NEW YORK STATE OF OPPORTUNITY. Department of Public Service

Public Service Commission
Audrey Zibelman
Chair

Patricia L. Acampora
Gregg C. Sayre
Diane X. Burman
Commissioners

Paul Agresta
General Counsel
Kathleen H. Burgess
Secretary

Three Empire State Plaza, Albany, NY 12223-1350
www.dps.ny.gov

January 6, 2017

Ms. Kathleen Burgess, Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

Re: Matter 16-00561 – In the Matter of the Clean Energy Advisory Council

Dear Secretary Burgess:

Enclosed please find the meeting materials for the January 10, 2017, Clean Energy Advisory Council (CEAC) Steering Committee meeting, to be held from 10:00 am to 12:00 pm via webinar and teleconference. The webinar and conference call information are provided below.

The attached meeting materials include an Agenda; the November 30, 2016 draft meeting minutes; the Clean Energy Implementation and Coordination Working Group's draft Utility/NYSERDA Coordination Report; the Low and Moderate Income (LMI) Clean Energy Initiatives Working Group's draft Alternative Approaches to LMI Energy Efficiency Services Report; Monthly Updates from each of the CEAC's six Working Groups; five revised Working Group Scopes; the CEAC's 2017 meeting schedule; and a revised CEAC Work Plan.

WebEx and Conference Call Information:

WebEx Event Address for Attendees:

https://nyserda-events.webex.com/nyserda-events/onstage/g.php?MTID=ebceab6cc6158aa4bb2b2f43e7ce02eb8

Event Number:	666 562 890
Event Password:	CEAC2017

Audio Conference:	1-415-655-0001
Access Code:	666 562 890

Sincerely,

/s/

Colleen Gerwitz

Director of Program Management & Planning

Office of Markets & Innovation

Enc.

January 10, 2017
Clean Energy Advisory Council
Steering Committee Meeting
10:00am – 12:00pm

Webinar/Teleconference

AGENDA

The **agenda** for the meeting is attached and provided below.

1.	Roll Call	(5 minutes)
2.	Old Business	(5 minutes)
	a. November 30th Meeting Minutes	
3.	Clean Energy Implementation & Coordination Working Group	(20 minutes)
	a. Monthly Update	
	b. Utility/NYSERDA Coordination Draft Report	
4.	Low & Moderate Income Clean Energy Initiatives Working Group	(45 minutes)
	a. Monthly Update	
	b. Alternative Approaches to LMI Draft Report	
5.	Energy Efficiency Procurement & Markets Working Group	(5 minutes)
	a. Monthly Update	
6.	Metrics, Tracking & Performance Assessment Working Group	(5 minutes)
	a. Monthly Update	
7.	Voluntary Investment & Other Market Development Working Group	(5 minutes)
	a. Monthly Update	
8.	REV Energy Efficiency Best Practices	(5 minutes)
	a. Monthly Update	
9.	Other Business	(15 minutes)
	a. Revised Scopes, Meeting Schedule, and Work Plan	
10.	Comments from the Public	(10 minutes)

WebEx and Conference Call Information

WebEx Event Address for Attendees:

https://nyserda-events.webex.com/nyserda-events/onstage/g.php?MTID=ebceab6cc6158aa4bb2b2f43e7ce02eb8

Event Number:	666 562 890
Event Password:	CEAC2017
Audio Conference:	1-415-655-0001
Access Code:	666 562 890

Clean Energy Advisory Council (CEAC) Meeting Minutes

Held on
November 30, 2016
10:00am-11:30 pm

Roll Call

The following organizations were represented on the Steering Committee:

Colleen Gerwitz, New York State Department of Public Service
David Margalit, New York State Energy Research and Development Authority
Mark Beaudoin, AVANGRID, Inc. / Iberdrola
Anthony Campagiorni, Central Hudson Gas and Electric Corporation
Matt Ketschke, Consolidated Edison Company of New York, Inc.
Michael Deering, Long Island Power Authority
Cliff Mason, National Fuel Gas Distribution Corporation
John Isberg, National Grid USA Service Company, Inc.
Jeffrey Cohen, New York Power Authority
Roberta Scerbo, Orange and Rockland Utilities, Inc.
Mike Voltz, PSEG Long Island

Chris Corcoran, NYSERDA, Designee, Clean Energy Implementation & Coordination Working Group
Tricia Cioni, Cascade Energy, Designee, Metrics, Tracking & Performance Assessment Working Group
Mark Lorentzen, TRC Solutions, Designee, and John Williams, NYSERDA, Co-Chair, Voluntary Investment & Other Market Development Working Group
Adam Flint, Binghamton Regional Sustainability Coalition, Designee, Low & Moderate Income Clean Energy Initiatives Working Group
Liz Weiner, TRC Solutions, Designee, Energy Efficiency Procurement & Markets Working Group
Irene Weiser, NRDC, Designee, REV Energy Efficiency Best Practices Working Group

Old Business

November 3, 2016 Meeting Minutes
The meeting minutes of the November 3, 2016 meeting were approved by the Steering Committee.

Voluntary Investment & Other Market Development Working Group

Mark Lorentzen, TRC Solutions, presented the *Voluntary Investment Pilot Parameters Draft Report*. He described the high level concepts contained therein and stated that the Draft Report reflects the guidance previously provided by the Steering Committee. Mr. Lorentzen stated that, while the Draft Report describes recommended parameters for the development of pilot efforts, it does not prescribe any particular pilot effort or design. For illustrative purposes, it does include examples of certain subject matter activities, such as an expanded approach to the self-direct program and support for project design and information as learned through the NY-Prize initiative. Overall, the Draft Report is intended to provide a framework for considering and evaluating potential pilot efforts. Mr. Lorentzen stated that the

Working Group stands ready to assist in furthering the process upon direction from the Steering Committee.

In its deliberations, Mr. Lorentzen explained that the Working Group agreed on several core criteria that should be part of any supported voluntary investment effort. Such efforts should provide "additionality" such that the pilot must result in clean energy achievements and the attraction of private investment dollars that are meaningfully greater than what would otherwise be achieved by the authorized portfolio from which the pilot seeks to draw public funds. It was noted that new efforts may be influenced by existing efforts, but that there should be proof of market-based activity above and beyond what is offered through the publicly-funded effort. The areas worth exploring as identified by the Working Group include: liaison services (such as CCA, or solarize-type efforts); the development of programmatic approaches (such as self-direct or performance contracting); rate design; financing; investment platforms (such as NYGATS); technical assistance (such as NY Energy Manager); information support (such as tool kits and data exchanges); and public recognition.

Mr. Lorentzen stated that the core criteria also include defining the target market; identification of the barriers to market engagement, and describing how the pilot is designed to address those barriers; additionality and how the effort is designed to do more than that which is already in place; identify measurable outcomes such as advancement of carbon reduction goals; and must be replicable by others in the market. Pilots should also seek to advance market activity by being scale-able; provide results within a reasonable timeframe; be conducive to sharing results; and contain elements of outreach and education. All pilots should have in place a properly designed measurement and verification strategy.

In response to an inquiry by Matt Ketschke, Consolidated Edison, about the possibility of creating multiple or duplicative venues for pilots, Mr. Lorentzen explained that, although innovation needs to originate in the market place, the role of the Working Group is to direct activity to areas not currently being addressed or to demonstrate how new efforts help a publicly-funded effort to better succeed. Mr. Lorentzen also described the examples of the NY Prize and the self-direct efforts as to how each addresses the identified criteria. He also stated that any pilot put forth needs to be tested against the criteria to demonstrate that it has value, addresses barriers, is animating the market, and fosters private investment.

In response to a follow-up inquiry by Mr. Ketschke regarding implementation and whether a new process would need to be created, John Williams, NYSERDA, stated that while the next steps have yet to be developed, if a pilot demonstrates success in influencing market activity, it would need to be decided whether such an effort should be channeled down any one particular implementation path, or whether it is self-executing. In this regard, Mr. Williams stated that the Working Group is seeking direction from the Steering Committee. Mr. Lorentzen added that, while the focus of the Working Group was on defining the parameters, it is willing to assist with implementation upon direction from the Steering Committee.

In response to an inquiry by Mark Beaudoin, AVANGRID, regarding a possible vehicle for bringing specific proposals to the Steering Committee and what type of funding might be needed, Mr. Lorentzen stated that there are multiple pathways forward, including some existing mechanisms that could be leveraged. Mr. Williams added that there might also be specific pathways that currently exist in the market. For example, Mr. Williams noted, the Clean Energy Fund is designed to test case new approaches or pilots that will result in market uptake. He posited that market actors could work with

NYSERDA to implement those ideas through the CEF and that the same may be true for utility demonstrations. Therefore, a separate path may not be needed. Separately, he could envision identifying a specific path that could be separate from or connected to the CEF or utility programs. Overall, the goal of this initial effort was to ensure some degree of standard setting for any pilots that advance through determined channels. The potential next phase would determine how such efforts could come forward.

Observing that some of the criteria contained in the Draft Report appear to be broad and sweeping, Colleen Gerwitz, DPS, asked the Steering Committee Members for their thoughts on the need for additional specificity regarding the criteria, given that is the focus at this time.

Ms. Gerwitz also stated that DPS Staff has requested of the NYS Public Service Commission Secretary an extension of its proposal on voluntary investments in clean energy technologies, required by the January 21, 2016 NYS Public Service Commission *Order Authorizing the Clean Energy Fund Framework* and due on December 1, 2016. The purpose of the extension request is to allow time for the consideration of this Draft Report. She also noted that the Draft Report highlights the challenges of determining baselines and of implementation, and described these as issues with which DPS Staff also continues to consider. She suggested the forthcoming DPS Staff Report as a possible vehicle for clarifying and soliciting input on some of the outstanding questions raised during this discussion.

In response to a clarification inquiry by Tricia Cioni, Cascade Energy, regarding how the description of the self-direct efforts in the Draft Report differs from the current utility efforts, Mr. Lorentzen suggested that the potential pilot design is intended to create an expanded program that would extend to CEF contributions. Mr. Lorentzen also noted that current utility programs are limited to energy efficiency and that this example expands eligible projects to include demand reduction (DR) and distributed generation (DG).

In response to an inquiry regarding the investigation of self-direct efforts in the State of Oregon by Ms. Cioni, as to how the self-direct efforts suggested for New York would be qualified, Mr. Lorentzen stated that, while he fully understands the validity of the question, that concept is much further down the path toward implementation and was not contemplated by the Working Group. He added that references to that effort were included merely as an example for testing the criteria and framework and the Working Group does not promote or endorse that effort over any other.

Mr. Lorentzen stated that the Working Group appreciates feedback provided by the Steering Committee.

Metrics, Tracking & Performance Assessment Working Group

Tricia Cioni, Cascade Energy, reported on the status and content of the Online Dashboard Recommendations Outline. She explained that the expectations of the dashboard are to eliminate the need for quarterly reporting, to increase transparency, and to reduce administrative burden. The Working Group recommends a two-phased approach, given the large task in capturing all of the necessary data. Phase One would create a public-facing dashboard that captures the basic quarterly report requirements and would include basic key performance indicators and financial progress against targets. Once Phase One is completed, Phase Two would create a more interactive dashboard, allowing users to drill further down into the data.

In beginning Phase One, the Working Group is currently in the process of identifying the basic requirements and how they could be developed across all of the various, existing platforms. The Working Group is also exploring the best practices that may exist nationwide for other dashboards. Ms. Cioni stated that the Working Group is open to additional examples, as it is still in the collection phase. The Working Group anticipates needing to engage Information Technology (IT) experts from within the utilities to assist with the development of Phase Two.

In response to an inquiry by Mark Beaudoin, AVANGRID, as to where the dashboard would be housed, Ms. Cioni suggested either NYSERDA or DPS. Ms. Gerwitz stated that it was not specified in the Clean Energy Fund (CEF) Order, but what is envisioned is a system that is more flexible than the current Energy Efficiency Portfolio Standard (EEPS) version and one that can house multiple programs. She added that it is an open question as to whether it would be housed with NYSERDA or DPS.

In response to an inquiry by Anthony Campagiorni, Central Hudson Gas and Electric Corporation, as to when this effort would be up and running, Ms. Cioni explained that the Working Group would be working first, in-house, through NYSERDA and, the additional components for Phase Two would require the involvement of IT experts. Mr. Margalit, NYSERDA, added that the goal is the lowest implementation costs and ongoing costs of operations possible, and that NYSERDA will seek to use in-place systems as sensible.

In closing, Ms. Cioni announced that the Working Group has a new co-chair, Mr. John Zabliski, NYSEG/Rochester Gas and Electric.

Ms. Gerwitz expressed her gratitude for the efforts of the Working Group.

CEAC Meeting Schedule and Work Plan

Absent any objections from Steering Committee Members, Colleen Gerwitz, DPS Staff, stated the intention to cancel the December 13, 2016 meeting, which will necessitate additional adjustments to the Steering Committee Work Plan. She stated that a revised Work Plan will be circulated after consultation with the Working Group Chairs, which may result in adjustments to, or extensions of, due dates previously-scheduled work products.

Ms. Gerwitz stated that an electronic meeting poll has been sent to Steering Committee Members for the purposes of planning 2017 Steering Committee meeting dates. She also mentioned the need to plan activities through 2017, including a reassessment of the current Working Group structure, which will likely be discussed in further detail at the scheduled February 2017 meeting. She requested that any feedback be directed to either herself or to Dave Margalit, NYSERDA.

Public Comments

There being no other business to discuss and no comments from the public, the meeting was adjourned.

Steering Committee Update
Clean Energy Implementation & Coordination Working Group

A Revised Work Plan reflecting the updates to the Work Plan described below and highlighting those activities expected to occur prior to the February 7, 2017 Clean Energy Advisory Council (CEAC) Steering Committee Meeting is attached.

E^2 Transition Recommendations Report:

Recent Progress:

Complete

Multiple Incentives Inventory & Recommendations Report:

Recent Progress:

Complete

Utility / NYSERDA Coordination Report:

Recent Progress:

The draft report has been completed and was submitted for Steering Committee comments and feedback on December 2, 2016.

Updates to the Work Plan:

The timeline associated with the report has been slightly adjusted and the statuses of specific tasks have been updated. The final report will now be filed on January 31, 2017 (rather than January 17, 2017).

Expected Coordination/Task Dependencies:

The CEI&C Working Group expects that coordination will be necessary with the ***Metrics, Tracking and Performance Assessment Working Group*** as it develops its Utility / NYSERDA Evaluation Coordination Recommendations Report to ensure a consistent approach to coordination.

Clean Energy Implementation & Coordination Working Group Work Plan

Background:

By order issued January 21, 2016 (January CEF Order),[1] the New York Public Service Commission (the Commission) established the Clean Energy Advisory Council (CEAC). The Commission required that the CEAC address specific issues and provide the Commission or Staff with recommendations and reports regarding such issues. To comply with the Commission directives, the CEAC developed a structure that relies upon Working Groups to conduct the necessary research and analysis and to prepare reports regarding their findings and recommendations.

The CEAC established the Clean Energy Implementation & Coordination Working Group to coordinate planning and implementation among New York's clean energy program administrators, in consultation with DPS Staff to better support New York's clean energy policy objectives, provide clarity to the market, and serve ratepayers.

Overview:

To complete the work assigned by the Steering Committee in accordance with the schedule established in the Clean Energy Implementation & Coordination Working Group Scope, the Working Group expects to meet once a week. The Working Group expects most of its meetings to be conducted as teleconferences, however, if necessary, the Working Group will also conduct webinars and in-person meetings. Between meetings, the Working Group members will conduct work through email.

The Working Group will seek public input regarding the Multiple Incentives Report and the Utility / NYSERDA Coordination Report. The Working Group will announce the specific processes and timelines for public input for each report in Matter 16-01005.

The Working Group intends to provide updates regarding progress and working schedule to the Steering Committee at the Steering Committee's public meetings.

[1] Case 14-M-0094 et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework (issued January 21, 2016).

Schedule:

Task	Responsibility	Due Date	Status
Updates to Steering Committee:			
Send Written Update to Steering Committee	*Co-Chair/Secretary*	*7/6/16*	*Complete*
Send Written Update to Steering Committee	*Co-Chair/Secretary*	*8/10/16*	*Complete*
Send Written Update to Steering Committee	*Co-Chair/Secretary*	*9/12/16*	*Complete*
Send Written Update to Steering Committee	*Co-Chair/Secretary*	*10/27/16*	*Complete*
~~*Send Written Update to Steering Committee*~~	~~*Co-Chair/Secretary*~~	~~*11/23/16*~~	
~~*Send Written Update to Steering Committee*~~	~~*Co-Chair/Secretary*~~	~~*12/6/16*~~	
Send Written Update to Steering Committee	*Co-Chair/Secretary*	*1/3/16*	*Complete*
Send Written Update to Steering Committee	*Co-Chair/Secretary*	*1/31/16*	
E^2 Transition Recommendations Report:			
Send Draft E^2 Activity List to Working Group	Katie Mammen	5/26/16	Complete
Finalize Activity List	Working Group	6/3/16	Complete
Send Draft (v1) Report to Working Group	Katie Mammen	6/10/16	Complete
Finalize Draft Report	Working Group	6/29/16	Complete
Send Draft Report to Steering Committee	*Co-Chair*	*7/1/16*	*Complete*
Incorporate Steering Committee Feedback into Report	Katie Mammen	7/20/16	Complete
Send Revised Draft (v2) Report to Working Group	Katie Mammen	7/20/16	Complete
Finalize Report	Working Group	7/20/16	Complete
File Final E^2 WG Transition Recommendations Report	***Co-Chair***	***8/1/16***	***Complete***
Multiple Incentive Inventory:[2]			
Send Draft (v1) Inventory to Working Group	Chris Corcoran	5/26/16	Complete
Send Inventory Additions/Corrections to Chris Corcoran	All Members	6/22/16	In-Progress
Send Revised Draft (v2) Inventory to Working Group	Chris Corcoran	6/27/16	Complete
Send Program/Initiative List to Working Group	Chris Corcoran	6/27/16	Complete
Finalize Program/Initiative List for Inventory	Working Group	7/1/16	Complete
Send Program/Initiative List to Steering Committee	*Co-Chair*	*7/6/16*	*Complete*
Incorporate Steering Committee Feedback into Inventory	Chris Corcoran	7/15/16	Complete
Send Revised Draft (v3) Inventory to Working Group	Chris Corcoran	7/15/16	Complete
Send Inventory Additions/Corrections to Chris Corcoran	All Members	7/29/16	Complete
Send Revised Draft (v4) Inventory to Working Group	Chris Corcoran	8/1/16	Complete
Finalize Draft Inventory	Working Group	8/5/16	Complete
Send Draft Inventory to Steering Committee	*Co-Chair*	*8/8/16*	*Complete*
Incorporate Steering Committee Feedback into Inventory	Chris Corcoran	8/18/16	Complete

[2] The Multiple Incentive Inventory, although shown separately for purposes of this Work Plan, is a component of the Multiple Incentive Recommendations Report. Therefore, the Incentive Inventory and Multiple Incentive Report deliverables will be sent to the Steering Committee and Filed in DMM as a single document.

Task	Responsibility	Due Date	Status
Send Revised Draft Inventory (v5) to Working Group	Chris Corcoran	8/18/16	Complete
Send Inventory Additions/Corrections to Chris Corcoran	All Members	8/24/16	Complete
Send Revised Draft Inventory (v6) to Working Group	Chris Corcoran	8/26/16	Complete
Finalize Inventory	Working Group	8/29/16	Complete
File Final Incentive Inventory	***Co-Chair***	***9/13/16***	***Complete***
Multiple Incentive Recommendations Report:			
Assign Working Group Member	Working Group	6/3/16	Complete
Send Draft Outline to Working Group	Gayle Pensabene	6/15/16	Complete
Finalize Outline	Working Group	7/1/16	Complete
Finalize Method for Public Input	Working Group	7/1/16	Complete
Send Outline to Steering Committee	*Co-Chair*	*7/6/16*	*Complete*
File Public Input Process Announcement	***Co-Chair***	***7/6/16***	***Complete***
Send Draft (v1) Report to Working Group	Assigned Members	7/8/16	Complete
Incorporate Outline Feedback into Draft Report	Assigned Members	7/15/16	Complete
Send Revised Draft (v2) Report to Working Group	Co-Chair	7/15/16	Complete
Public Comment Due	Public	7/22/16	Complete
Incorporate Public Comment into Draft Report	Assigned Member	7/29/16	Complete
Send Revised Draft (v3) Report to Working Group	Co-Chair	7/29/16	Complete
Finalize Draft Report	Working Group	8/5/16	Complete
Send Draft Report to Steering Committee	*Co-Chair*	*8/8/16*	*Complete*
Incorporate Steering Committee Feedback into Report	Assigned Member	8/24/16	Complete
Send Revised Draft (v4) Report to Working Group	Assigned Member	8/24/16	Complete
Finalize Report	Working Group	9/12/16	Complete
File Final Multiple Incentives Report	***Co-Chair***	***9/13/16***	***Complete***
FILE MULTIPLE INCENTIVE GUIDANCE	***DPS***	***10/3/16***	***Complete***
Utility / NYSERDA Coordination Report:			
Assign Working Group Member	Working Group	8/17/16	Complete
Send Draft Outline to Working Group	Assigned Members	9/14/16	Complete
Finalize Outline	Working Group	9/23/16	Complete
Send Outline to Steering Committee	*Co-Chair*	*10/27/16*	*Complete*
Send Initial Draft (v1) Report to Working Group	Assigned Member	10/25/16	Complete
Incorporate Steering Committee Feedback into Report	Assigned Member	11/4/16	Complete
Finalize Initial Draft Report	Working Group	11/14/16	Complete
Finalize Method for Public Input	Working Group	11/14/16	Complete
File Public Input Process Announcement	***Co-Chair***	***11/~~7~~14/16***	***Complete***
Public Comment/Input Due	Public	11/~~18~~23/16	Complete
~~Incorporate Public Comment into Draft Report~~	~~Assigned Member~~	~~11/21/16~~	

Task	Responsibility	Due Date	Status
Send Draft Report (v2) to Working Group	Assigned Member	11/30~~21~~/16	Complete
Finalize Draft Report	Working Group	12/1/16	Complete
Send Draft Report to Steering Committee	*Co-Chair*	*12/2/16*	*Complete*
Incorporate Steering Committee Feedback into Report	Assigned Member	~~12/16/16~~1/18/17	
Send Revised Draft Report to Working Group	Assigned Member	~~12/16/16~~1/18/17	
Finalize Report	Working Group	1/25~~13~~/17	
File Final Utility/NYSERDA Coordination Report	***Co-Chair***	***1/31~~17~~/17***	
Consideration of Additional Work Scope[3]			
Discuss & Prioritize Additional Tasks	Working Group	2/2/17	
Assign Working Group Member	Working Group	2/2/17	
Send Draft Scope & Justification to Working Group	Assigned Member	2/16/17	
Finalize Draft Scope & Justification	Working Group	3/9/17	
Send Draft Scope & Justification to Steering Committee	*Co-Chair*	*3/10/17*	
Incorporate Steering Committee Feedback into Scope	Assigned Member	3/22/17	
Send Revised Scope to Working Group	Assigned Member	3/23/17	
Finalize Revised Scope	Working Group	4/6/17	
File Revised Work Scope	***Co-Chair***	***4/7/17***	

Revisions:

This Work Plan is a living document and the Working Group will revise it on a regular basis to include additional tasks assigned to the Working Group and to reflect any changes to the Working Group schedule. Revisions to this Work Plan will be included as a component of the Written Update to the Steering Committee. In instances where the Working Group determines that it will be unable to meet the deadlines established by the CEAC Steering Committee, it will comply with the revision process outlined in the CEAC Work Plan and update this Work Plan accordingly.

[3] In accordance with the Working Group's Work Scope, the Working Group may propose additional objectives, tasks, and deliverables to the Steering Committee at any time. However, no later than 90 days following the completion of the previously assigned deliverables, the Working Group must provide the CEAC Steering Committee with a recommendation to either adopt additional scope or fold the Working Group.

New York Program Administrator Coordination Report

The Clean Energy Implementation & Coordination Working Group of the Clean Energy Advisory Council has developed the following report for the CEAC Steering Committee's consideration and feedback.

Contents

Executive Summary

To Be Developed after Draft Submission

Overview

Background

By order issued January 21, 2016 (January CEF Order),[1] the New York Public Service Commission (the Commission) established the Clean Energy Advisory Council (CEAC). Among other things, the Commission required the CEAC to provide recommendations for using the appropriate working group as a venue for planning and collaboration among program administrators (PAs) that supports effective development and deployment of program offerings and initiatives. The CEAC Steering Committee required its Clean Energy Implementation & Coordination Working Group (WG), comprised of PAs from utilities, New York State Energy Research and Development Authority (NYSERDA), New York Power Authority (NYPA), and Long Island Power Authority (LIPA)/PSEG-Long Island, to develop a report to formalize these recommendations.

Purpose

The goal of this Coordination Report is to formalize the principles and process of collaboration, while defining what successful coordination looks like for PAs and for the state. Throughout the process of developing and deploying programs and initiatives, collaboration maximizes the effectiveness of ratepayer dollars invested, leverages the strengths of complementary programs, avoids duplication of initiatives, and maximizes societal value. Successful coordination will allow PAs to improve their work and identify opportunities for partnerships. As a result of this ongoing collaboration throughout the program lifecycle, initiatives will be stronger and will serve customers better.

Principles of Collaboration

The following principles will guide the collaboration process:

- Coordinate throughout the lifecycle of programs, including design, launch, implementation, and retirement
- Ensure that layered initiatives are complementary, thus increasing their impact and maximizing effectiveness of ratepayer investments
- Leverage each other's programs to increase market participation by customers
- Expand energy savings opportunities
- Maintain flexibility to allow for creative approaches to innovation and market responsiveness
- Engage proper stakeholders internally and externally to get input and feedback
- Share best practices, new ideas, customer feedback, and opportunities for improvement in a safe space

[1] Case 14-M-0094 et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework (issued January 21, 2016).

State of Collaboration: Timeline

Joint Utilities (JU) – 2007-Present

The Joint Utilities (JU) have coordinated energy efficiency program design and implementation since the May 2007 order instituting an Energy Efficiency Portfolio Standard (EEPS) and that communication continues through today with formal and informal teams addressing all aspects of the Reforming the Energy Vision and Clean Energy Fund Proceedings. Over the past several years this coordination has been segmented into sectors (i.e. residential, C&I, multi-family, electric, gas) with regularly scheduled in person meetings and conference calls. Historically, the JU filed joint comments in response to Commission proceedings as the coordinated implementation of similar energy efficiency programs created a forum for an effective uniform message.

Evaluation Advisory Group (EAG) – 2008-2010

In the June 2008 EEPS order, the Commission made clear that rigorous program evaluation must be a central focus and specifically required "transparent and technically sound methods for measurement and verification of net energy savings, benefits and costs, as well as assessment of customer satisfaction and program efficacy." To achieve these objectives, the Commission ordered the creation of the EAG. The primary mission of the EAG was to advise the Commission and Department of Public Service (DPS) Staff on statewide evaluation and reporting standards and protocols that are comprehensive, consistent, transparent, and reliable. The Commission envisioned that the EAG would serve as a key advisor to DPS Staff and play a critical role in encouraging communication and cooperation by creating a forum where members discuss concerns, share ideas, and solve problems. With its membership of approximately 20 key stakeholders, each with extensive energy program experience, the EAG ensured that many points of view were considered in the evaluation process. Key stakeholders included program administrators, DPS Staff, environmental groups, interested parties, and the New York Independent System Operator (NYISO). The EAG held regular meetings and formed subcommittees as needed. The EAG also provided a forum for the discussion of evaluation results by holding in-person meetings in Albany where utilities, DPS Staff, NYSERDA, interested parties, and Commissioners could be informed of evaluation results.

Energy Efficiency Program Administrator Committee (EEPAC) – 2009-2010

In early 2009, EEPAC held its first meeting at NYSERDA's offices in Albany. EEPAC consisted of program administrators from each utility and NYSERDA and was responsible for coordinating the implementation of energy efficiency programs with in person monthly meeting at NYSERDA. EEPAC developed procedures to avoid the double payment and counting of energy savings for the same measure from NYSERDA and utilities. It also established working groups to address referral of customers to efficiency programs, procurement activities among program administrators, contractor training and the development of a contact list that identified residential, commercial, industrial program staff at each utility and NYSERDA.

Implementation Advisory Group (IAG) – 2010-2014

In December 2010, the Commission issued an order that established the IAG and clarified that the IAG was to be hosted by DPS Staff. The inclusion of DPS Staff added an invaluable pathway to engage Staff

and program administrators to resolve implementation issues and to highlight difficulties with achieving goals developed in the 2009 EEPS Orders. Monthly meetings were held at DPS offices in Albany with most utilities attending in person and others by phone. Subcommittees were formed to respond to specific issues.

E^2 Working Group (E^2) – 2014-2016

The IAG transitioned into the E^2 Working Group which included IAG members and third parties. The E^2 Working Group was established on February 28, 2014 and operated in the context of broader Commission proceedings. The E^2 Working Group consisted of DPS Staff and EEPS and ETIP PAs, and was open to Ex-officio members and parties in Cases 07-M-0548 or 15-M-0252. Meetings of the E^2 Working Group Members occurred regularly through April, 2016. The objective of the E^2 Working Group was to inform Staff, and ultimately the Commission, with regard to oversight of the ratepayer-funded energy efficiency programs and the development of technical tools and resources that may inform future energy efficiency program cycles. Subcommittees were formed to provide guidance on Technical Resource Manual (TRM) issues, evaluation assessments, data tracking, and 2015 program closeout.

While the E^2 Working Group no longer holds meetings, the JU continues to meet monthly and more often if needed to discuss program implementation, ETIP issues and upcoming filings. The JU have also been active participants on the Clean Energy Advisory Committee Working Groups and continue to meet to discuss the activities within all of the CEAC Working Groups.

All of these working groups were successful in meeting the objectives they set out to achieve and much can be learned from their successes. For instance, having utilities, NYSERDA, and DPS Staff all engaged in solving implementation issues that arose in the 2009-2011 EEPS I period was invaluable and led to effective program design for the 2012-2015 EEPS II period.

Current

Moving forward, coordination between all program administrators is essential to maximizing the benefits to all ratepayers. The CEI&C Working Group aims to create an environment and process through which coordination is used to support a complimentary suite of energy efficiency and clean energy efforts within and across the State's program administrators. The WG will facilitate transparency and information sharing among program administrators as they develop new programs and evolve existing programs. In addition, the WG will focus on highlighting lessons learned and best practices through implementation experience and evaluations. This coordination will allow the WG to highlight missed opportunities, avoid duplicative and/or competing programs, and maximize the effectiveness of energy efficiency and clean energy activities.

Collaboration Process

This section aims to formalize how this WG will serve as a forum for sharing best practices, lessons learned, and communicating both informally and formally on new ideas and progress to date. It will also ensure adherence to CE-04 Layered Incentive Guidance, which states "Prior to adding or modifying a

program to its portfolio, a PA must engage in active discussions with CEI&C members regarding potential overlap and coordination on program design and the implementation of complementary incentives".[2]

The WG will provide a venue for these discussions regarding current and prospective programs/initiatives. Through regular meetings and facilitating the Incentive Inventory, the WG will ensure PAs have the opportunity to regularly coordinate and cooperate on any issues that may impact energy efficiency and other related initiatives.

The process described below is intended to be both structured in that there is consistency in information sharing and quality, and flexible in that each PA may be structured differently and have different mandates (e.g. dedicated efficiency departments versus multiple departments, gas only versus mixed commodity, size and resources of the PA, varying program offerings, and the many other differences across utilities, NYSERDA, NYPA and LIPA). The WG may adjust these processes over time to better achieve the goals of collaboration.

Most broadly, the PAs will use the CEI&C meetings to coordinate on issues pertaining to each entity's ideation and development of initiatives, details of programs prior to launching into the marketplace, as well as ongoing implementation. At each meeting there will be a designated rotating secretary/scribe to note relevant decisions, open questions and action items.

Specifically, the WG will hold monthly, quarterly and annual meetings, as described below. The primary goal of the monthly meetings will be to share information among PAs. The monthly meetings will be remote and held via conference call, and meetings will not be held during months when quarterly and annual in-person meetings are convened. The meetings will be approximately 1-2 hours in length, and will be comprised of the core CEI&C WG members, as well as any other invited individuals or organizations that the WG determines is relevant for a specific meeting. In general, the monthly meetings will focus on the following areas:

- Follow up on action items from the previous meeting
- Sharing details of pre-development and planning of upcoming initiatives
- Discussing any issues pertaining to current initiatives
- Sharing results, successes, challenges, and lessons learned
- Review the Incentive Inventory for completeness and overlaps
- Discuss regulatory compliance filing questions and issues with Staff as needed
- Note where follow up among one or more entities is required, and ensure that resources are assigned
- Set future agendas to define priorities and identify invitees, as well as to guide discussions
- Periodically review processes for effectiveness and propose changes

[2] Layered Incentive Guidance.
http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/255ea3546df802b585257e38005460f9/$FILE/75542951.pdf/CE-04_Multiple%20Incentive%20Guidance_10-3-16.pdf

The quarterly in-person meetings will go beyond information sharing among WG members and include discussion of program-specific issues and engagement with specific Program Managers from each PA as determined as appropriate by the WG. The in-person quarterly meetings are intended for a broader audience, including program managers of new or revised initiatives under discussion, demand response and demand management administrators when applicable, DPS Staff and other relevant parties. Discussions may be divided in a number of ways, including by sector, customer type, or technology, in order to facilitate discussions among the correct staff. Having the right people in attendance to address shared topics and priorities will be essential for these meetings; active agenda planning and internal outreach by WG members will enable this success. The WG will work to ensure that these efforts do not duplicate or replace existing coordination among groups. The meetings will be one half to one full day in length and will be led by a rotating chair. The chair position will be a one-year assignment, or as otherwise agreed to by the WG. The quarterly meetings will generally focus on the same areas as the monthly meetings, with additional time available to work through program-specific issues, and deep dive on other related topics as necessary.

The annual in-person meeting will provide the WG with an opportunity to engage a wider audience of outside stakeholders and interested parties, while also accomplishing the business of quarterly meetings. The annual in-person meeting will be set over two days and will be run by the chair, with support from WG members. One half of the meeting will be similar in structure and content to the quarterly meetings, where program issues are discussed. The WG will invite outside parties to the second half of the meeting to discuss issues identified by the WG. These may include representatives from other WGs, other agencies such as NYISO, DER providers, program administrators, and others. In order to maximize feedback and engagement, outside parties may be invited to present on specific program or project successes, share issues and insights as they relate to the WG, and suggest new program ideas.

Meeting	Audience	Focus
Monthly (Conference Call)	WG Members	Information sharing
Quarterly (In-Person)	WG Members, Program Managers, DPS Staff	Information sharing, program-specific issues, relevant topics
Annual, day 1 (In-Person)	WG Members, Program Managers, DPS Staff	Information sharing, program-specific issues, relevant topics
Annual, day 2 (In-Person)	WG Members, Program Managers, DPS Staff, DER Providers, Outside Agencies, Other Stakeholders	Feedback and presentations from outside stakeholders and other invited interested parties

The WG will use the first in-person meeting to establish and agree to the principles of collaboration it will abide by going forward. These will include the principles of collaboration discussed above, as well as

more process-related items that will enable the group to be productive. These may include the requirement for all organizations to:

- Come prepared to share the current state of program design and implementation
- Be prepared to discuss and/or update the Incentive Inventory
- Discuss recent successes and setbacks
- Share potential plans and timelines
- Be open to new ideas and ready to partner/coordinate, with the express understanding that no party will be held to implementing any proposal or concept discussed during this open exchange, as well as expected results
- Be open to soliciting and providing input on how to address other PAs concerns/ideas

In addition to the above meetings, PAs should also meet separately as needed regarding regional and sector specific coordination. This localized coordination should ensure that if multiple PAs are marketing to the same customer segment, or through similar delivery channels or market partners, that a coordinated strategy is developed to reduce any potential customer confusion and to maximize program delivery efficiencies.

Tools for Coordination

The primary tool for the WG is the Incentive Inventory. The tool allows users and PAs the ability to view all the current and prospective utility, NYSERDA, NYPA, LIPA and NYISO programs along with key details about the specific program goals and targets. The tool was created to help the WG and other parties assess the current state of programs available around the state. The tool will also assist PAs as they plan for future programs by helping them understand what other PAs are planning or what specific markets are being targeted.

The WG (or its future iteration) plans to update the Inventory quarterly, barring any significant program changes that require updating the tool on a more frequent basis. It is the goal of the working group to include forward looking prospective programs. This can help guide strategy discussions between the various groups and facilitate lessons learned conversations. The WG will plan to update the CEAC Steering Committee quarterly, following working group updates to the Inventory. On an annual basis, the Inventory of current programs will be filed publicly.

The WG will also consider adding to the Inventory to increase its benefit and ensure adherence to the layered incentive criteria/principles. Some examples of additional information could include specifics related to supply chain beneficiaries and other data points. The WG will investigate the feasibility of creating a database or platform of current incentive programs across the state which will allow PAs to access the most current and relative information to assist in their planning efforts. The platform could also be made public for use by customers.

The WG will use all the tools available to them during the process of collaboration including guidance documents, meeting minutes, collaboration from other CEAC working groups, discussions with PAs, and primarily the Incentive Inventory. While the WG will continue to look at on-going programs, the WG will

devote designated time each quarter to discuss prospective programs which are a key component of the Inventory connecting the present to the future. Prospective programs would become the starting point for discussion with particular emphasis on how proposed programs impact other service territories and/or PAs as well as the impact to the supply chain in terms of the upstream, midstream and downstream markets. Discussion could also center on identification of any gaps between current and future offerings to determine where customer segments or technologies could be more effectively served.

The WG will also utilize the Incentive Inventory as a tool to gather input from others, share best practices, explore and build off of innovative solutions while at the same time allowing stakeholders to leverage each other's programs to ensure effective use of ratepayer investment. Additionally, as the tool is socialized with stakeholders, it can also serve to solicit feedback and ideas for the WG to use as it follows the process as outlined in this report to ensure that efforts are not duplicative, contribute to program development and improvement, and maximize savings penetration and value to society.

The Inventory may also be useful to support other objectives, such as customer and market knowledge and outreach. Additionally, the inventory can serve to identify areas where collaboration and coordination are necessary between and among clean energy activities outside the ETIP and CEF programs including, the Technical Resource Manual, EM&V, DSIP and Rev Demos. The utility of the Inventory to others outside of the WG is beyond the current scope of this group's recommendations.

Coordination with Other Groups

Coordination and collaboration with a variety of groups is essential to the successful implementation of programs that will support achievement of statewide energy goals. These efforts will involve coordination and collaboration with CEAC Working Groups, established energy efficiency program administrators, various Reforming the Energy Vision (REV) initiative, demand response program administrators, and other stakeholder groups.

The integration of energy efficiency programs into utility system planning and other energy related initiatives is a key component moving forward. This begins with communication and collaboration between the CEI&C Working Group and the other CEAC Working Groups.

CEAC Working Group coordination will occur in order to ensure the applicable transfer of information and to avoid potential duplication and overlap of prospective programs or initiatives. Furthermore, coordination between working groups is a necessity in providing uniformity in tracking and reporting on energy efficiency efforts, as well as, identifying any potential market gaps and effectiveness of current programs.

Beyond the CEAC Working Groups, coordination with existing, established groups managing energy efficiency efforts in New York such as Evaluation, Measurement and Verification (EM&V) staff, energy efficiency program implementation staff, demand response program administrators, and the Technical Resource Manual Management Committee (TRM MC) also play a vital role. These groups have

significant experience operating successful programs and will provide valuable lessons regarding past program experiences and insight to the future.

Coordination with other relevant on-going New York initiatives such as Distributed System Implementation Plans (DSIPs) and REV demonstration projects will also be required to understand creative new approaches and initiatives, leverage best practices and ensure efforts are implemented to achieve maximum market participation.

Interaction and coordination with other stakeholder groups is vital to understanding new and innovative technologies, gaining customer insights and sharing industry best practices. This collaboration will be an integral component in increasing market engagement in support of statewide initiatives and will occur during the quarterly and annual meetings.

Coordination and collaboration will be a key component supporting the effective and successful implementation of programs that will achieve New York's energy reduction targets.

Steering Committee Update

LMI Clean Energy Initiatives Working Group

A Revised Work Plan reflecting the updates to the Work Plan described below and highlighting those activities expected to occur prior to the February 2017 Clean Energy Advisory Council (CEAC) Steering Committee Meeting is attached.

Report on Alternative Approaches to Providing LMI Clean Energy Services:

Recent Progress:

The working group completed the draft recommendations report and submitted it for Steering Committee review on December 22, 2016. The draft report includes forty-three recommendations that the working group believes will improve the delivery of clean energy services to LMI customers. The recommendations range from program design considerations to maximize the impact of ratepayer funds, improving access to financing, access to DER, and coordination with other state agencies. The co-chairs of the working group will provide an overview of the draft report to the Steering Committee at the January 10, 2017 Steering Committee meeting. Based on the input received on the draft report, the working group will revise the report and finalize and submit the report on January 31, 2017.

Updates to the Work Plan:

The work plan was updated to remove the report out to the CEAC Steering Committee on November 30 and December 13 because the agenda for the November 30 meeting was specific to the Voluntary Investment & Other Market Development Working Group draft report and the Metrics, Tracking & Performance Working Group dashboard recommendations outline. The December 13 CEAC Steering Committee meeting was canceled.

In addition, the work plan was updated to reflect the revised dates for the submission of the LMI draft report to the Steering Committee from December 2 to December 22; the finalization of the report from January 13 to January 30; and the filing of the report from January 17 to January 31.

Expected Coordination/Task Dependencies:

The LMI Working Group has identified the need to discuss the potential for the development of a low-income or affordability EAM with the Energy Efficiency Procurement & Markets Working Group. The chairs of the LMI working group will have an initial discussion on this topic with the chairs of the Energy Efficiency Procurement & Markets Working Group in January 2017.

Recommendation Regarding Continuation of Working Group Activities

Recent Progress:

The Working Group has not discussed the continuation of Working Group activities and will contemplate the continuation of activities after the completion of the Report.

Updates to the Work Plan:

With the extension on the date for the Report filing, the work on the recommendation regarding the continuation of Working Group activities was also shifted out, to March 2017. Once a date for the CEAC meeting in March 2017 is identified, the specific dates for the development and delivery of the recommendation will be determined.

Low & Moderate-Income (LMI) Clean Energy Initiatives Working Group Work Plan

Background:

By order issued January 21, 2016 (January CEF Order),[1] the New York Public Service Commission (the Commission) established the Clean Energy Advisory Council (CEAC). The Commission required that the CEAC address specific issues and provide the Commission or Staff with recommendations and reports regarding such issues. To comply with the Commission directives, the CEAC developed a structure that relies upon Working Groups to conduct the necessary research and analysis and to prepare reports regarding their findings and recommendations.

The CEAC established the LMI Clean Energy Initiatives Working Group (Working Group) to provide a venue for NYSERDA, the utilities, and other interested stakeholders to actively evaluate alternate approaches for the delivery of services to LMI customers that can improve customer value, for the customers served as well as for the ratepayer funding invested.

The Working Group is tasked with developing a set of recommendations on alternative approaches to providing LMI clean energy services by assessing the strengths and weaknesses of the current approaches to providing these services, and identifying and assessing alternative approaches deployed in other jurisdictions. In addition, the Working Group will make a recommendation to the Steering Committee on the continuation of Working Group activities, beyond the submission of the recommendations report.

Overview:

To complete the work assigned by the Steering Committee in accordance with the schedule established in the LMI Clean Energy Initiatives Working Group Scope, the full Working Group expects to meet bi-weekly, with subgroups meeting on a more frequent basis. The Working Group expects most of its meetings to be conducted via webinar and teleconference, however, where necessary the Working Group will schedule in-person meetings. Between meetings, the Working Group members will conduct work through email.

The Working Group will provide updates on progress and working schedule to the Steering Committee at the Steering Committee's public meetings.

[1] Case 14-M-0094 et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework (issued January 21, 2016).

Schedule:

Task	Responsibility	Due Date	Status
Written Updates to CEAC Steering Committee			
Send written update to Steering Committee	Co-Chair/Designee	7/6/16	Complete
Send written update to Steering Committee	Co-Chair/Designee	8/10/16	Complete
Send written update to Steering Committee	Co-Chair/Designee	9/12/16	Complete
Send written update to Steering Committee	Co-Chair/Designee	10/27/16	*Complete*
Send written update to Steering Committee	Co-Chair/Designee	12/6/16	
Send written update to Steering Committee	Co-Chair/Designee	1/3/17	
Send written update to Steering Committee	Co-Chair/Designee	1/31/17	
Report Out to CEAC Steering Committee			
Report out to the Steering Committee	Designee/Alternate Designee	6/16/16	Complete
Report out to the Steering Committee	Designee/Alternate Designee	7/13/16	Complete
Report out to the Steering Committee	Designee/Alternate Designee	8/17/16	Complete
Report out to the Steering Committee	Designee/Alternate Designee	9/19/16	Complete
Report out to the Steering Committee	Designee/Alternate Designee	*11/3/16*	*Complete*
~~Report out to the Steering Committee~~	~~Designee/Alternate Designee~~	~~11/30/16~~	
~~Report out to the Steering Committee~~	~~Designee/Alternate Designee~~	~~12/13/16~~	
Report out to the Steering Committee	Designee/Alternate Designee	1/10/17	
Report on Alternate Approaches to Providing LMI Clean Energy Services			
Develop subgroup structure	Working Group	7/7/16	Complete
Develop the Report Outline and send to the Working Group for review	Co-Chairs	7/7/16	Complete
Feedback on the Report Outline from the Working Group due	Working Group	7/21/16	Complete
Finalization of the Report Outline	Working Group	7/25/16	Complete
Send the Report Outline to the Steering Committee	***Co-Chairs***	***8/10/16***	***Complete***
Finalize approach for soliciting stakeholder input	Working Group	8/17/16	Complete
Components of the First Draft finalized by Working Group (e.g.: assessment of current initiatives and recommendations)	Co-Chairs	11/23/16	*Complete*
Revisions to First Draft incorporated and sent to the Steering Committee for comment	***Co-Chairs***	***12/21/2016***	***Complete***
Finalize Report	Working Group	1/30/2017	
File Report in DMM	***Co-Chairs***	***1/31/2017***	

Task	Responsibility	Due Date	Status
Recommendation Regarding Continuation of Working Group Activities			
Provide recommendation to the Steering Committee	Working Group	March 2017	Not started
Provide a draft revision to the workscope, including tasks and deliverables, to the Working Group	Co-Chairs	March 2017	Not started
Finalize revised workscope, including tasks and deliverables	Working Group	March 2017	Not started
Submit final revisions to workscope, including tasks and deliverables to Steering Committee	Co-Chairs	March 2017	Not started
File revised workscope in DMM	Co-Chairs	March 2017	Not started

Revisions:

This Work Plan is a living document and the Working Group will make revisions when necessary to include additional tasks assigned to the Working Group and to reflect any changes to the Working Group schedule. Revisions to this Work Plan will be included as a component of the Written Update to the Steering Committee. In instances where the Working Group determines that it will be unable to meet the deadlines established by the CEAC Steering Committee, it will comply with the revision process outlined in the CEAC Work Plan and update this Work Plan accordingly.

Clean Energy Advisory Council
Low and Moderate-Income (LMI)
Clean Energy Initiatives Working Group
Recommendations Report

Draft for Review

December 22, 2016

Table of Contents

Tables and Figures

Executive Summary

<<Will be incorporated into final report>>

1. Introduction

In a January 21, 2016 Order,[1] the New York State Public Service Commission (PSC or Commission) established a 10-year, $5 billion Clean Energy Fund (CEF) to accelerate the growth of New York's clean energy economy, address climate change, strengthen resiliency despite extreme weather, and lower energy bills. The CEF is a critical component of Reforming the Energy Vision (REV), New York's comprehensive plan to reform the State's power industry, and is designed to support the Clean Energy Standard, a goal to meet 50 percent of the State's electricity needs with renewable resources by 2030.

The Commission also directed major electric and gas utilities to develop new energy efficiency programs on both a regional and statewide basis. To complement further programs supported by the CEF, the Commission directed each investor-owned utility to seek improvement of their own energy efficiency programs to better engage customers and to meet the overall goals of the Clean Energy Standard and the State Energy Plan. Energy efficiency programs offered by major utilities are intended to achieve greater market-wide efficiency savings, target specific needs in the State, and depend less on direct ratepayer support.

In the CEF Framework Order, the Commission established a Clean Energy Advisory Council (CEAC), co-chaired by Department of Public Service Staff (Staff) and NYSERDA. The Commission stated that the Council's "primary objective is to support innovation and collaboration for an effective transition from current program offerings to post-2015 clean energy activities and on-going delivery thereafter."[2] The Commission required that the CEAC address specific issues and provide the Commission with recommendations and reports regarding the appointed issues. The Commission also indicated that the CEAC is intended to inform NYSERDA's CEF Investment Plans and the utilities' ETIP and Budget and Metric Plan filings.

The Commission directed the CEAC to develop a structure that recognizes the need for NYSERDA interaction with utilities in addition to allowing for meaningful involvement from a broad array of stakeholders, allowing for the geographic considerations of the State. The Charter developed by the CEAC establishes the structure of a Steering Committee and six Working Groups to address specific areas of focus. The CEAC relies upon the Working Groups to conduct necessary research and analysis and to prepare reports regarding their findings and recommendations. Working Groups were established for Clean Energy Implementation & Coordination; Energy Efficiency Procurement & Markets; Metrics, Tracking & Performance Assessment; REV Energy Efficiency Best Practices; Voluntary Investment & Other Market Development; and Low & Moderate Income Clean Energy Initiatives (LMI Working Group).

[1] New York State Public Service Commission. Order Authorizing the Clean Energy Fund Framework (Case 14-M-0094). Issued January 21, 2016. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={B23BE6D8-412E-4C82-BC58-9888D496D216}>

[2] Ibid, p. 53.

1.1 LMI Working Group Scope and Work Plan

The stated purpose of the LMI Working Group is "to actively evaluate alternative approaches for the delivery of services to LMI customers that can improve consumer value, for the customers served as well as for the rate-payer funding invested."[3] Fulfilling this purpose requires investigating and evaluating alternatives to current LMI service delivery in order to improve customer value. Specific related tasks include an assessment of the strengths and weaknesses of current approaches to LMI service delivery; identification and documentation of alternative approaches deployed in other jurisdictions, including the strengths and weaknesses of each; and a summary of findings regarding opportunities for improved service delivery, including the potential for coordinating delivery of energy efficiency and renewable generation to the LMI population. In addition, the required LMI Working Group report must outline well-defined best practice approaches and specific transitional considerations. Finally, the LMI Working Group should determine whether it has fulfilled its purpose upon the completion of the initial objectives and provide a recommendation regarding the necessity for continuation of LMI Working Group activities. The LMI Working Group Scope can be found in Appendix A.

The Work Plan details activities required to complete the work assigned by the CEAC Steering Committee in accordance with the schedule established in the Working Group Scope. The Work Plan provides due dates for reports and updates to CEAC Steering Committee, a schedule with milestones for producing this report and for recommendations regarding continuation of Working Group activities.

During the October 20, 2016 CEAC Steering Committee Meeting, the Working Group recommended and the Steering Committee concurred with extensions to the draft report submission date and filing date of the LMI Working Group's Final Report.

1.2 LMI Working Group Composition and Membership

The CEAC Charter provides that Working Groups be limited to 20 members, except where the level of stakeholder interest necessitates additional members. Each Working Group is required to select a Chair or Co-chairs and a Designee to the Steering Committee, which must be a representative from a stakeholder group. Working Groups are responsible for the development of findings and recommendations that may be used to inform future decisions by the Commission, NYSERDA's Clean Energy Fund Investment Plans, the utilities' future Energy Efficiency Transition Implementation Plan and Budget and Metric Plan filings, and other clean energy activities. Each Working Group created and posted rosters, scoping documents and work plans to the Document and Matter Management (DMM) system, and also provides written and oral status updates to the Steering Committee. Working Groups must submit their findings and recommendations in separate reports, which must reflect the full range of Working Group participant viewpoints.

[3] Clean Energy Advisory Council Low & Moderate Income Clean Energy Initiatives Working Group Scope. November 1, 2016. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={8E4956E3-7D2F-41C8-81B0-DBA7D65D9301}>

Prior to the Charter being established, PSC Chair Audrey Zibelman received a letter on April 27, 2016, from representatives of the Energy Democracy Alliance (a collaboration of community-based organization and grassroots groups) and other interested parties. The letter expressed concerns that the CEAC "appears heavily weighted in favor of utilities and entities with resources who can pay staff to participate in the CEAC working groups and Steering Committee."[4] The authors state that they are "particularly focused on how these programs can reach and benefit low and moderate income people, people of color, small businesses, and other groups that face barriers."[5] The letter concludes by expressing the hope that "CEAC will be an authentic space in which stakeholders representing consumer and community experience can participate on equal ground with business interests."[6]

In a reply letter dated June 3, 2016, CEAC Steering Committee Staff Co-Chair Colleen Gerwitz expressed confidence "that the CEAC and Working Group structure will both represent and accommodate a variety of stakeholder viewpoints and expertise. The interest that we have received regarding Working Group participation along with the Steering Committee Designee assignments from each Working Group will satisfy the need for diverse participation at all levels of the CEAC."[7]

As finally constituted, the LMI Working Group consists of representatives of 28 organizations including utilities, environmental groups, energy efficiency contractors, solar providers, government agencies, and community-based organizations, including several members of the Energy Democracy Alliance. The LMI Working Group membership roster is included in the Working Group Scope (Appendix A).

1.3 LMI Working Group Process and Schedule

The LMI Working Group held its initial meeting on June 7, 2016, where it elected Co-chairs, primary and alternate Steering Committee Designees, and a Secretary. The LMI Working Group has met on a bi-weekly basis since then. The meetings were held at NYSERDA's Albany offices, with both webinar and teleconference access for those not able to attend in person. The LMI Working Group meeting schedule is included in Appendix X.

To promote efficiency, the LMI Working Group formed four subgroups, each focused on a specific area, providing representatives of organizations with particular areas of interest or expertise an opportunity to concentrate their activities. The four subgroups are: single-family housing sector, multi-family housing sector, renewables, and community-based approaches/customer acquisition. These subgroups met on a biweekly, or in some cases weekly, basis by teleconference.

[4] Energy Democracy Alliance. Concerns and Recommendations Regarding the Clean Energy Advisory Council (Case 14-M-0094). Issued April 27, 2016, p. 1. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={2B54213E-552C-45CC-AD5B-100A2B783143}>

[5] Ibid, p. 1.

[6] Ibid, p. 4.

[7] New York State Department of Public Service. Response to EDA CEAC Letter (Case 14-M-0094). Issued June 3, 2016, p. 1. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7b77829282-35A3-4A54-9699-A6CEA010D97E%7d>

In addition, the LMI Working Group established an online SharePoint site used to store and exchange documents. The site includes folders for resource documents, meeting minutes, a subfolder for each subgroup, the LMI Working Group's Work Scope and Work Plan, reports to the Steering Committee, and a compendium of recommendations.

1.4 Stakeholder Input

Given the importance of capturing the input of the full range of stakeholders, including low-income consumers, the Working Group conducted focus groups with low-income consumers and issued a survey to individuals belonging to a number of organizations that address low-income customer needs. Stakeholders provided their perspectives on accessing or working with current energy programs, while low-income consumers provided their perspectives on energy issues including affordability, awareness, and program participation.

1.4.1 Focus Groups

The LMI Working Group conducted three focus groups[8] with low-income customers with the objective of obtaining insights to inform the development of the Working Group recommendations. The focus groups were held in varied regions of the state[9] to capture the breadth of customer experience across utility territories. The focus groups yielded interactive discussion about customer experiences and concerns with energy awareness, energy affordability and participation in clean energy or bill payment assistance programs. Seventeen low-income customers participated in the focus groups, and for those that provided demographic information, half of the participants were home owners; sixty-five percent lived in multi-unit buildings; and seventy-five percent of participants had annual incomes below $20,000. Findings from the focus groups includes:

- most low-income consumers place the highest value on the services that result in the lowest energy costs for the home, indicating that they did not have a preference for energy efficiency or renewable energy services;
- most consumers are interested in more information on energy and how to reduce energy costs online, over the phone, or in the home;
- many consumers identified the need to prioritize the paying for other necessities, such as rent or medicine, over their energy bills;
- rigid income eligibility requirements present a challenge for households that make just over the income threshold;
- many consumers took actions to reduce energy consumption in the home, including turning off appliances and shutting off lights when not in use, hanging laundry instead of using a clothes dryer;
- understanding utility bills was a challenge for many of the consumers;

[8] The focus group in Buffalo was held on November 3, 2016. The focus group in Binghamton was held on November 16, 2016. The New York City focus group has not been scheduled yet.
[9] Buffalo, Binghamton, and New York City

- consumers identified challenges accessing information on available programs from their utility, and poor communications from service providers about what measures are eligible;
- many consumers identified the importance of having a trusted source of information on energy programs and opportunities to reduce energy costs, such as a neighbor or community-based organization;
- consumers that participated in the EmPower NY program, identified the program as effective in reducing their energy consumption;

Summary information on the focus groups, including the discussion guide and participant demographic summary are included in Appendices C through E.

1.4.2 Service Provider Survey

The survey was distributed to 60 organizations, including Environmental Justice (EJ), weatherization subgrantees,[10] community action agencies, and other community-based organizations that provide service to low-income customers. Service providers were asked to identify the programs that they have experience with and provide input on which programs have been most useful in delivering benefits to LMI customers, to highlight clean energy services that are not currently available, and to identify models for successful engagement of the LMI community. 15 service providers responded to the survey, providing the following insights:

- outreach and education is important to ensure that customers understand available programs, and can make informed decisions on which clean energy upgrades to invest in;
- available programs need to do a better job of coordinating and integrating energy efficiency and renewables to maximize affordability;
- income eligibility thresholds can be too restrictive,
- to reduce energy bills, an emphasis should be on increasing access to clean energy services rather than relying on bill assistance;
- more utility-non-profit partnerships are necessary to drive affordability in LMI communities;
- community-based organizations can play an effective role as messengers by building a good reputation and trust in the community;
- respondents identified various programs including EmPower NY, the Weatherization Assistance Program (WAP), the ConEd Multifamily Energy Efficiency Program, and the National Grid Residential Efficiency programs as being helpful in addressing energy affordability for low-income consumers or providing incentives to offset the cost of clean energy upgrades.

A complete summary of the survey responses, along with the survey questions can be found in Appendices F and G.

[10] Weatherization subgrantees administer the Weatherization Assistance Program (WAP) in each county

2. LMI Landscape in New York State

New York's low- to moderate-income (LMI) market segment is broad and diverse, with more than 3.5 million households across the State.[11] For ratepayer funded programs[12] in New York, the low-income designation applies to households with annual incomes at or below 60 percent of the state median income (SMI),[13] while moderate-income households are designated by annual incomes between 60 percent SMI and 80 percent of area median income (AMI) or SMI, whichever is greater.[14] LMI household characteristics vary across the State with respect to housing tenure, housing type and condition, and primary heating fuel used, all of which can contribute to a household's annual energy consumption and costs and influence energy savings opportunities within the home. In addition to LMI households, the LMI market includes building owners and landlords, service providers, and program administrators who are responsible for delivering clean energy solutions to LMI households.

2.1 LMI as a Designation

For the purposes of establishing categorical eligibility and creating consistency in the market, where possible, the income thresholds used to determine eligibility for LMI energy programs administered by NYSERDA and the utilities are aligned with other state and federal energy and housing programs. The low-income designation of 60 percent of SMI is consistent with income eligibility criteria used by the Home Energy Assistance Program (HEAP)[15] and the Weatherization Assistance Program (WAP), which allows for the receipt of HEAP or WAP to serve as a proxy in lieu of income eligibility determinations from NYSERDA and the utility. The moderate-income designation of the greater of 80 percent of SMI or AMI aligns with Housing and Urban Development (HUD) definitions for affordable housing.

While income thresholds used by NYSERDA and the utilities align with those state and federal definitions, differences in terminology used across other state and federal energy, housing, and social service programs create confusion among customers and service providers. Many social service programs, such as Temporary Assistance for Needy Families and Special Supplemental Nutrition Program for Women, Infants, and Children determine eligibility on the basis of federal poverty level. HUD utilizes AMI to set income eligibility and considers moderate-income to be 80% - 120% AMI, low-income to be 80% AMI, and further segments to very low income (50 percent of AMI) and extremely low income (30 percent of AMI).

[11] American Community Survey 2013-2015
[12] Administered by NYSERDA and the utilities
[13] For a household of four, 60% of SMI is approximately $4,423 monthly.
[14] For a household of four, 80% of SMI is approximately $5,897 monthly.
[15] Federal Low-Income Energy Assistance Program regulations establish the maximum income level allowed at 150 percent of the poverty level, except where 60 percent of SMI is higher. New York State has adopted the higher of 60 percent SMI or 150% FPL as the maximum income level allowed.

2.2 The LMI Market Segment

When defined as up to 80% of the greater of SMI or AMI, the LMI market segment accounts for nearly half of the households in New York State. Within the LMI segment, there are approximately 2.3 million low-income households (60 percent SMI) and about 1.2 million moderate-income households (80 percent AMI/SMI, whichever is greater), as outlined in Table 1. Nearly 1 million have an annual income at or below the federal poverty level.[16]

Table 1: Distribution of LMI Households by Income Level[17]

Income Level	Number of Households in New York State	% of LMI Households	% of Households in New York State
Poverty Level[18]	999,659	28%	14%
Low-Income[19]	1,358,258	39%	19%
Moderate-Income[20]	1,153,239	33%	16%
Total	3,511,157	100%	48%

When considering the ability for LMI households to afford energy and identifying options for delivering clean energy solutions to such a large portion of the population, it is important to understand the characteristics of the population because variations in income level, housing tenure, and housing type can influence energy costs and the degree to which these households can engage in and undertake clean energy upgrades. For example, given very low household income, households living at or below poverty level face significant barriers to investment in clean energy upgrades.

Further consideration of LMI household distribution by housing type provides insights that can inform the design of clean energy programs to target this large market segment. As indicated in Table 2, there is a near equal distribution of LMI households across single family and multifamily building types.

[16] In 2016, the federal poverty level designates annual household income for a family of four at $24,300.
[17] United States Census Bureau. "Summary File."*2013 – 2015 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016. Web. 29 November 2016 <http://ftp2.census.gov/>.
[18] Represents the number of households at or below the Federal Poverty Level (FPL). These households would be included in the low-income market segment, however they are presented separately for illustrative purposes.
[19] Represents the number of households between FPL and 60% of SMI.
[20] Represents the number of households between 60% SMI and 80% of AMI.

Table 2: Distribution of LMI Households by Housing Type[21]

Income Level	Single Family Detached	Single Family Attached	Small Multi-Family (2-4)	Moderate Multi-Family (5-50)	Large Multi-Family (50+)	Mobile Homes & Other
Poverty Level	17%	4%	23%	29%	23%	3%
Low-Income	31%	4%	22%	22%	17%	4%
Moderate-Income	37%	5%	20%	19%	15%	3%
Total	29%	5%	22%	23%	18%	3%

As indicated in Table 3, LMI customers tend to live in older buildings. Nearly two thirds of LMI customers live in homes that are more than 50 years old, and a third live in homes built prior to 1940. Older homes have a tendency to be drafty, have outdated and inefficient appliances, and can have significant structural or other deficiencies. A review of the American Housing Survey indicates that low-income households in New York experience higher incidences of structural and other building deficiencies, compared to higher income households.[22] Issues such as electric wiring problems and leaky roofs can be costly to repair and, in most cases, can be a barrier to moving forward with energy efficiency upgrades[23] until the deficiency is addressed. In addition to more frequent equipment breakdowns, these households report higher occurrences of homes being uncomfortably cold for a period of 24 hours or longer.

Table 3: Housing Vintage by Income Level[24]

Income Level	**Pre- 1940**	**1940-1970**	**1970-2000**	**2000 +**
Poverty Level	37%	35%	22%	7%
Low-Income	34%	37%	23%	6%
Moderate-Income	32%	39%	22%	6%
Total	**34%**	**37%**	**22%**	**6%**

Energy end use profiles can vary significantly between single family home and apartment dwellers. According to the U.S. Energy Information Administration (EIA), apartments in buildings of five or more units consume about half as much energy as single family homes.[25] This is due to the fact that the apartments are typically smaller, can be bordered by other apartments or common areas, and large apartment buildings typically have centralized heating systems. As illustrated in Table 4, the majority of

[21] United States Census Bureau/American Fact Finder. *2013 – 2015 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016. Web. 29 November 2016 <http://factfinder.census.gov/>.
[22] Summarized from Rochester and New York City data in United State Census Bureau. *American Housing Survey for the United States: 2013,* U.S. Government Printing Office, Washington, DC.
[23] For example, electrical problems and leaky roofs can be a barrier to improvements such as air sealing, insulation, and upgrading inefficient appliances.
[24] United States Census Bureau. "Summary File."*2013 – 2015 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016. Web. 29 November 2016 <http://ftp2.census.gov/>.
[25] "Apartments in Buildings with 5 or More Units Use Less Energy than Other Home Types." U.S. Energy Information Administration, June 18, 2013. Web. 18 December 2016 <http://www.eia.gov/todayinenergy/detail.php?id=11731>

LMI customers rent their homes. Opportunities for making clean energy improvements in rental properties can be compromised by the willingness of a landlord to fund improvements or to otherwise give permission for no-cost energy upgrades. Typically, direct install measures such as replacing inefficient lighting, installing low-flow devices, and the addition of weather stripping can be done without landlord approval. However, intrusive measures such as insulation and air sealing or the replacement of appliances, require either landlord sign off or in some cases warrants landlord cost share. The ability to site solar panels or other forms of renewable energy generation is compromised for those who live in apartments, though the emergence of shared solar will provide apartment dwellers with opportunities to access the benefits of renewable energy.

Table 4: Distribution of LMI Households by Housing Tenure[26]

Income Level	% Own	% Rent
Poverty Level	20%	80%
Low-Income	38%	62%
Moderate-Income	50%	50%
Total	**37%**	**63%**

As indicated in Table 4, home ownership in the LMI segment increases with income level. Moderate-income customers are generally more likely than low-income households to own their homes and may have a greater capacity to take on clean energy improvements through participation in programs subsidize the cost of upgrades, or by undertaking do-it-yourself activities to improve the energy performance of the building.

The way in which customers use energy, along with the fuels consumed, are also critical factors for energy affordability and identifying potential clean energy solutions. Table 5, provides detail on the average residential energy consumption by primary end use for households in New York.

Table 5: Residential Energy Consumption[27]

End Use	Portion of Overall Household Energy Consumed
Space Heating	56%
Appliances, electronics, and lighting[28]	26%
Water heating	17%
Cooling	1%
Total	**100%**

[26] United States Census Bureau/American Fact Finder. *2013 – 2015 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016. Web. 29 November 2016 <http://factfinder.census.gov/>.
[27] United States Energy Information Administration/2009 Residential Energy Consumption Survey. *Household Energy Use in New York*. United States Department of Energy, 2009. <https://www.eia.gov/consumption/residential/reports/2009/state_briefs/pdf/NY.pdf>
[28] Also worth noting is the growth in the adoption of consumer electronics among households of all incomes, and the associated increase in electric consumption, which affects all residents regardless of housing configuration.

Home heating is the most energy-intensive activity in the residential sector, accounting for over half of total annual energy consumption. As highlighted in Table 6, more than half of the LMI market segment heats with natural gas, and about 27 percent of LMI homes heat with a deliverable fuel.

Table 6: Distribution of LMI Households by Primary Heating Fuel[29]

Income Level	% Natural Gas	% Oil or Propane	% Electricity	% Other	% None
Poverty Level	55%	26%	15%	3%	2%
Low-Income	57%	27%	12%	3%	1%
Moderate- Income	57%	29%	10%	3%	1%
Total	**56%**	**27%**	**12%**	**3%**	**1%**

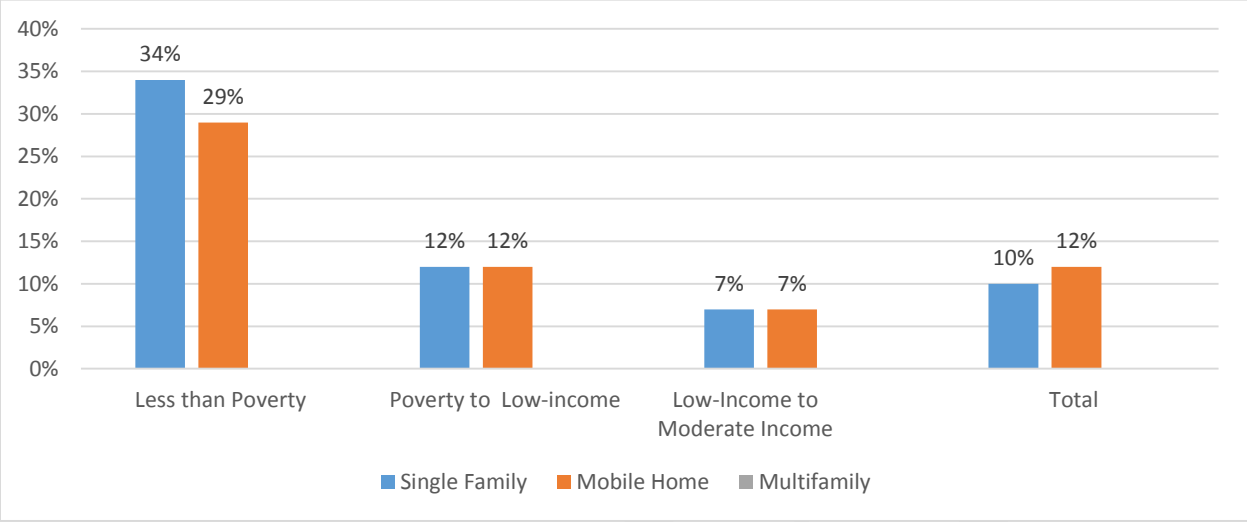
Current commodity prices for natural gas and electricity are relatively low and stable. Conversely, prices for deliverable fuels such as oil or propane are typically higher than natural gas and can be volatile, making it difficult for a household on a limited budget to afford. For households with high energy costs associated with home heating, improvements to the building shell[30] and the efficiency of the heating system are an important consideration. Oil to natural gas conversions also can deliver affordability benefits to households that heat with deliverable fuels.

2.3 Energy Affordability

LMI households pay a disproportionate share of their incomes on energy needs, relative to higher income households. The energy burden, or the percentage of annual household income spent on energy, can approach 25 percent for LMI households, compared to less than five percent for households with higher incomes. As outlined in Figure 1, further segmentation reveals that energy affordability can vary greatly among LMI households. Many of these households face difficult tradeoffs between paying their energy bills or paying for housing, food, or medical needs.[31] For low-income households that have heat included in the rent, high energy costs can result in increased operating and maintenance costs for building owners, who pass the cost along to the tenants. This dynamic can result in unaffordable housing and create housing insecurity for lower-income households.

[29] United States Census Bureau/American Fact Finder. *2013 – 2015 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016. Web. 29 November 2016 <http://factfinder.census.gov/>.
[30] Such as reducing thermal loss through insulating the attic and walls, and air sealing.
[31] National Energy Assistance Directors' Association. *2009 National Energy Assistance Survey, Final Report*. Distributed April 2010. <http://neada.org/wp-content/uploads/2013/03/neada_2009_survey_report_4_16_10.pdf>

Figure 1: Average Energy Burden by Income Level and Housing Type[32]



Indicators such as the level of utility arrears and the number of utility disconnects highlight the difficulty that customers have paying for their energy needs. As of October 31, 2016, there were 1,012,956 residential customers who were more than 60 days in arrears, carrying approximately $711 million owed to utilities; and 256,096 residential customers statewide had utility service disconnected for non-payment during the preceding 12 months. As can be seen from the high numbers of arrearages and shut offs, energy affordability remains a significant challenge in New York State.

2.4 Service Providers

The LMI market segment is served by a wide range of service providers, including utilities, government agencies, affordable housing owners and managers, community-based organizations, contractors and installers, and program administrators, all of whom could assist in delivering clean energy solutions to the LMI population. These organizations often serve as important and trusted information sources for LMI customers. Increasing energy affordability and access to clean energy solutions requires not only direct engagement with the LMI households but also working through these intermediaries. The primary LMI market actors are summarized in Table 6.

[32] American Community Survey 2013-2013. NOTE: the analysis on the energy burden for multifamily tenants is not complete as of the filing of this draft, however it will be incorporated into the final report.

Table 7: Summary of LMI Market Segment Participants

Actor	Description	Role
Human service providers	Local Departments of Social Services, Office for the Aging	Serve as the point of intake for low-income households when they apply for assistance programs.
Community-based organizations	NYSERDA GJGNY CBO, faith-based organizations, NYS Community Action Agencies, Weatherization subgrantees	Provide services such as energy education, identification of programs and resources for LMI residents, and assistance with application processes.
Contractors, vendors, and installers	Weatherization subgrantees and home performance contractors; multifamily partners; architect and engineering (A&E) firms; solar installers	A network of more than 300 firms and non-profits that deliver clean energy solutions to LMI households through existing clean energy programs.
Affordable housing owners and managers	Own and manage multifamily affordable housing	Provide affordable housing for income-eligible residents. For many owners and managers, clean energy upgrades help manage building operational costs.
Program administrators	NYSERDA, utilities, NYS Homes and Community Renewal, Office of Temporary and Disability Assistance, and others.	Responsible for administering ratepayer and taxpayer-funded clean energy programs.

2.5 Multifamily Affordable Housing

Multifamily affordable housing in New York State presents significant opportunities for energy savings, however the various ownership and metering configurations can impact the level of benefit to LMI households. In direct metered buildings, where tenants are responsible for paying their energy bills, in-unit energy efficiency improvements such as appliance and lighting upgrades, can result in direct financial benefit to the LMI tenant. In master-metered buildings, the financial benefit of energy efficiency improvements result in reduced operational costs for the building owners, this benefit is typically passed on to the LMI tenant in the form of increased comfort and safety, improved viability of the housing stock, and the stabilization of rents as a product of reduced operating and maintenance costs for the building owners. In cooperative or condominium configurations, the LMI tenants have an ownership stake in the building, and benefit directly from improvements to the building (central systems and shell improvements), as well as in-unit upgrades.

In addition, when regulated affordable buildings undergo capital refinancing, the benefits of clean energy improvements can be included in the underwriting criteria, thus improving the financing terms

for the building owner. The building owner therefore can make additional capital improvements to the building, which can further improve the viability of the housing stock and the quality of life for tenants.

2.6 Access to Clean Energy Solutions

While energy efficiency and renewable energy upgrades can decrease energy consumption and energy bills, most LMI customers and affordable building owners face obstacles that prevent them from undertaking energy efficiency improvements or investing in renewable energy solutions. Direct consumer input and secondary research indicate that the LMI market segment faces significant barriers to the adoption of clean energy solutions. Barriers for consumers and building owners include financial barriers, competing interests and priorities, lack of information on available programs, building structural issues, and split incentives.

In addition, systemic challenges present barriers to achieving scale and maximizing the impact of energy programs. Policy and program barriers include limited budgets, the high cost of delivering programs, the fragmented administration of LMI-oriented energy programs, and challenges in identifying LMI customers.

2.6.1 Barriers for LMI Consumers and Affordable Building Owners

Access to capital. By definition, LMI consumers have lower incomes and many have difficulty paying their energy bills, making it less likely that they can budget for clean energy improvements on their own. LMI consumers can also face difficulty in accessing affordable financing options. Debt-to-income and FICO score requirements associated with typical consumer lending can often leave LMI customers effectively without access to credit. Affordable building owners also often operate on tight budgets, and may be unable or unwilling to take on additional debt to make clean energy upgrades. In addition, many LMI customers do not sufficient tax liability to benefit from tax credits for the installation of clean energy measures.

Competing interests. Due to their limited budgets, LMI consumers often face tradeoffs between paying for necessities such as mortgage or rent, utilities, childcare, transportation, food, and medicine; which are prioritized over investments in clean energy improvements. This sentiment was echoed by many focus group participants. Similarly, the lean budgets of affordable building owners often preclude them from budgeting additional expenditures for clean energy improvements, when other capital improvements are needed.

Lack of information. Many LMI consumers and building owners are not aware of the benefits and cost savings of clean energy improvements; are unaware of the available programs to offset the costs of such improvements; and/or lack confidence that the upgrades will result in the projected savings.

Building structural issues. As noted above, most LMI residents live in older housing and can experience a higher prevalence of structural and electrical deficiencies. Many key energy efficiency measures, such as insulation, depend on the integrity of the roof or walls ensure that the measure is effective. Rooftop solar PV system installation requires that the roof is structurally sound and that the electric service is in

good repair. When structural issues are present, clean energy upgrades must be deferred until the deficiencies are corrected. To compound this issue, there are limited sources of assistance available to LMI households to address these deficiencies. While current LMI programs such as EmPower NY can address health and safety issues such as improper venting of combustion appliances, addressing knob and tube wiring, gas leaks, and the installation of smoke and carbon monoxide detectors, the budget available does not allow for major health and safety mitigation or structural repairs to the home.[33]

Split incentive. In rental buildings, in cases where renters are individually metered and pay the energy bill, owners typically do not have an incentive to invest in clean energy upgrades, and renters do not have the ability to make investments to improve the energy efficiency of a property that they don't own. In master-metered buildings, owners may have a motive to invest in clean energy upgrades, however if the benefits of such investment are not passed on to tenants, such investments do not impact affordability. In addition, tenants in master metered buildings are not directly responsible for paying the energy bill and may not have a financial incentive to moderate their energy consumption.

2.6.2 Systemic Barriers

Limited budgets. As noted above, nearly half of the households in the State qualify as low or moderate-income. In addition, LMI clean energy programs require high subsidization. For example, the EmPower NY program, open to utility customers up to 60% of SMI, provides no-cost energy efficiency services, and averages about $4,000 per project. The Assisted Home Performance with ENERGY STAR program, open to utility customers up to 80% of SMI/AMI, provides a 50% subsidy on the cost of the entire energy efficiency workscope. It would be difficult to scale-up clean energy programs to serve all eligible households at these expenditure levels.

Fragmented program administration. LMI clean energy and bill payment assistance programs are delivered by multiple program administrators, including the utilities, NYSERDA, HCR, and OTDA. While recently, progress has been made to coordinate and align certain programs,[34] multiple program processes and rules can create confusion for both service providers and customers.

Identifying LMI customers. Low-income energy programs generally use receipt of HEAP to establish categorical eligibility for low-income energy services.[35] In the case of the utility bill payment discount programs and EmPower NY, utilities have the ability to identify their direct HEAP recipients and automatically enroll them into the utility bill payment assistance program, as well as referring the customer for energy efficiency services through EmPower. The utilities have a difficult time identifying low-income customers; however, if the customer does not receive a utility HEAP benefit. Similarly,

[33] Under EEPS, NYSERDA allocated approximately 4% of the EmPower NY program budget to address health and safety issues. The level of health and safety expenditure is expected to be similar under the CEF.
[34] NYSERDA and HCR have made progress in aligning EmPower and WAP, including the development of a joint application that is used by Weatherization Subgrantees.
[35] Utility payment assistance, EmPower NY, WAP.

identification of moderate income customers is difficult, unless the customer directly applies for a given program and provides documentation of income eligibility.

3. Energy Policy and Regulatory Landscape

3.1 Background

3.1.1 Deregulation and the Systems Benefit Charge

In 1996, as the State deregulated the electric industry to introduce competition with the goal of lowering costs for ratepayers, the PSC acknowledged the need to ensure that certain public policy objectives that may not be met by competitive markets would be addressed. Energy affordability for low-income customers was among these policy objectives.[36] The System Benefits Charge (SBC) was established to fund these objectives through a surcharge on electric bills. NYSERDA was named as the independent administrator of SBC funds, and eventually became the default provider of low-income energy efficiency services, due to the administrative and operational efficiencies associated with a statewide program.[37] The SBC portfolio included several activities targeting LMI customers, including energy efficiency programs (EmPower, AMP), awareness and education, and leveraging initiatives.

3.1.2 Energy Efficiency Portfolio Standard

On June 23, 2008, the PSC established the Energy Efficiency Portfolio Standard (EEPS) proceeding as a statewide initiative to develop and encourage adoption of cost-effective energy efficiency, in order to reduce energy consumption and greenhouse gas emissions and in support of the State's energy and environmental goals.[38] Under EEPS, the Commission directed the utilities and NYSERDA to submit proposals for energy efficiency programs.

In 2010, the Commission reaffirmed its preference for a statewide approach for low-income energy efficiency programs, in order to maintain consistency in offerings and capture administrative efficiencies,[39] and NYSERDA was continued as the default provider of low-income energy efficiency

[36] Opinion and Order Regarding Competitive Opportunities for Electric Service (Case 94-E-0952). Issued May 20, 1996. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B076F3B08-917D-47FE-83C0-8B2B32822A67%7D>

[37] Order Establishing Conditions for The Continuation and Transfer of Low-Income Programs and Establishing System Benefits Charge Funding (Case 94-E-0952). Issued May 30, 2003. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B3AB4D394-F72C-417B-86CF-533E62E02893%7D>

[38] At the time, the State's goals included reducing New York residents' electricity usage by 15 percent of forecast levels by 2015.

[39] New York State Public Service Commission. Order Approving Certain Commercial and Industrial; Residential; and Low-Income Residential Customer Energy Efficiency Programs with Modifications (Case 07-M-0548). Issued January 4, 2010. <http://documents.dps.ny.gov/public/Common/ ViewDoc.aspx?DocRefId=%7B4B290246-94FD-451F-B352-1C9C6CCC110B%7D>

services.[40] The EEPS portfolio included the following low- and moderate-income energy efficiency programs: EmPower NY, Assisted Home Performance with ENERGY STAR, Multifamily Performance Program, and ENERGY STAR Certified Homes Program. The annual budget for the low- and moderate-income programs was over $60 million.

Throughout SBC and EEPS, the Commission acknowledged the important role that the utilities play in referring candidates for low-income energy efficiency services. In 2010, the Commission provided an incentive to utilities for the referral of low-income customers. For customers referred to EmPower NY, utilities were able to claim 15 percent of the energy saved from measures installed toward the utility's EEPS energy savings goals.[41] In 2012, this incentive was expanded to include 7.5 percent of the energy savings from low-income customers referred from other entities within the utility's service territory.[42]

3.1.3 NY-Sun

The NY-Sun initiative, administered by NYSERDA, was launched in 2014 and represents New York State's approach to creating a self-sustaining solar photovoltaic (PV) market. With support from NY-Sun, solar power systems in New York State have grown 750 percent increase – from a little over 78 megawatts in 2012 to 669 megawatts currently throughout the state. The market is expected to add 3,000 megawatts of solar capacity to the State's electricity generation mix by 2023. While deployment of solar PV can provide significant grid benefits for all consumers, as previously discussed, many LMI customers cannot directly access the benefits of solar PV due to barriers to adoption.

To explore solutions to address barriers to solar PV adoption by LMI customers, NYSERDA created a working group, comprised of solar installers, utilities, consumer advocacy groups, and DPS staff, in 2014. The working group discussed financing options, increased outreach and education, and community-based investment models as opportunities for increasing access to solar PV for LMI customers. The Commission further supported these efforts by authorizing up to $13 million in NY-Sun funds to be used to support increased participation by LMI customers in solar PV.[43]

[40] While NYSERDA was the default provider for low-income energy efficiency programs, low-income customers were able to participate in the utility rebate programs.

[41] Ibid.

[42] New York State Public Service Commission. Order Modifying Budgets and Targets for Energy Efficiency Portfolio Standard Programs and Providing Funding for Combined Heat and Power and Work Force Development Initiatives (Case 07-M-0548). Issued December 17, 2012. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B15F1F208-370F-4AF5-A110-2062012A1F4F%7D>

[43] New York State Public Service Commission. Order Authorizing Funding and Implementation of the Solar Photovoltaic MW Block Programs (Case 03-E-0188). Issued April 24, 2014. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bEDB54E42-13EA-4817-8F5C-8E3165D78919>

3.2 Recent Developments

3.2.1 New York State Energy Plan

The 2015 NYS Energy Plan (Energy Plan) presents a comprehensive path for coordinating the State's energy policies and initiatives to achieve a 40 percent reduction in greenhouse gas emissions, 50 percent of electricity generation from renewable energy sources, and a 23 percent decrease in energy consumption from buildings, by 2030. In presenting the challenges and opportunities that the State must address to achieve these aggressive energy and environmental goals, the Energy Plan emphasizes the importance of energy affordability and providing solutions for addressing the barriers to adopting clean energy solutions for LMI communities. In addition, the Energy Plan highlights the important co-benefits of clean energy in LMI communities, such as positive health impacts, job creation, and sustainable development.[44]

3.2.2 Reforming The Energy Vision

In Governor Cuomo's Reforming the Energy Vision (REV) proceeding, the Commission articulated a new approach to regulation of energy markets, and new business models that create opportunities for customers and other third parties to be active participants, utilizing distributed energy resources (DER) as an integral tool. The Commission's policy to maintain universal, affordable service is a critical driver of the REV initiative.[45]

The REV initiative facilitates opportunities to invest in clean energy and the means to reduce energy costs -- the best solution for all customers, including LMI customers. Greater access to clean energy solutions for LMI customers will empower those for whom these savings may have the greatest value, as well as allowing these customers more choice in how they manage and consume energy. It is also the best way to narrow the affordability gap that needs to be filled with direct financial assistance for customers with low incomes.

In the REV Framework Order,[46] the PSC concluded that ready access to information regarding customer energy usage is vital to the success of DER markets, and directed the utilities to consider near-term measures to enhance access to customer data. During the Distribution System Implementation Planning (DSIP) process that followed, the utilities took stock of customer data accessibility in their service territories, sought stakeholders' perspectives on data issues, and outlined plans for streamlining and standardizing the provision of customer data. This effort culminated in a joint utility proposal for a common path forward on data access, filed with the PSC on November 1, 2016 as part of the

---

[44] New York State Energy Planning Board. *The Energy to Lead: 2015 New York State Energy Plan*. <https://energyplan.ny.gov/-/media/nysenergyplan/2015-state-energy-plan.pdf> The planned 40 percent reduction in greenhouse gas emissions is relative to 1990 levels. The planned 23 percent decrease in energy consumption from buildings is relative to 2012 levels.

[45] Case 14-M-0101, Reforming the Energy Vision, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015).

[46] New York State Public Service Commission. Order Adopting Regulatory Policy Framework and Implementation Plan (Case 14-M-0101). Issued February 16, 2016, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={0B599D87-445B-4197-9815-24C27623A6A0}>

Supplemental DSIP.[47] Among other things, the utilities that intend to deploy automated metering infrastructure (AMI) committed to the following steps:

- Implement a nationwide standard for customer-driven data sharing called Green Button Connect My Data (or a comparable specification);
- Develop a new electronic data interchange (EDI) transaction to provide ESCOs with interval data at the end of the billing cycle;
- Provide bill-quality basic energy usage data in intervals between five minutes and one hour, available on a 24-hour lag; and
- Provide a uniform level of aggregated data including information on kW and/or ICAP, customer counts, and kWh data that is aggregated by zip code and/or tax district, and segmented by rate class.

Additionally, the PSC's REV Track Two Order[48] directed the utilities and NYSERDA to work together to continue developing NYSERDA's statewide Utility Energy Registry (UER), which houses aggregated customer usage data provided by the utilities. NYSERDA has convened a UER working group that will develop potential solutions around reporting standardization, customer privacy, the mode of UER implementation, and cost of implementation.

3.2.2.1 Clean Energy Fund

In a January 21, 2016 Order, the Commission established a 10-year, $5 billion Clean Energy Fund (CEF) to accelerate the growth of New York's clean energy economy, address climate change, strengthen resiliency despite extreme weather, and lower energy bills.[49] The CEF is designed to meet four primary objectives: (1) greenhouse gas emission reductions; (2) affordability, as measured by reductions in customer energy bills; (3) statewide penetration and scale of energy efficiency and clean energy generation; and (4) growth in the State's clean energy economy. The CEF is administered by NYSERDA and is intended to build on the progress already made to date in developing a robust clean energy sector through innovative projects and private-public partnerships and mobilizing private-sector capital. The fund will operate four major portfolios:

- Market Development ($2.7 billion): NYSERDA will undertake a variety of activities to attract and leverage third-party capital, stimulate consumer demand for clean energy alternatives, and help build clean energy supply chains to meet that demand. At least $234.5 million must be invested

[47] Joint Utility DSIP, http://documents.dps.ny.gov/public/MatterManagement/MatterFilingItem.aspx?FilingSeq=170233&MatterSeq=51282.

[48] New York State Public Service Commission. Order Adopting a Ratemaking and Utility Revenue Model Policy Framework (Case 14-M-0101). Issued May 19, 2016, http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={D6EC8F0B-6141-4A82-A857-B79CF0A71BF0}.

[49] New York State Public Service Commission. Order Authorizing the Clean Energy Fund Framework (Case 14-M 0094). Issued January 21, 2016. <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={B23BE6D8-412E-4C82-BC58-9888D496D216}>

in initiatives that benefit low- to moderate-income customers during the first three years of the fund.

- NY-Sun ($961 million): CEF finalizes funding for NY-Sun and confirms a long-term commitment to the solar electric market and industry in New York State.
- NY Green Bank ($782 million): CEF completes the capitalization of the NY Green Bank, increasing the NY Green Bank's total investment to $1 billion.
- Innovation and Research ($717 million): CEF will fund research and technology development that drives clean-tech business growth and job creation while providing more energy choices for customers.

In approving the CEF, the Commission emphasized that the delivery of services to low-income customers will remain a priority and required NYSERDA to invest a minimum of $234.5 million in LMI clean energy programs over the first three years of the CEF. In addition, the Commission directed NYSERDA and the utilities to actively evaluate the delivery of services to low-income customers in order to develop alternative approaches that can improve consumer value.[50]

In February 2016, NYSERDA filed the Resource Acquisition Transition Chapter,[51] which includes $162 million in investments in LMI clean energy programs. In August 2016, NYSERDA filed the LMI Chapter of the CEF,[52] which includes an overview of NYSERDA's strategy for providing clean energy services to LMI households under the CEF. It also includes a summary of funding allocations for the first three years of the CEF, along with investment plans for four LMI-oriented initiatives.[53] The LMI Chapter will be updated, as new CEF investments in LMI initiatives are made.

3.2.2.2 Affordability Proceeding

In January 2015, the Commission opened a proceeding to examine the low income programs offered by the major electric and gas utilities in New York State.[54] The primary purposes of the proceeding were to standardize utility low income programs to reflect best practices where appropriate, streamline the regulatory process, and ensure consistency with the Commission's statutory and policy objectives.

On May 20, 2016, the Public Service Commission issued an order in this proceeding adopting a universal Energy Affordability Policy, which seeks to limit energy costs for LMI New York households to no more than 6 percent of household income.[55] A brief summary of the order follows:

[50] Ibid, p. 28.
[51] NYSERDA. CEF Resource Acquisition Transition Chapter. February 22, 2016. < https://www.nyserda.ny.gov/-/media/Files/About/Clean-Energy-Fund/CEF-Resource-Acquisition-Transition-Chapter.pdf >
[52] NYSERDA. CEF Low-to Moderate Income Chapter. August 18, 2016. < https://www.nyserda.ny.gov/-/media/Files/About/Clean-Energy-Fund/CEF-Low-to-Moderate-Income.pdf>
[53] Retrofit NY, REVitalize, the Low-Income Forum on Energy, and the Healthy Homes Initiative.
[54] Case 14-M-0565, Utility Low Income Programs, Order Instituting Proceeding (issued January 9, 2015) (Instituting Order).
[55] Ibid.

- As an initial step to reaching all eligible households, the Commission directed that utilities open their low income discount programs to all households that currently receive HEAP, regardless of fuel or benefit type.
- A default process of setting benefit levels was established which varies levels of discounts based on need; however, utilities were allowed some flexibility in designing rate discounts. Con Edison and National Grid-NY were specifically allowed to pursue alternative approaches.
- A funding limit was established such that the total budget for each utility may not exceed 2% of total electric or gas revenues for sales to end-use customers.
- Statewide, the enhanced low income discount program will serve approximately 1.65 million customers, at a cost of approximately $248 million, an increase of approximately 87% to existing programs.

In concert with the Commission's adoption of the Energy Affordability Policy, the Governor also directed the formation of a Task Force, to develop new strategies so that all of the state's low income households have greater access to clean energy and are better served by the state's energy efficiency and assistance programs. The Task Force has been meeting regularly in the latter half of 2016, and has made itself available as a resource to the CEAC LMI Working Group.

3.2.2.3 Retail Access

There are currently about 200 energy service companies (ESCOs) eligible to provide electricity and natural gas in New York State. It is estimated that there are about 173,000 low-income ESCO residential electric customers and about 108,000 low-income ESCO residential gas customers. Staff recently compiled data that indicates that for the 30 months ended June 30, 2016, New York State low-income customers who chose to take service from an ESCO paid almost $96 million more than residential customers that elected to take commodity supply from their utility for the same period.

Based on these findings, the Commission issued an Order on December 16, 2016 prohibiting ESCOs from selling electricity and natural gas to low-income customers in New York.[56] The ban is effective 60 days after the Order was issued. In its Order, the Commission determined that a prohibition on ESCO service to low-income customers is necessary to protect those customers who receive a subsidy on their energy bill, and to protect taxpayers and ratepayers who fund the programs that provide those subsidies. The Commission provided a limited window to individual ESCOs that may be willing and able to provide guaranteed savings to these consumers. For those ESCOs who are capable of doing so, the Commission is allowing them to seek a waiver.

[56] Case 12-M-0476, Order Adopting a Prohibition on Service to Low-Income Customers by Energy Service Companies. (Issued December 16, 2016). <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={1803241A-06B8-4B4C-96CA-F6B7C1D64A16} >

3.2.2.4 Community DG

A July 2015 Order established a two-phase process for the Community Distributed Generation (DG) Program. In Phase 1 (October 19, 2015 – April 30, 2016), priority was given to projects that included at least 20 percent low-income participants.[57] Staff also initiated a collaborative to develop means for encouraging low income customer participation and to address obstacles to such participation in Community DG during Phase Two. In Phase 2 (began May 1, 2016), the entire state was open to CDG projects.[58] While initial steps in developing community solar projects began (resulting in many such projects entering utility interconnection queues), actual progress has been slow; no projects entered service during Phase 1 and only a few have entered service in 2016.

In the Order, the Commission directed Department of Public Service Staff (Staff) to initiate a collaborative process involving NYSERDA, low-income community organizers, utilities and other interested stakeholders to identify the main barriers to participation for low-income customers in Community DG and exploring possible solutions. The Collaborative established five working groups — Financing, Energy Usage Data, CDG Customer (Subscriber), Incentives, and Oversight — to examine key barriers to low-income customer participation and develop solutions. A report on the Collaborative' s work was presented to the Commission in August 2016[59], which noted that no consensus on best approaches was achieved and the DPS Staff will develop a whitepaper examining utility ownership of LMI CDG will be forthcoming.

Con Edison recently filed a petition for approval to install solar panels on some of its buildings, and to share the benefits with a group of it low income customers.[60] That petition remains pending before the Commission.

3.2.2.4.1 Value of DER

In December 2015, the Commission instituted a proceeding[61] seeking input on the development of an alternative method of valuing distributed energy resources (DER), particularly solar systems that receive compensation under net metering. This proceeding is still underway. After a year-long collaboration with environmental advocates, utilities, solar and DER providers, and consumer advocates, Staff recently issued for comment a set of initial steps of an ongoing process that will lead to an new methodology for

---

[57] Case 15-E-0082, Community Net Metering, Order Establishing a Community Distributed Generation Program and Making Other Findings (issued July 17, 2015).

[58] Visit www.lowincomesolar.org/models/community-solar-new-york/ for further details.

[59] New York State Public Service Commission. Collaborative Report Regarding Protections for Low-Income Customers of Energy Services Companies (Case 12-M-0476). <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/8A75B07F45E1672485257EDD00602D7C?OpenDocument>

[60] [cite]

[61] New York State Public Service Commission. In the Matter of the Value Distributed Energy Resources, Notice Soliciting Comments and Proposals on an Interim Successor to Net Energy Metering and of a Preliminary Conference (Case 15-E-0751). Issued December 23, 2015. < http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={72C65039-EC54-497A-8D4A-FD0636512C10}>

an increasingly granular pricing. In the transition phase, existing rooftop solar systems would continue to receive compensation under current contracts for up to 20 years of operation.

3.2.2.5 Community Choice Aggregation (CCA)

The Commission initiated consideration of CCA as part of both the REV initiative and its continued review and revision of retail energy markets. The goals of both REV and retail energy market reform include, among other things, increasing the ability of consumers to manage their energy usage and bills, facilitating wider deployment of clean energy, and increasing the benefits of retail competition for residential and small non-residential customers.[62] A Community Choice Aggregation (CCA) program creates these benefits for participating communities.

Under CCA, municipalities are able to form associations to purchase power for residents and small businesses in a single neighborhood or an entire community. When a municipality creates a CCA, every resident is a member of the power purchase association, unless they opt-out. The plan must comply with public comment requirements. Utilities are required to share certain and applicable customer data with a CCA, but that data does not include phone numbers or whether the customer is LMI.

3.2.2.6 REV Demos

Demonstration projects are a transition step in implementing REV policy changes, and are intended to inform decisions with respect to developing distributed system platform functionalities, measuring customer response to programs and prices associated with REV markets, and determining the most effective implementation of DER. These projects are also a means of presenting REV to customers and gauging their receptiveness to REV technologies, products, and services. Data collected from these projects will help inform regulatory changes, rate designs, and the most effective means to integrate DER on a larger scale.

A total of 11 projects are being actively implemented, including several that focus on community and LMI customer engagement. National Grid's "Fruit Belt" REV Demo seeks to install up to 100 residential rooftop solar systems within the Buffalo "Fruit Belt" neighborhood to provide 150 LMI customers with monthly net-metering credits.[63] National Grid also plans to partner with the Town of Clifton Park and clean energy providers to offer programs and pricing signals designed to manage usage and reduce peak demand and energy bills. NYSEG's Community Energy Coordination Project aims to aggregate local demand for clean energy technologies, organize a bulk purchase from third-party providers on behalf of customers, and target outreach to areas where DER provides the greatest system benefits.

[62] Case 14-M-0101, Reforming the Energy Vision, Order Instituting Proceeding (issued April 25, 2014); Case 12-M-0476 et al., Residential and Small Non-Residential Retail Energy Markets, Order Instituting Proceeding and Seeking Comments Regarding the Operation of the Retail Energy Markets in New York State (issued October 19, 2012).
[63] National Grid is also partnering with NYSERDA to integrate energy efficiency improvements for the homes that either host PV or receive the net metering bill credit.

4. LMI Clean Energy Initiatives in New York State

Across New York State, more than $700 million in public funds are spent on delivering clean energy and bill payment assistance initiatives that support the LMI market segment, each year. These initiatives include both ratepayer-funded programs administered by NYSERDA and the utilities and federally-funded programs such as the Home Energy Assistance Program (HEAP) and the Weatherization Assistance Program (WAP).[64] Combined, these programs provide clean energy services to approximately 16,000 households, nearly 200 affordable multifamily buildings and bill payment assistance to 1.65 million households on an annual basis. Ratepayer-funded initiatives represent over $300 million in spending annually, with $248 million being directed at bill payment assistance through the utilities, $38 million going towards no-cost energy efficiency improvements for low-income households, $18 million for affordable multifamily initiatives, $7 million for affordable new construction, and $10 million for renewable energy.

Beyond incentives for clean energy projects, there are several other initiatives that help facilitate LMI clean energy projects and contribute to the reduction of energy burden of LMI customers. Outreach and education help consumers make more informed energy decisions and can help them learn about available programs; by working through community based organizations and addressing community-level energy needs, programs can address access and energy burden issues; and low-interest financing options can help to overcome capital constraints for some LMI customers and building owners.

Table 8: Summary of Low-Moderate Income Energy Programs in NYS

Program	Income Threshold	Service Provided	Target Audience	Program Administrator	Annual Funding Level[65]
Utility Low-Income Program	60% SMI	Bill payment assistance	Utility customers that pay directly for their energy	Utilities	$248 million[66]
EmPower NY	60% SMI	Energy Efficiency	Homeowners and renters	NYSERDA	$30 million
National Fuel Gas LIURP	60% SMI	Energy Efficiency	Homeowners and renters	NYSERDA	$6 million
National Grid/KEDLI Low Income Program	60% SMI	Energy Efficiency	Homeowners and renters	National Grid	$1.9 million
Residential Energy Affordability	60% SMI	Energy Efficiency	Homeowners and renters	PSEG	TBD

[64] The focus of this report is on the ratepayer-funded programs, however HEAP and WAP are included to provide a more comprehensive picture of LMI energy initiatives within New York State.
[65] Annual funding levels are based on estimated 2016 program budgets.
[66] The utility low-income program funding level is based on that established in the New York State Public Service Commission's Proceeding on Motion of the Commission to Examine Programs to Address Energy Affordability for Low Income Utility Customers (Order 14-M-0565). Issued January 9, 2015. < http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={B9477FFE-87E4-427F-937A-12E490920EEB}>

Partnership (REAP) Program					
Assisted Home Performance with ENERGY STAR	greater of 80% AMI or SMI,	Energy Efficiency	Home owners (1-4 family)	NYSERDA	$10 million
Multifamily Performance Program (LI)	80% AMI	Energy Efficiency	Affordable MF building owners and property managers	NYSERDA	$11 million
ConEd Multifamily Energy Efficiency Program	80% AMI	Energy Efficiency	Affordable MF building owners and property managers in ConEd service territory	Con Ed	$4 million[67]
RetrofitNY	80% AMI	Building Performance	Affordable MF building owners; A&E and construction firms; and manufacturers	NYSERDA	$3 million
NYSERDA New Construction	80% AMI	Building Performance	Affordable housing builders and developers	NYSERDA	$7 million
Affordable Solar (Rooftop PV)	80% AMI	Renewable Generation	Homeowners	NYSERDA	$7 million[68]
Affordable Solar Pre-Development	80% AMI	Renewable Generation	Developers	NYSERDA	$3.6 million[69]
Weatherization Assistance Program	60% SMI	Energy Efficiency	Homeowners and renters	NYS HCR	$60 million
Home Energy Assistance Program	60% SMI	Bill payment assistance	Low-income consumers that pay for their heating needs	NYS OTDA	$330 million

4.1 Energy Efficiency Initiatives

4.1.1 EmPower New York

The EmPower NY program provides no-cost energy efficiency services to households at or below 60 percent of the State Median Income. The program is administered by NYSERDA, is funded through the Clean Energy Fund, and is delivered by a network of more than 200 energy efficiency and weatherization contractors across the State. Improvements provided at no-cost include insulation, air sealing, health and safety measures, efficient lighting replacement, and replacement of inefficient appliances. Each home receives a comprehensive energy audit and in-home energy education to inform customers on options for saving energy within their home. The program closely coordinates with the Weatherization Assistance Program (WAP) in the delivery of energy efficiency services.

[67] Based on an estimate of 20% of program activity being directed at affordable buildings.
[68] $7 million is a total funding level for the initiative.
[69] The funding level for the Affordable Solar Pre-Development initiative is for the duration of the initiative.

Homeowners and renters are eligible, however rental properties require landlord cost share and approval to install intrusive measures such as air sealing or insulation. Customers are primarily enrolled through utility referral, however there are paths for customers to apply or be referred from other entities such as CBOs and contractors. The average project costs approximately $4,000,[70] including both whole-house efficiency upgrades and projects that include electric reduction services only. The higher costs for this type of program, relative to rebate programs, limits the number of customers that can be served each year. Since 2004, the program has served more than 125,000 units, saving customers an average of $400 a year, including comprehensive and electric reduction projects. EmPower is currently funded at nearly $30 million a year, and is projected to serve 8,750 households annually.[71] Feedback from consumers in the focus groups indicate that EmPower has been successful in lowering their energy costs.

4.1.2 National Fuel Low-Income Usage Reduction Program

The Low-Income Usage Reduction Program (LIURP) was initiated in September 2007 by National Fuel Gas (NFG) to provide weatherization and energy efficiency services to their low-income customers. NFG has partnered with NYSERDA to deliver the LIURP through the EmPower NY program to leverage the program infrastructure that already existed. Participants receive an energy audit and in-home education and may also receive air sealing, insulation, heating system tune up, and other thermal reduction measures. Because the program is administered with EmPower NY, NYSERDA can bring electric reduction resources to LIURP participants, providing opportunities for comprehensive energy efficiency improvements. To date, over 7,600 NFG customers have received services under LIURP, and the initiative is currently funded at approximately $6 million a year.

4.1.3 KEDLI Low-Income Energy Efficiency Program

Low-income customers in the KEDLI service territory had been provided energy efficiency services through the EmPower NY program under EEPS. With the transition to the CEF, the Commission ordered that NYSERDA continue to serve low-income KEDLI customers through EmPower through 2016, and for NYSERDA and KEDLI to pursue alternatives to providing low-income energy services in 2017 and beyond.[72] In late 2016, KEDLI issued a solicitation to procure a vendor to deliver services. The company expects that the energy efficiency program will include a four tier approach: customer outreach, marketing and education will occur in Tier I. Tier II will include a Home Energy Assessment, a Health and Safety Test and the direct installation of several energy efficiency measures such as faucet aerators, low-flow shower heads, thermostats, pipe wrap, etc. Tier III will include energy efficiency measures recommended in the Home Energy Assessment and Health and Safety Check such as weatherization measures, heating and hot water system repairs and replacements. Tier IV will allow for

[70] Inclusive of incentives and implementation costs.

[71] More than 15,000 households were served in 2015, and NYSERDA is projecting over 13,000 households will be served in 2016. At the end of 2014 and in 2015, EmPower received infusions of uncommitted EEPS funds and were in the middle of a planned ramp up in production, as such annual budgets for these years were significantly higher than they were in previous years. The budget under the CEF, approximately $30 million a year, will be similar to the program budgets in 2012 and 2013.

[72] New York State Public Service Commission. Order Authorizing the Clean Energy Fund Framework (Case 14-M 0094). Issued January 21, 2016

health and safety and resiliency work that may prevent a customer from receiving energy efficiency services. This will be a collaborative effort with local human service agencies, the electric utility and local contractors to provide customers with comprehensive coordinated services. The company expects to serve approximately 2,000 customers a year, with an annual budget of $1.9 million.

4.1.4 Residential Energy Affordability Partnership (REAP) Program

The REAP program is a direct install program offered at no charge to PSEG Long Island customers with an annual income at or below 60% SMI. Services include an energy audit, the replacement of inefficient lighting, low-flow devices, and pipe insulation. Starting in 2017, the customers will also be eligible for shell measures to reduce thermal load, attic and wall insulation. In addition, participants are guided to other non-PSEG Long Island services that can help them with special needs. 60,324 households have been served to date. PSEG estimates that approximately 2,000 households will be served in 2017.

4.1.5 Assisted Home Performance with ENERGY STAR

The Assisted Home Performance with ENERGY STAR (AHPwES) program is a whole-house energy efficiency program, administered by NYSERDA and funded through the CEF. The program provides incentives for energy efficiency upgrades for households that have an annual income up to 80% of AMI or SMI, whichever is higher, that also pay into the CEF. Eligible customers receive a discount covering 50 percent of the cost of eligible energy efficiency improvements[73] up to $4,000 per project for single-family homes. Two- to four-unit residential homes with income-eligible residents may qualify for a discount of up to $8,000. In addition, customers are eligible for a no-cost energy audit and can access low-interest financing options through Green Jobs- Green New York (GJGNY).

This program serves an important service, as it address the need for financial support for customers that are over the income eligibility threshold for no-cost energy efficiency services that are available through EmPower NY. Nearly 28,000 homes have received energy efficiency services through AHPwES, since program inception, with an average annual bill savings of nearly $500. For the time period 2016 through 2018, the program is funded at $8 million a year and is projected to serve approximately 1,600 homes on an annual basis.

4.1.6 Multifamily Performance Program

NYSERDA's LMI component of the Multifamily Performance Program (MPP) addresses cost barriers experienced by owners LMI properties when implementing clean energy upgrades. The program also increases the awareness of and access to energy efficient solutions for LMI properties by supporting a network of firms that promote the program and clean energy opportunities in affordable multifamily buildings. The program was launched in 2005,[74] based on the Assisted Multifamily Program, and is currently funded through the CEF. MPP has undergone several program design modifications since

[73] Eligible measures for the AHPwES program can be found here: http://www.energyfinancesolutions.com/sites/energyfinancesolutions.com/files/pdfs/hpwes-eligible-measures-and-accessories.pdf

[74] In 2005, MPP started by incentivizing affordable new construction and began offering incentives for existing buildings in 2007.

inception, and in 2015, applications for new projects were temporarily suspended as a result of high demand for incentives. A redesigned MPP was relaunched in April 2016, offering two options for buildings to improve their energy performance: a targeted option that provides incentives for single measure installations with no minimum energy reduction target, and a comprehensive option that provides incentives for work scopes designed to achieve at least 25 percent whole-building source energy savings. In addition, a high performance offering that provides incentives for deep energy retrofit projects will be made available through a competitive solicitation, to be released in 2017.

To date, the MPP has facilitated energy efficiency upgrades to over 780 affordable multifamily buildings, touching over 120,000 dwelling units. In addition, the program has contributed to the high performance new construction of 400 affordable multifamily buildings, encompassing over 30,000 units. This initiative allocates a total of $34 million for the period of 2016 through 2018 across the three options. Under the CEF, NYSERDA has a goal to touch approximately 70,000 affordable units through MPP, however since the program re-launch uptake has been slow. NYSERDA is currently examining opportunities for making program modifications to increase uptake of the program.

4.1.7 Con Edison Multifamily Energy Efficiency Program

Through the Multifamily Energy Efficiency Program, Con Edison provides in unit and common area direct install measures at no cost for both market rate and affordable multifamily buildings. Affordable buildings are eligible for in-unit direct install measures including LED lighting, low-flow devices, and thermostatic radiator valves. Other no-cost measures include air sealing and boiler clean and tunes. Building surveys and custom assessments are also provided at no cost to the building owner. Additional electric and gas measures are eligible for incentives.[75]

Affordable housing customers must show proof of subsidy or rent roll and can receive higher incentives. The program has been in operation since 2010, with total electric and gas budgets both the affordable and market rate components equaling $21 million a year. The Program has served 6,000 buildings with 94,000 MWh and 975,000 Dth in savings since inception. For calendar year 2016, 1,200 buildings received services with savings estimates of 30,000 MWh and 150,000 Dth. ConEd estimates that 20% of program activity is attributable to affordable multifamily buildings.

4.1.8 NYSERDA New Construction

NYSERDA's new construction program promotes high performance for affordable low-rise and high-rise multifamily new construction projects. Support includes financial incentives to overcome the incremental cost of building to a higher performance threshold, such as passive house or net zero energy standards; providing technical assistance, tools and resources to builders, developers, architects, and engineers on high performance new construction techniques, with an emphasis on integrated design solutions and pre-development cost reductions; and strengthening the capacity of clean energy partners in the building design, construction, and performance verification. This initiative allocates a total of $21 million for the period of 2016 through 2018.

[75] Visit www.coned.com/energyefficiency/residential_multifamily.asp for details.

4.1.9 RetrofitNY

Through RetrofitNY, NYSERDA seeks to develop a sustainable market for deep energy retrofits in multifamily buildings. scalable and financeable. Starting with the affordable housing sector, NYSERDA will work with A&E firms, manufacturers, and construction entities to develop scalable technical solutions to enable the deep retrofit of occupied multifamily buildings to approach net-zero levels of energy performance. Substantially reducing the energy consumed by multifamily buildings will result in operational cost reductions for building owners, which will help preserve affordability for tenants. In addition, deep retrofits will deliver positive impacts on resiliency, tenant comfort and health.

To facilitate the development and adoption of the technical solutions, NYSERDA will organize design and build competitions and will test the best solutions through pilot activities, where design solutions will be refined. To enable large scale implementation of successful designs, NYSERDA will identify and address regulatory issues, facilitate the development of new private sector financing products, and work to develop the New York supply chain for high-efficiency building components.

RetrofitNY is funded through the CEF, with a budget of $30 million over 10 years. The investment plan[76] for the initiative was approved by DPS Staff in August 2016 and NYSERDA expects activities to launch in 2017.

4.1.10 Utility Rebates

In addition to the ratepayer-funded programs directed towards the LMI segment, LMI customers are also eligible to participate in utility rebate programs. Each utility offers rebates on energy efficient appliances and services. While utilities do not track the level of LMI participation in rebate programs, anecdotal evidence suggests that participation is low, primarily due to the fact that rebates require a cash contribution. In other cases, renters may not have the ability to participate in the utility rebate programs because appliances are provided by the landlord.

4.2 Renewable Energy Initiatives

4.2.1 Affordable Solar Incentives

Affordable Solar, administered by NYSERDA, is part of NY-Sun and provides incentives to help lower the cost of installing rooftop solar for LMI customers. For homeowners[77] with total household income less than the higher of 80% of AMI or SMI, the program doubles the current NY Sun incentive for solar electric system installations. Homeowners may also access Green Jobs, Green New York low-interest financing to finance the balance of the project. Affordable Solar has a total budget of approximately $7 million and is funded out of the $13 million of NY Sun funds that were approved by the Commission to be used to support increased participation by LMI customers in solar PV. Since the launch of the initiative in October 2015, 130 installations have been completed or approved, and an additional 30 projects have submitted an application.

[76] NYSERDA. *Low-to Moderate Income Chapter*. August 18, 2016. < https://www.nyserda.ny.gov/-/media/Files/About/Clean-Energy-Fund/CEF-Low-to-Moderate-Income.pdf>

[77] Customers must own and occupy a 1-4 family home to be eligible for incentives through Affordable Solar.

4.2.2 Affordable Solar Predevelopment and Technical Assistance

In December 2016, NYSERDA announced the availability of predevelopment funding to address resource gaps and market barriers that prevent the development of solar installations serving LMI households through the Affordable Solar Predevelopment and Technical Assistance solicitation. To help expand access to the benefits of solar to LMI households, funding will be awarded through an open solicitation to support the projects that lead to the implementation and operation of solar installations for multifamily affordable housing and shared solar installations that provide access to LMI households. The predevelopment and technical assistance is funded through the $13 million of NY Sun funds that were approved by the Commission to be used to support increased participation by LMI customers in solar PV. This initiative has a total budget of $3.6 million.

4.2.3 Additional Incentives through NYSERDA and Utility Programs

NYSERDA programs such as Home Performance with ENERGY STAR and NY-Sun, and utility rebate programs offer incentives or access to low-interest financing to install renewable technologies such as geothermal heat pumps, air source heat pumps, and solar thermal water heating. While not specifically targeted at LMI households, LMI customers are eligible to participate. Program administrators do not track participation by income level, as such it is difficult to estimate the level of LMI participation, but similar to the utility energy efficiency rebates, it is believed that there is not much LMI uptake as a result of the cost share requirements and the fact that renters are not likely to invest in clean energy upgrades that involve the installation of equipment or appliances.

4.3 Financing

4.3.1 Green Jobs - Green New York/On-Bill Recovery

Customers can finance energy efficiency, PV, and solar thermal installations through the Green Jobs - Green New York (GJGNY) revolving loan fund. The GJGNY financing program includes two low-interest loan products, that are subsidized for LMI customers: a Smart Energy Loan, an unsecured loan that is repaid in installments to NYSERDA's loan servicer; and an On-bill Recovery (OBR) Loan,[78] repaid through an installment charge on the customer's utility bill.[79] OBR loans have strict cost-effectiveness requirements associated with them, meaning that on average, the annual cost of the energy improvements are no more than the projected bill savings to achieve a "bill neutral" approach to financing. Both loan options offer expanded credit qualification criteria, a Tier 2 option, for applicants that do not qualify for a loan based on more traditional criteria to qualify for GJGNY loans.

[78] The Power NY Act of 2011 established the on-bill recovery financing mechanism and increased maximum loan limits for residential loans to $13,000, if the simple payback is less than 15 years, the maximum value of the loan can be $25,000.

[79] Specific detail on the loan products can be found online at: http://www.energyfinancesolutions.com/sites/energyfinancesolutions.com/files/pdfs/residential-loan-information-sfr-hp-prodinfo-fs-1-v3.pdf

The New York State 2015-2016 budget bill required NYSERDA to take steps to encourage and increase participation of and issuance of loans to LMI households under GJGNY and to establish a working group (GJGNY LMI Working Group) to provide recommendations on options for increasing participation of LMI households in GJGNY.[80] The GJGNY LMI Working Group identified a number of barriers to accessing the GJGNY financing options by LMI customers[81] and also addressed the sustainability of the loan fund.

While subsidized interest rates and alternate qualification criteria help address the gap for financing for LMI households, there are concerns about the sustainability of the loan fund. The combination of the low interest rates, long loan terms, and an increasing rate of demand for loans for higher income borrowers has an impact on the ability of the loan fund to continue to lend at low-interest rates. The interest rate is not adequate to cover the full cost of providing the loans and the rate of replenishment of the loan capital is not adequate to keep up with demand for new loans. To address the sustainability of the loan fund, NYSERDA implemented modifications to the interest rates for GJGNY finance products in September 2016, increasing the interest rates for higher income households.

Through October 2016, NYSERDA reports that 17,690 residential GJGNY Loans have closed, 12,373 have been for residential energy efficiency projects.[82] 32 percent of the energy efficiency loans have gone to Assisted HPwES customers, representing 23.9 percent of the total loaned funds. Of the loans closed for Assisted HPwES customers, 28.7 percent met Tier 2 qualification standards. Since the launch of OBR, 25.6 percent of the Assisted HPwES customers who access financing use OBR Loans.

4.3.2 New York Green Bank

Administered by NYSERDA, NY Green Bank is a state-sponsored investment fund dedicated to overcoming current obstacles in clean energy financing markets and increasing overall capital availability through various forms of financial support. NY Green Bank partners with private-sector clients to address and alleviate specific gaps and barriers in current clean energy capital markets through a variety of approaches and transaction structures. NY Green Bank is market responsive in the solutions it provides, although there are several "product types" frequently requested from NY Green Bank to address gaps and barriers in clean energy financing markets, including: credit enhancements to mitigate perceived financial risks; warehousing/aggregation of smaller projects on a short-term basis in order to build larger portfolios which are more attractive to many private sector capital providers; asset loans and investments to support long-term financial products; and, composite products to combine various financial products in one transaction. Additional information on these products can be found on NY Green Bank's website.

[80] Green Jobs- Green New York Low to Moderate Income (LMI) Working Group Recommendations. September 2015. <https://www.nyserda.ny.gov/-/media/Files/EDPPP/GJGNY/Advisory-Council-Updates/GJGNY-LMI-Working-Group-Recommendations.pdf>

[81] Ibid.

[82] Comprising of 12,373 Home Performance with Energy Star® (HPwES) loans, 5,298 Photovoltaic (PV) loans, 10 Solar Thermal (ST) loans and 9 Renewable Heat NY (RHNY) loans. Of the 17,690 total loans closed, 15.6 percent are Tier 2 customers, representing 15.2 percent of the total funds, while 84.4 percent are Tier 1 customers representing 84.8 percent of the funds.

With regard to support for LMI initiatives, NY Green Bank has been in touch with several counterparties to explore opportunities. One area that has been explored would entail working with local lenders, Community Development Financial Institutions (CDFIs) and regional banks to extend credit to a project sponsored for low-income households for the purpose of subscribing to a Community DG project. NY Green Bank could perform a "warehousing" function in advance of the potential development of a secondary loan market for Community DG equity share purchasing loans to LMI consumers. Another option -- one that has been suggested to NY Green Bank by a number of counterparties – is to provide credit enhancement for LMI customers as one part of a broader portfolio of end users being built out by a sponsor or project developer.

4.3.3 Property Assessed Clean Energy (PACE)

Property Assessed Clean Energy (PACE) is a financing mechanism that enables low-cost, long-term funding for energy efficiency and renewable energy projects that is repaid through an assessment on the property's tax bill. PACE financing has been available for commercial properties in New York,[83] but residential PACE has not been an option until recently. Due to concerns of mortgage lenders including Freddie Mac and the Federal Housing Finance Agency, that the PACE assessment would subordinate the mortgage, PACE was not an option for homeowners. However, in July 2016, the HUD issued guidance that enabled residential PACE financing and outlining how properties with PACE assessments can be purchased or refinanced with Federal Housing Administration (FHA) insurance. The HUD guidance allowed the PACE assessment to become subordinated to mortgages, and stay with the property. While residential PACE has not yet been adopted in New York State, it may provide another option to address finance barriers for all homeowners, including LMI.

4.4 Community Approaches

4.4.1 Green Jobs, Green New York

The GJGNY Program delivers services in targeted communities with the support of Constituency-Based Organizations (CBOs). NYSERDA currently has contracted with 12 constituency-based organizations to help homeowners, renters, small businesses, not-for-profit organizations, and multifamily building owners through the process of improving energy efficiency of their home or building. CBOs typically assist homeowners in the application process for programs and financing, and help to identify additional resources that may be necessary for the home to undergo energy efficiency improvements.

4.4.2 REVitalize

Through REVitalize, NYSERDA will provide technical assistance to community-based organizations representing low-income or environmental justice (EJ) communities for the implementation of a community-scale clean energy project. Through this initiative, NYSERDA expects to develop replicable models for ownership and finance of these projects. REVitalize was approved by DPS in August 2016, NYSERDA anticipates a launch of early 2017.

[83] Multifamily projects could be considered for commercial PACE.

4.4.3 Solarize

Solarize campaigns are locally organized community outreach efforts aimed at getting a group of homes and businesses in one area to go solar. When groups of neighbors learn about solar and the installation together, they can often get better pricing and share the tasks. Group members can contribute their strengths and learn new skills. NYSERDA provides technical assistance, marketing materials, and other support for these efforts. Solarize is part of the NY-Sun Incentive Program. While solarize campaigns are not necessarily targeted at LMI communities, LMI customers can take advantage of the initiative to receive lower-cost solar installations. To date, NYSERDA has one round of Solarize campaigns complete, resulting in over 1,000 solar PV installations through 54 Solarize campaigns across the State. So far, two Solarize projects have qualified for the Affordable Solar incentive, however NYSERDA anticipates increased LMI participation in the second round of Solarize campaigns.

4.5 Energy Education and Literacy

4.5.1 Consumer Education Program for Residential Energy Efficiency

NYSERDA established an energy literacy and awareness campaign "Consumer Education Program for Residential Energy Efficiency (CEPREE)" in 2002. CEPREE is designed to raise awareness, educate the general public, with an emphasis on the low-income population, and increase the adoption of energy efficiency behaviors and practices at home, at work and within communities. CEPREE is implemented through a series of no-cost workshops that are open to the public, and targeted at LMI customers. From October 2002 through February 2016 there were 7,275 workshops across the State, with 82,404 attendees.[84] In the consumer focus groups conducted by the LMI Working Group, many consumers mentioned the value provided by these workshops.

4.5.2 Low-Income Forum on Energy

The Low-Income Forum on Energy (LIFE) initiative was established by the PSC in 1998, as New York prepared to move to a more competitive retail electric market. The PSC recognized the importance of identifying, discussing, and addressing issues of particular concern for low-income consumers given the changing energy marketplace. To that end, the PSC established LIFE to provide a forum for public dialogue on these issues and to assess the intended and unintended consequences of energy policy decisions on the low-income population. The initiative is administered by NYSERDA in partnership with the NYS DPS, and is guided by a Steering Committee comprised of 22 organizations that represent program administrators, community-based organizations, utilities, and advocates. The initiative provides a venue for information exchange and collaboration by hosting meetings and conferences, webinars, and distribution of an electronic newsletter.

4.5.3 Consumer Education and Outreach through Utility Companies

Utilities have implemented outreach and education programs for decades. These programs provide customers with information on their rights and responsibilities, ways to reduce energy usage, and availability of budget billing, deferred payment arrangements and other options available to help

[84] 68% of workshop attendees self-reported that their annual income was at or below $30,000.

customers manage their utility bills. Clean energy technologies are driving a shift to a more consumer-centric business model; however, residential customers still struggle to understand or become motivated to participate in clean energy programs. Consumer education consequently must be a higher priority for utilities today than it has been in the past.

In addition, for LMI households, increasing energy literacy can be a key to maintaining utility service. Low income energy education, including counseling in household budgeting and financial management, energy savings actions, and information on how to participate in clean energy projects, helps engage and involve the customer in the process, and can have a lasting impact on affordability.

5. LMI Clean Energy Initiatives in Other Jurisdictions

In addition to assessing the current approaches for delivering LMI clean energy services in New York State, the LMI Working Group also reviewed several initiatives being implemented in other jurisdictions. While not exhaustive, the following provides an overview on how other states and utilities are delivering clean energy services to LMI customers.

5.1 Mass Saves

Mass Save is an initiative sponsored by the Massachusetts natural gas and electric utilities and energy efficiency service providers. Massachusetts legislation requires investor owned utilities to collect money from customers to provide energy efficiency services with the goal of providing benefits to ratepayers and reducing the need for new power plants. Participating in the Mass Save energy efficiency program is one way to access these energy efficiency funds. The Low-Income Multi-Family (LIMF) program is part of Mass Save and offers energy efficiency improvement or replacement opportunities for residential multi-family facilities with five (5) or more dwelling units.

The LIMF Program is funded and overseen by the Massachusetts Energy Efficiency Program Administrators (PAs) – electric and gas investor-owned utilities, and energy efficiency service providers, including: the Berkshire Gas Company, Cape Light Compact, Columbia Gas of Massachusetts, Eversource, National Grid, Liberty Utilities, and Unitil. The Sponsors of Mass Save work closely with the MA Department of Energy Resources to provide a wide range of services, incentives, trainings, and information promoting energy efficiency that help residents and businesses manage energy use and related costs.

As a low-income energy efficiency program, the LIMF Program is managed and operated collaboratively by the Low-Income Energy Affordability Network (LEAN) and the PAs. This arrangement means that daily operations of the program are handled by LEAN and its member Lead Agencies while program standards, policies, and evaluations are developed jointly by LEAN and the PAs.

5.2 California Multifamily Affordable Solar Housing (MASH) and Multifamily Affordable Solar Housing Roofs (MAHSRP) Programs

In California, the Multifamily Affordable Solar Housing (MASH) Program[85] launched in 2009 along with its sister program, the Single-Family Affordable Solar Homes (SASH) Program.[86] These programs provide up-front incentives for multifamily affordable housing solar installations with a primary purpose of maximizing economic benefits to low-income tenants and maximizing benefit to ratepayers. MASH/SASH were financed using 10 percent of the overall $2.2 billion budget from the ratepayer-funded California Solar Initiative. If low-income customers pay into solar program's incentive pool as ratepayers or taxpayers, low-income incentives should be created in proportion to their contribution to the incentive pool. This approach forms the backbone of SASH and MASH and ensures that all ratepayers who contribute to the solar initiative, including low-income families, also have equitable access to receive the benefits of the program.

The MASH program provides fixed, up-front, capacity-based incentives for qualifying solar energy systems on affordable multifamily dwellings. The amount of the incentive depends on which Track the applicant is eligible for. Requires participants who receive monetary incentives to enroll in the Energy Savings Assistance (ESA) program, if eligible. Provides job training and employment opportunities in the solar energy and energy efficiency sectors of the economy.

Currently MASH is closed to new applications. Recent highlights and milestones of the program include[87]:

- 25.7 MW of solar capacity is now interconnected across 370 projects statewide that serve multifamily affordable housing.
- More than $83 million in incentives have been paid to completed projects; an additional $46 million is reserved for pending projects.
- There are now over 6,880 tenant units participating in Virtual Net Metering thanks to the MASH program.

In 2015, the Multifamily Affordable Housing Solar Roofs Program (MAHSRP)[88] was established to extend low-income multifamily solar options beyond the existing MASH program. Similar to MASH, the MAHSRP uses up-front rebates to reduce the cost of installing solar, but requires that the systems provide direct economic benefits to tenants. It is funded by the California Climate Investments fund (cap-and-trade revenues). The MAHSRP – the largest dollar investment for low-income multifamily solar to date – is being implemented starting in 2016 with California Public Utilities Commission oversight. The program will be up and running no later than June 30, 2017 and will provide incentives up to December 31, 2030 for qualified deed-restricted multifamily properties.[89]

[85] http://www.cpuc.ca.gov/General.aspx?id=3752
[86] http://www.cpuc.ca.gov/General.aspx?id=3043
[87] http://www.cpuc.ca.gov/General.aspx?id=3752
[88] https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB693
[89] http://www.lowincomesolar.org/models/multi-family-california/

5.3 Colorado- Low-Income Community Shared Solar Demonstration Project and Xcel Energy Renewable Energy Compliance Plan

In 2015, the Colorado Energy Office (CEO) launched a low-income community shared solar demonstration project[90] designed to demonstrate the viability of community solar models that serve low-income households. The demonstration will include at least 5 projects totaling over 1 megawatt of installed solar capacity to serve at least 300 low-income families. The CEO investment is leveraged with utility investment for each project, at a ratio of two dollars for each dollar of CEO grant funding invested. In-kind contributions may also be included in the leveraged ratio. While the details will vary project by project, each project will result in significant savings to low-income subscribers. The community solar installations will also provide an estimated 2,000 hours of hands-on solar job training to local workers.[91]

On November 9, 2016, the PUC voted to approve a settlement that will make at least 20 MW of low-income rooftop and community solar available in Colorado for 2017-19.[92] The Xcel Energy settlement is comprehensive, offering solar developers access to incentives and creates structures to encourage workforce development and job training.

Additionally, Colorado is first state to integrate rooftop solar into their Low-Income Weatherization Assistance Program (WAP).[93]

5.4 California Low-Income Weatherization Program

California has a program[94] that combines the use of Low Income Weatherization Program funds and Cap & Trade greenhouse gas reduction funds to provide efficiency and solar (PV and thermal) to large affordable multifamily buildings. Energy analysis and benchmarking of buildings is provided for free by the program, which serves buildings with 20 or more units (a waiver is possible for buildings with fewer units). The program provides funds to properties that meet affordability requirements of having 2/3 of households at or below 80% Area Median Income and that are located in specific "disadvantaged communities," which have been identified using census tract data. The program provides incentives for efficiency and solar although property owners are expected to contribute capital as well. Efficiency measures must equate to at least a 15% modeled energy savings above existing conditions and can be for common area and/or in-unit upgrades with lower incentives for reducing owner energy bills versus tenant energy bills. The incentives are provided to the property owner after completion of the work.

[90] https://www.colorado.gov/pacific/energyoffice/community-solar
[91] https://www.colorado.gov/pacific/energyoffice/community-solar and http://www.lowincomesolar.org/models/community-solar-colorado/
[92] Docket 16A-0139E Decision No. C16-1075
[93] http://www.renewableenergyworld.com/articles/2016/08/colorado-launches-first-low-income-rooftop-solar-power-project.html
[94] https://camultifamilyenergyefficiency.org/

5.4 California Solar Initiative-Thermal Program Low-Income Program

The California Solar Initiative Thermal Program[95] (thermal program) provides incentives to offset the cost of solar thermal hot water heating that displaces natural gas. A minimum of 10 percent of the total budget is allocated to low-income projects. Single family and multifamily projects are eligible for incentives that cap out at $3,750 for single family, and $500,000 for multifamily installations.
To be eligible, single family households must have previously participated in an energy assistance program and the home must be occupied by the homeowner. Rental properties must meet the definition for low-income property in the Public Utilities Code. For multifamily properties, at least half of the units in the building must have previously received energy assistance and benefits of the solar thermal installation must be passed on to the tenants in the form of lower energy costs.

Since 2010, there have been 671 multifamily installations and 224 single family installations that are low-income, compared to the total 4,059 installations incentivized by the program.

6. Best Practices for Providing Services to LMI Customers

To inform the development of this report, the LMI Working Group conducted a literature review of best practices for delivering clean energy services to LMI customers. There can be many factors that influence the design and delivery of LMI clean energy initiatives including regulatory and policy objectives, demographic and geographic distribution of the LMI population, and energy prices; however, there are general principles for the effective delivery of LMI initiatives that should be considered when examining options for delivering LMI clean energy services. The following best practices have been identified by researchers and other stakeholders to achieve the greatest impact of LMI clean energy initiatives, with respect to reaching the targeted population, engaging affordable building owners and property managers, and making the most of energy and bill savings.

Target high usage program participants.[96] By targeting resources at LMI customers that have the highest energy use, programs can maximize savings and ensure that resources are being directed at customers with high potential for energy savings.

Encourage a whole-building approach, with a wide range of eligible measures.[97] Installing or improving multiple measures in a building can also provide the added value of interactive effects, for instance a project that combines insulation with a high efficiency heating system is likely to realize greater savings than it would if the heating system was installed alone. To achieve this greater level of energy savings and to address all potential opportunities for energy savings, LMI energy programs should offer a wide range of eligible measures. In addition, incentives should be structured to encourage a whole-building approach.

---

[95] http://www.gosolarcalifornia.ca.gov/solarwater/low_income_solar_water.php

[96] "Barriers and Solutions to Achieving Potential Savings in Whole House Low-Income Weatherization Programs." APPRISE. http://www.appriseinc.org/wp-content/uploads/2016/05/IEPEC-Barriers-and-Solutions.pdf

[97] "Building Better Energy Efficiency Programs for Low-Income Households." ACEEE, March 2016. and "Energy Efficiency Programs in Multifamily Affordable Housing" Energy Efficiency for All, May 2015

Ensure that major measures are installed where opportunities exist and that missed opportunities are minimized.[98] In a study on solutions for achieving potential savings in whole house weatherization programs, APPRISE found that household energy savings increased with the number of major measures[99] installed.

Facilitate access to additional resources.[100] To address the homes structural issues and other needs that the customer might have, program administrators should connect customers with other social service programs and organizations.

Include customer energy education strategies.[101] Energy education is important to make customers aware of available programs, to maximize energy and bills savings achieved through energy efficiency programs, and to influence the behavior of the customer.

Support a "one-stop" where customers and building owners can access program services.[102] A "one-stop" shop can simplify program enrollment and participation, increasing the likelihood that clean energy projects are implemented. The "one-stop" shop can facilitate program participation by providing participants with a single point of contact, providing assistance to navigate eligibility and application processes, as well serving as a trusted resource on clean energy opportunities.

Coordinate efficiency and bill payment assistance programs.[103] By coordinating bill payment assistance and energy efficiency programs, program administrators can achieve efficiencies in income eligibility qualifications and allow for targeting energy efficiency to the highest energy users by sharing consumption data between the programs. In other cases, the provision of energy efficiency services can lower the need for bill payment assistance.

Develop fuel neutral programs.[104] To successfully address energy affordability issues, it is important to address various end uses and install measures regardless of fuel type.

Align with existing efforts to serve low-income households.[105] Coordination with other programs and resources that provide services to LMI households, such as WAP and HEAP, can result in a simplified

[98] "Barriers and Solutions to Achieving Potential Savings in Whole House low-Income Weatherization Programs." APPRISE
[99] Identified by APPRISE as insulation, air sealing, HVAC replacement, duct sealing, refrigerator replacement
[100] Ibid.
[101] Ibid.
[102] Energy Efficiency for All, May 2015. and "Apartment Hunters: Programs Searching for Energy Savings in Multifamily Buildings." ACEEE, December 2013.
[103] ACEEE, March 2016
[104] Ibid.
[105] Ibid.

delivery for the customer. In addition, leveraging ratepayer and federal funds can increase the number of homes receiving weatherization or energy efficiency services.

Improve building owners' access to energy usage information.[106] To help building owners make informed decisions on investing in clean energy upgrades and other operational improvements, it is important for the owners to have information on the energy performance of the building. In addition to energy consumption and cost detail, providing metrics such as energy usage intensity (EUI) can provide insights on the potential savings, when compared to similar buildings.

Deliver measures through innovative channels.[107] In addition to relying on utilities and energy efficiency contractors to engage customers, ACEEE has found that programs can reach a broader range of low-income households when they identify options for engaging households and delivering energy efficiency measures through organizations that the customers are already familiar with, such as foodbanks or other social service networks.

Address health, safety, and building integrity issues.[108] As building integrity, health, and safety can often be barriers to energy efficiency upgrades, ACEEE has identified a number of programs that have incorporated ways to make necessary health, safety, and structural improvements necessary to allow for energy efficiency improvements to take place. Programs fund these improvements anywhere from $500 per home, to up to 50% of the cost of the workscope.

Encourage deeper retrofits by providing escalating incentives.[109] Generally, the cost of an energy efficiency project increases with scope, thus a more extensive upgrade will be more expensive and time consuming. Tying higher incentives to the achievement of higher levels of energy savings will help offset the costs associated with increased workscopes, but may also serve to compensate owners for the perceived risk and uncertainty associated with deep energy retrofits.

Integrate direct install and rebate programs.[110] Offering no-cost direct install measures[111] at the time of an energy assessment can serve as an engagement tool for home and building owners and encourage them to undertake more significant energy improvements.

7. Recommendations

New York has a strong foundation of ratepayer-funded and federally-funded clean energy programs that are targeted to the LMI market; however, there may be opportunities to improve the targeting, coordination, and delivery of these services. Modifications to the design and delivery of current

[106] EEFA, May 2015
[107] ACEEE, March 2016
[108] Ibid.
[109] ACEEE, December 2013.
[110] ACEEE, December 2013.
[111] Such as efficient light bulb replacement, low-flow devices, and weatherstripping.

programs, the exploration of new initiatives, and improved coordination would increase energy affordability and access to clean energy solutions for the LMI market.

The Working Group submits the following recommendations to address barriers associated with clean energy adoption among LMI consumers, affordable building owners, and affordable property managers. These recommendations are intended to increase the impact of ratepayer funded initiatives, improve energy affordability among LMI consumers, and develop better cohesion with other publically funded LMI clean energy initiatives.

Given the breadth and complexity of the LMI market, a singular approach to improving the delivery of services to LMI customers will not suffice. The recommendations reflect a variety of approaches to address energy affordability and access to clean energy, however the timing, available budget, and particular market segment targeted will influence what approach is most appropriate for a particular program. The recommendations are presented in no particular order. Additional analysis may need to be conducted to fully understand the cost implications of the recommendations.

7.1 Energy Literacy, Awareness, and Program Application Process

In the focus groups and surveys conducted by the Working Group, LMI consumers overwhelmingly identified a lack of awareness and understanding of current programs, and inadequate communications regarding such programs, as a primary barrier to realizing energy savings. The knowledge and information gap has the potential to increase under REV, as new opportunities for procuring and managing energy emerge. LMI customers in particular need to be aware of energy savings opportunities. Likewise, affordable housing owners and managers may be unaware of opportunities for clean energy upgrades that would enhance the energy performance of their buildings. LMI renters should also be equipped to encourage and support their building owners and managers to make clean energy improvements.

Recommendation:

1. **DPS, NYSERDA, and the utilities[112] should develop a coordinated energy literacy campaign to educate and inform LMI customers and affordable housing owners and managers on energy topics including: understanding the costs of energy; strategies for managing tight household budgets; energy savings tips; available programs, including opportunities for participation in community or shared-solar projects; and Community Choice Aggregation (CCA), where applicable.[113] All materials developed should be multi-lingual and should be made available through multiple avenues.[114] A statewide campaign could result in cost savings, as well as a standard and consistent message to the LMI market segment. The State should also develop a framework to evaluate the effectiveness of the components of the literacy campaign and making modifications to the content and delivery, as necessary.**

[112] It will be important for the utilities to maintain control over communications with their customers, however the communications would be coordinated with the statewide campaign.
[113] While CCA decisions will be made at the municipal level, DPS and NYSERDA should work with municipalities to ensure that awareness and education about CCA is done consistently across the State. Education should include how a CCA works, identification of the possible benefits, and consumer rights.
[114] Educational avenues should include online resources, utility bill stuffers, and outreach from community-based organizations.

2. **NYSERDA and the utilities should develop an LMI-specific "one-stop shop" online portal that provides homeowners and multifamily building owners and property managers with information on available incentives. This portal should also include an online application process.[115]**

3. **To avoid confusion about the different clean energy programs and various program administrators, NYSERDA and the utilities should consider coordinating outreach and co-branding to present the various program offerings in a cohesive and easy to understand format.**

7.2 Program Design

The current portfolio of ratepayer funded clean energy programs has resulted in improvements to energy affordability and has increased access to clean energy solutions for LMI customers; however, including LMI households residing in affordable housing, there are opportunities for further enhancing current programs to increase impact, reach additional LMI customers, and provide greater certainty to the market. Certain segments of the LMI market, such as multifamily affordable housing, require distinct program design considerations to ensure programs achieve the greatest impact. New developments in Community Distributed Generation and CCA introduce the need for new approaches to the structure of incentive programs.

7.2.1 Maximizing the Impact of Ratepayer Funds

Over $300 million in ratepayer funding is invested on an annual basis on programs designed to improve energy affordability and increase access to clean energy options for LMI customers.[116] Despite this significant investment, only a fraction of eligible households receive energy efficiency services and bill payment assistance annually. Due to the limited budgets relative to the size of the market, NYSERDA and the utilities must continue to explore all opportunities to reduce the costs associated with delivering LMI programs, to leverage the buying power that is represented by the nearly $400 million that is spent on an annual basis, and to prioritize the provision of fully subsidized energy efficiency services to those homes that consume the most energy, and/or have the highest energy burden. [117]

Recommendations:

4. **The utilities, NYSERDA, and DPS should develop a standard approach for referring and prioritizing high usage/high energy burden low-income utility customers for energy efficiency services through EmPower NY. NYSERDA and the utilities should also develop a process for referring LMI customers and affordable buildings for clean energy services through NYSERDA utility energy efficiency programs. In addition, NYSERDA should work to**

[115] The MassSave initiative, sponsored by Massachusetts natural gas and electric utilities, provides a replicable model for providing an online portal.

[116] Including renters

[117] Delivery cost should include adjusting program requirements to lessen the administrative burden placed on vendors and contractors.

develop an approach to better identify customers that heat with oil or other delivered fuels for the purposes of providing energy efficiency services.[118]

5. **NYSERDA and the utilities should develop and pilot models that maximize the impact of limited ratepayer funding by exploring opportunities to implement pay for performance approaches that incentivize vendor performance and consumer uptake. Such approaches could potentially apply to traditional incentive programs in the single and multifamily market segments, where incentives would be paid based on the level of energy savings achieved.**

6. **To further maximize the impact of limited ratepayer funding, NYSERDA and the utilities should explore opportunities for demand bidding. For example, the EmPower NY program could aggregate projects and develop a bid approach to procuring energy efficiency services.**

7. **While comprehensive building assessments[119] are essential for understanding the interaction between systems within the building, identifying health and safety issues, and benchmarking the energy consumption of the building, these assessments can be time consuming and costly. Ratepayer funded programs should adopt modified energy audit procedures, based on the project. Specifically, if the home or building owner is interested in a single measure, then a comprehensive audit should not be required.[120]**

7.2.2 Customer Acquisition

Many clean energy programs use receipt of utility bill payment assistance to identify eligible low-income customers for energy efficiency or renewable energy services. This is an administratively efficient process; however, this approach excludes many eligible customers, including moderate-income customers, who do not receive utility bill payment assistance or HEAP benefits.

Recommendation:

8. **NYSERDA and the utilities should use additional methods for identifying and acquiring LMI customers beyond participation in utility discount or assistance programs, including outreach through community and faith-based organizations that work with LMI customers.[121] This process would also allow for the referral of additional customers into the various clean energy programs administered by the utilities or NYSERDA.**

[118] To the extent that programming is required of utility billing systems to accomplish this recommendation, cost recovery should be afforded to utilities separate from the budgets dedicated to providing programs and services to the LMI market segment.

[119] Such as the ASHRAE Level 2 or BPI Home Energy Audit Standard

[120] The Commission has approved some utility programs that provide incentives for prescriptive measures. This has allowed some programs to adopt modified audit procedures, such as using a spreadsheet tool that incorporates Tech Manual calculations to determine energy savings.

[121] Including the statewide network of weatherization subgrantees, community action agencies, and GJGNY CBOs.

7.2.3 Market Certainty

If program participation levels suggest that incentive levels are insufficient to incent customers (or conversely, too rich, and threaten to prematurely exhaust the budget), program administrators must be ready and able to make adjustments. At the same time, consistent funding is needed to keep market actors engaged. Ensuring that funding for specific programs does not lapse creates certainty for market participants.

Recommendations:

9. **When incentive levels and associated savings targets are established, the Program Administrators should monitor the level of program activity and be able and willing to make adjustments on a timely basis to maximize program uptake and impact of the ratepayer funds.**

10. **To keep vendors and other market actors engaged in the delivery of programs, NYSERDA and the utilities should make information regarding the expected duration and level of program funding publically available, and commit to widely communicate any proposed changes to the market in advance of such changes.**

7.2.4 Whole Building Approach

Comprehensive energy programs take a whole-building approach rather than focusing on individual units or common areas within a building and promote more-comprehensive retrofits in which multiple measures are installed. Whole-building programs are typically more costly to implement; however, significant additional benefits also can result from these upgrades, including increased comfort, improved indoor air quality, and reduced maintenance.

Recommendation:

11. **NYSERDA and the utilities should encourage a whole building approach for both residential and multifamily buildings whenever possible to realize the greatest energy savings. For multifamily buildings this should include treatment of dwelling units, as well as common areas, to address the split incentive issue (as discussed in Section 2.6.1). While upfront costs may pose a barrier to undertaking larger scopes of work, NYSERDA and the utilities should develop engagement tools and other incentives to encourage building owners to plan and implement a comprehensive approach all at once or on a phased basis over time, as discussed below.**

7.2.5 Fuel Neutrality

While CEF programs, such as EmPower NY, can be administered on a fuel-neutral basis[122], there have been other ratepayer supported programs, such as the RPS, that would only provide incentives to projects that displace electricity. This resulted in missed opportunities for energy affordability improvements because higher cost fuels such as oil or propane were not eligible.

[122] To operate on a fuel-neutral basis, CEF programs must demonstrate that the level of GHG savings possible will be greater with a fuel-neutral approach, than an electric only approach.

Recommendation:

12. **Ratepayer funded initiatives should be administered on a fuel-neutral basis, and for affordability purposes, target the displacement of higher-cost fuels. By implementing clean energy projects, including oil to natural gas conversions, that displace the combustion of natural gas, oil, and propane, the initiatives would contribute to the State's carbon reduction goals.**

7.2.6 Direct Install and DIY

Comprehensive (whole building) energy efficiency programs can maximize immediate savings, however financial and logistical barriers can often prevent comprehensive efficiency upgrades from being adopted by home or building owners, and can prevent the scale up of fully-subsidized comprehensive programs, such as EmPower NY. In addition, a Do-It-Yourself (DIY) approach may be appropriate in some instances. Properly designed and managed, such an approach can empower residents by allowing them to have a hand in controlling their energy use , as well as provide hands on experience that could potentially provide a potential entry path for on the job training.

Recommendations:

13. **NYSERDA and the utilities should incorporate a direct install (DI) component to the single and multifamily programs.[123] For single family customers, DI can be done for moderate income customers that may or may not choose to go forward with a comprehensive energy efficiency upgrades, DI can also be employed as a means for triaging low-income projects (an audit + DI gets done, then those home that are the best candidates for air sealing/insulation are identified and referred to EmPower). For multifamily buildings, DI can be a means of engaging building owners and encouraging them to go forward with a more comprehensive building upgrade.**

14. **NYSERDA and the utilities should consider designing a program component to enable building owners and residents to carry out the direct installation of select measures on their own, or a DIY approach.**

7.2.7 Phased Improvements

Whole building energy efficiency improvements and integration of renewables with efficiency may be the optimal approach in some instances to maximize the benefits of the interactions between shell work, appliances, and renewable energy generation; however, many home and building owners may not have the ability to finance whole building upgrades at once. NYSERDA and the utilities should acknowledge this and engage home and building owners to foster the achievement of clean energy improvements over time.

Recommendation:

15. **NYSERDA or the utilities should adopt or develop a tool[124] that engages home and building owners and encourages the phasing in of clean energy improvements over a period of**

[123] for Commission-approved prescriptive measures

[124] Similar to the Home Advisor tool, developed by DOE for residential customers.

time. This can be expanded to the development of a multi-year "Energy Master Plan" approach for affordable multifamily buildings to guide the phasing of measures in a specific building or portfolio of buildings over time. Incentives could be provided to encourage more comprehensive energy improvements, or to complete improvements over a certain period of time.

7.2.8 Multifamily Programs

As highlighted in Section 2, over 40 percent of New York's LMI population live in buildings with more than 5 units, and nearly 20 percent live in buildings with more than 50 units. To ensure that multifamily affordable housing remains viable and provides stable rents to LMI tenants, discrete strategies are needed to address the barriers faced by owners and property managers of multifamily buildings, including the issue of split incentives.

Recommendations:

16. **NYSERDA and the utilities should incorporate a portfolio approach to clean energy upgrades that would enable owners to have a group of buildings evaluated and treated. Affordable building owners often may wish to refinance several properties within their portfolio as part of comprehensive refinancing project. Carrying out clean energy upgrades throughout a portfolio that is being refinanced can take advantage of this optimal intervention point. Aggregating such a group of buildings may also result in an overall reduction in costs for third parties to deliver their services, and provide building owners an opportunity to prioritize their investments in energy/other capital upgrades.**

17. **Multifamily programs should require that the building's management, supervisory and maintenance staff responsible for operating the building should also have the experience, training and credentials necessary to operate the building, and its energy efficiency upgrades, in a manner that will ensure that the planned energy efficiency goals of the upgrades can be achieved and savings retained.[125] For key building personnel who have not already completed a course in energy efficiency building operations, one should be provided at the time of the retrofit.**

18. **Because larger buildings require regular commissioning in order for systems to operate efficiently, affordable multifamily buildings should have an ASHRAE Level 2 audit conducted every 5 years. As the cost for a comprehensive audit may be cost prohibitive for affordable building owners, incentives should be made available to affordable building owners to offset the costs of audits.**

19. **When developing incentive structures, particularly for affordable multifamily buildings, Program Administrators should consider increasing incentives or reducing cost share requirements for buildings that have a larger proportion of low-income residents, or can meet a lower income threshold. This approach would provide additional encouragement for owners of affordable housing to pursue clean energy upgrades.**

[125] This may occur as part of an on-site audit or pre-inspection.

20. **Develop a comprehensive program to integrate solar installations into affordable housing for the primary purpose of maximizing economic benefits to low-income tenants through deployment of solar and energy efficiency.[126] The incentive structure should account for other financing that is often leveraged for multifamily solar installations,[127] and be subject to review and adjustment over time to ensure that projects are not over incentivized.[128] Ideally, workforce development also would be an integral component of the program, providing robust and substantive job training opportunities, thereby increasing the program's overall benefits. Program requirements should be designed to provide flexibility and avoid over-burdening participating property owners and contractors.[129]**

7.2.9 Community Distributed Generation (CDG)

CDG holds the potential for providing access to renewable energy solutions to thousands of LMI households that either rent or cannot afford to have on-site renewables installed. The September 2015 GJGNY LMI Working Group report highlights that "NYSERDA anticipates that community net metering can provide significant benefits to LMI households and is one of the better options for increasing LMI participation in the solar electric market." However, additional work is necessary to develop scalable models for finance, ownership, and LMI participation.

Recommendations:

21. **To facilitate the development of community solar projects that benefit low-income communities, NYSERDA should develop toolkits on proven financing and ownership models for community solar projects.**

22. **NYSERDA, DPS, and the utilities should continue to explore options to increase LMI customer participation in CDG projects through either regulatory requirements for minimum LMI participation or by providing incentives to projects that include LMI customers.[130] Other measures could include prioritizing projects that contain LMI customers or conducting a separate RFP process for LMI community solar projects.**

23. **NYSERDA should continue seeking ways to use Clean Energy Fund investment to provide upfront incentives for LMI access to CDG as part of a comprehensive program that provides meaningful savings, incorporates energy efficiency and weatherization upgrades**

[126] The Multifamily Affordable Solar Housing (MASH) and Multifamily Affordable Solar Housing Roofs (MASHR) Programs in California provide up-front incentives for multifamily affordable housing solar installations.
[127] ITC, LIHTC
[128] The incentive structure should utilize a limiting mechanism on installed megawatts or the incentive amount to ensure that funding remains available over a multiyear timeframe.
[129] The comprehensive program could be best served by having a single, third-party statewide program administrator, such as NYSERDA, with expertise in affordable housing, solar technologies for multi-family dwellings, and job training programs, among other aptitudes. NYSERDA can also coordinate this initiative with other clean energy programs offered across the state, allowing meaningful energy efficiency upgrades to be included in the total project.
[130] Such as prioritizing projects that contain LMI customers and provide meaningful savings or conducting a separate RFP process for LMI community-solar projects.

and provides workforce development opportunities for LMI participants and developers.[131]

24. **NYSERDA should seek opportunities to pilot community scale geothermal in affordable housing or low-income neighborhoods.**

7.3 Health and Safety

Health and safety improvements are often a critical co-benefit of energy efficiency improvements; however tight program budgets can leave health and safety work unaddressed. In addition, structural deficiencies such as a leaky roof, can prevent energy efficiency and renewables work from being conducted because these structural deficiencies are outside of the fundable scope of work for the programs.

Recommendation:

25. **NYSERDA should work to identify alternate sources of funding/financing to address health, safety, and structural issues, while delivering energy savings.**

7.4 Finance and Access to Capital

Access to capital and financing is a primary barrier to clean energy upgrades for both LMI households and building owners, resulting in lost opportunities for achieving energy savings or other home improvements. While subsidized programs can alleviate this barrier for some, these programs are only able to serve a portion of the market due to budget limitations relative to the size of the market. Copay requirements also present barriers to participation where customers do not have the capital to make the upfront copayment. [132]

While low-interest financing is available in New York through Green Jobs- Green New York, qualification criteria[133] can disqualify prospective borrowers and the sole reliance on the subsidized loan fund creates sustainability issues that can impact the ability to preserve lending at such low interest rates. To scale the market for clean energy improvements, new finance models are necessary that can leverage or extend the life of program funds, incorporate third party capital, or can be operated in an inclusive manner, and not disproportionately benefit borrowers or lenders are necessary. For example, clean energy investments can generate significant and steady revenue streams, which could serve as a stable source of underwriting for loans that finance the investments.

[131] The September 2015 Green Jobs – Green New York Low to Moderate Income (LMI) Working Group Recommendations Final Report stated "NYSERDA anticipates that community net metering can provide significant benefits to LMI households and is one of the better options for increasing LMI participation in the solar electric market. In addition, NYSERDA is currently working to make financing for shared renewable opportunities available to LMI and other households through the proposed Clean Energy Fund and other initiatives." The Department of Public Service convened a CDG Low-Income Collaborative in 2015 and 2016 (which included a number of the same participants as the Clean Energy Advisory Committee LMI Working Group) and established working groups to examine key barriers to low-income customer participation and develop solutions. Specifically, the Incentives Working Group regularly discussed the importance of upfront incentives (rebates, low-interest financing, grants) to remove the upfront cost barrier for LMI participation in CDG and that upfront incentives for LMI access are most useful if directed to developers.

[132] Such as Assisted Home Performance with ENERGY STAR or the Multifamily Performance Program

[133] Debt-to-income and cost effectiveness criteria (NOTE: SEE/REFERENCE GJGNY LMI WG REPORT-p.21)

Recommendations:

26. **Demonstrate an inclusive finance solution in New York that overcomes the credit barriers faced by lower income and low FICO consumers, integrates 3rd party capital to create a finance model that is more sustainable than the current GJGNY revolving loan fund, and possibly includes a guaranteed cost recovery mechanism.**

27. **While program incentives can help offset the costs of clean energy improvements by LMI customers and affordable building owners, in some cases the incentives are either not sufficient to overcome first cost barriers or they are paid out in milestones. NYSERDA should develop a bridge loan product that will provide the necessary capital to initiate clean energy improvements. Such loans could be structured as a short-term bridge product that could fund a portion of construction or installation, leveraging near term incentives as source of repayment and then rolled into a flexible permanent financing source, such as described in the prior recommendation.**

28. **To encourage energy efficiency improvements by LMI tenants and to address the split incentive issue, the utilities and/or NYSERDA should develop a program approach that would allow interested tenants to finance high efficiency appliances through 0% interest loans. The financing would need to result in net positive cash flow for the tenant.** [134]

7.5 Access to DER and Utility Ownership

There is currently limited uptake of renewable energy solutions among LMI customers. As noted in Section 3.2.2.4, DPS Staff is developing a whitepaper examining utility ownership of LMI CDG. Utility ownership of DER is appropriate where market solutions have not been identified. Utility ownership of DER, including roof top, community solar, solar thermal, combined heat and power, and geothermal, should be considered in such cases, provided that all of the net metering credits and other energy benefits go directly to LMI customers or affordable multifamily buildings.

In the meantime, various ownership models of DER designed to provide benefits to LMI customers should be further developed and explored.

Recommendation:

29. **NYSERDA should develop a demonstration program to identify and evaluate innovative models for creating access to DER including rooftop and community solar, combined heat and power, geothermal, and solar thermal for LMI households. An incentive program should be developed to support the successful models.**

30. **Utility-owned CDG projects targeted to serving LMI customers should be required to partner with a nonprofit or public interest entity that has a track record in serving LMI needs, to be designed so as to maximize savings and customer benefit for LMI participants, and to provide job training opportunities.**

[134] ENERGY STAR or Consortium for Energy Efficiency –Tier 2 or 3 rated

7.6 Integration of Energy Efficiency and Renewable Technologies

Both energy efficiency and renewable technologies can help lower energy bills while helping to reach the state's energy goals; however, the market barriers that have slowed adoption of each type of clean energy may be different. Current programs generally do not integrate and offer both energy efficiency and renewable solutions. By working to install energy efficiency measures and distributed renewables at the same time, programs can engage customers in new ways and potentially accelerate access and adoption of these technologies, while lowering energy burdens.

Recommendation:

31. **NYSERDA should develop a demonstration program to identify and evaluate innovative models for integrating renewable energy and energy efficiency in low-income projects. Based on the demonstrations, NYSERDA should develop an incentive program to support the successful models.**

32. **Develop a standard package for retrofitting manufactured housing with renewable technologies such air source heat pump, or solar, and storage, as part of a weatherization/EE package that includes insulation and air sealing. Test the package and assess the net benefits (energy and bill savings) of implementing such a package. Explore the potential for customer financing the renewable technologies through the savings associated with the energy efficiency improvements, which could be fully subsidized, if coordinated with an existing no-cost energy efficiency program such as EmPower NY.**

7.7 Access to Energy Consumption Data

Access to energy consumption data is essential to estimate the savings of clean energy upgrades, both using historical data and accessing data for heating fuel in addition to electricity. Obtaining prior bill data in order to conduct energy modeling improves the accuracy of estimated savings and reduces the timeline and administrative costs associated with clean energy projects. Estimation of multi-fuel savings further requires access to bill data from both electric and heating fuel providers. The Electronic Data Interchange (EDI) standards recommended by the NY EDI Working Group are a step in the right direction.[135] At this time; however, these standards do not have a firm implementation requirement or timeline.

Recommendation:

33. **DPS, NYSERDA, and the utilities should continue their efforts to continue efforts to streamline the availability of utility energy consumption data, in a standardized format, for the purposes of conducting energy modeling. This should include allowing the customer to provide consent for utilities to share their data with DER providers online. This will improve the accuracy of estimated savings and also reduce the timeline and administrative costs associated with clean energy projects.**

7.8 Workforce Development and Training

The integration of workforce development and training specifications in clean energy program design and delivery can have positive outcomes with respect to the realization of energy impacts resulting from

[135] Case 98-M-0667.

clean energy projects, but can also result in economic development benefits for low-income communities, in addition to the realization of energy impacts.

Recommendations:

34. **All ratepayer funded programs should adopt industry recognized workforce training and certification standards for installers, energy auditors, and quality control inspectors.** [136]

35. **Contractors should be encouraged to hire and train workers from within the communities that they serve. Ratepayer funded programs should provide an incentive to contractors. The incentive could be financial or some other incentive, such as access to workforce training resources.**

36. **Programs should provide a mechanism to support on the job or hands on training for disadvantaged workers within the communities where clean energy projects are being implemented.**[137]

7.9 Community Choice Aggregation (CCA)

Community Choice Aggregation provides the potential for delivering benefits to consumers including price stability for a fixed contract term, the potential for lower prices and more favorable terms, and the ability to design a program that reflects local preferences and needs, including a preference for cleaner power sources. These benefits may also help deliver affordability benefits to LMI households. Specific recommendations for CCA are being discussed within the Voluntary Investment Working Group and will be submitted as part of an overall recommendations report on CCA, however in this report, the LMI Working Group identifies the value that a CCA model can bring for LMI consumers.

Recommendation:

37. **Local governments should maintain control over the CCA program and the CCA revenue stream. The CCA revenue stream and leverage should be used to develop and promote energy efficiency programs, with a focus on providing energy efficiency assistance to low-income households, as well as to meet other community goals and local policy objectives, such as increasing renewable energy supply. To ensure that the needs and concerns of LMI customers are considered and met, outreach to low-income customers through community-based organizations should be integrated into CCA development plans.**

7.10 Consistency in Income Eligibility Classification

LMI customers and affordable building owners often receive or seek services from multiple energy, housing, financing, and other social service programs. While many of these programs have aligned eligibility criteria,[138] there are some differences, as well as variations in terminology that can lead to

[136] Including Building Performance Institute (BPI), the Interstate Renewable Energy Council (IREC) and the Association of Energy Engineers (AEE).

[137] In particular, rooftop and community PV provide an excellent opportunity for hands-on training.

[138] DPS and NYSERDA have aligned eligibility for utility bill payment assistance and the EmPower NY program with the federal LIHEAP and WAP eligibility (60% SMI) to establish categorical eligibility for low-income customers. NYSERDA and ConEd have set eligibility for AHPwES, MPP, Affordable Solar, and the ConEd MF program at 80% of AMI to align with the HUD definitions for affordable housing.

confusion for the customers and service providers. In order to effectively engage both LMI households and affordable building owners to facilitate/encourage clean energy upgrades and achieve synergies with other publically funded LMI energy, housing, and social service programs it is essential to establish a consistent approach for defining the LMI market segment, as well as establishing categorical eligibility between programs to reduce administrative overhead and application time.

Recommendations:

38. **NYSERDA and DPS should work with other state and federal agencies to align household and building eligibility requirements and standardize terminology across energy, housing, and social service programs to the extent possible.**

39. **NYSERDA and the utilities should establish a tiered approach to establishing LMI service eligibility that fosters consistency with other energy, housing and social service programs.**

    For households: develop a two-tiered approach that would provide different levels of subsidy for clean energy services to both homeowners and renters.

    Tier 1- would apply to households up to 60% SMI (HEAP and WAP eligibility);

    Tier 2- would apply to households between 60% of SMI and 80% of AMI (or state, whichever is greater), which would be consistent with HUD designation;

For buildings: in a similar manner, develop a consistent approach for establishing three tiers of eligibility for programs based on the percentage of income eligible units and status as regulated affordable housing.[139]

Tier 1- weatherization eligible buildings that meet the federal DOE Weatherization requirement for whole building eligibility, requiring that 66% of all households in the building (or project) meet the DOE household income eligibility requirement (which, in NY, is 60% of State Median Income (SMI);

Tier 2 – government regulated multifamily buildings, with rent level requirements for a specified share of the apartment units in the building or complex of buildings that are specified in some form of contract or regulatory agreement between HUD, NYSHCR, or NYCHPD and the property owner;

Tier 3 – privately owned properties that are not publicly assisted or government regulated through such a contract or agreement but whose rent levels for at least 25% or the apartment units in the building (as confirmed by their rent rolls for the building) meet the HUD definition of affordability, i.e., that the monthly rent for a given size apartment is not more than 30% of the monthly income for households with incomes not greater than 80% of Area Median Income (AMI).

[139] This status applies to buildings regulated by HUD, NYSHCR, and NYCHPD

7.11 Coordination with Other State Agencies

While the focus of the Working Group is on the ratepayer-funded LMI portfolio, there are other state agencies that are involved in providing clean energy services to the LMI market segment. With nearly $700 million in ratepayer and federal funds being invested in New York state to provide clean energy services to LMI customers, it is imperative that these activities be coordinated and leveraged to increase the efficacy of these funds.

As previously noted in Section 3.2.2.2, the Governor has directed the formation of a Task Force, to develop new strategies so that all of the state's low income households have greater access to clean energy and are better served by the state's energy efficiency and assistance programs. The Task Force has been meeting regularly in the latter half of 2016, and has made itself available as a resource to the CEAC LMI Working Group.

Recommendations:

40. **The Task Force should work with utilities to develop a process for automatically referring recipients of various social service program benefits into clean energy programs and to develop a process for targeting clean energy services to eligible consumers having the greatest energy consumption.[140] In all cases, appropriate customer consent must be obtained.**

41. **NYSERDA should work with SONYMA to implement a program to reduce Mortgage Insurance Premiums or establish other standard cost savings for affordable housing properties achieving certain efficiency certifications or where robust energy savings are projected, based on a standard building assessment and work plan.**

42. **NYSERDA should work with NYPA and the utilities to support Public Housing Authorities by creating a pre-development funding source and construction funding to support clean energy improvements.[141]**

43. **NYSERDA, DPS, and the utilities should consider models for successfully leveraging ratepayer with federally funded programs to achieve greater scale and energy affordability impacts associated with the investment of public funds towards clean energy services for the low-income market segment. NYSERDA and the utilities can pilot different coordinated approaches.**

Table 9 provides a summary of the recommendations based on whether they amount to modifications to existing efforts, new approaches, and/or whether they represent potential pilot projects for further development. Table 10 identifies how the recommendations address the barriers to improving energy affordability and the adoption of clean energy solutions.

[140] Including HEAP, SNAP, SSI, and other income-eligible benefits.

[141] This could be considered as part of Case 16-M-0395, which is considering NYPA's "opt-in" to electric utility programs.

Table 9: Categorization of Recommendations

Recommendation	Modification to Existing Program	New Approach	Potential Pilot	Integration of EE/RE	Market Segment
1. Coordinated energy literacy campaign	✓				All
2. Online portal		✓	✓		All
3. Coordinated program outreach and co-branding		✓			All
4. Standard approach for referring customers	✓				All
5. Pilot pay for performance approaches			✓		All
6. Explore opportunities for demand bidding			✓		
7. Modified audit procedures	✓				All
8. Additional methods of acquiring LMI customers	✓	✓			All
9. Timely monitoring and adjustment of program activity by Program Administrators	✓				All
10. Funding and program changes should be widely communicated to the market	✓				All
11. Encourage a whole building approach	✓				All
12. Fuel neutrality				✓	
13. Incorporate a direct install program component	✓	✓	✓		All
14. DIY component to direct install		✓	✓		All
15. Adopt an engagement tool that supports a phased approach to clean energy upgrades		✓	✓		All
16. Incorporate a portfolio approach		✓			All
17. Multifamily building operations requirements					Multifamily
18. Comprehensive audits for MF buildings every five years		✓			Multifamily
19. Reduce cost share for affordable MF buildings with larger proportion of low-income residents		✓			Multifamily
20. Comprehensive program to integrate PV into affordable MF buildings	✓				Multifamily
21. Develop toolkits on CDG finance and ownership models		✓		✓	Multifamily
22. Explore options to increase LMI participation in CDG		✓			CDG
23. Continue to seek ways to provide upfront incentives for LMI access to CDG		✓	✓	✓	CDG
24. Pilot community-scale geothermal			✓	✓	CDG
25. Identify alternative funding/financing to address health, safety and structural issues		✓			All
26. Inclusive finance solution that overcomes credit barriers		✓		✓	All
27. Develop a bridge loan product		✓			All
28. Zero percent interest finance option for high efficiency appliances for tenants		✓			All
29. Develop demonstration program to identify and evaluate DER for LMI households		✓		✓	All
30. Requirement for CDG projects to partner with nonprofit or public interest entity		✓			All
31. Develop a demonstration program to identify and evaluate innovative renewable and efficiency integration		✓	✓	✓	

32. Standard package for retrofitting manufactured housing including solar/storage and/or air source heat pump		✓	✓	✓	Single family
33. Streamline availability of energy consumption data		✓			All
34. Adoption of workforce training and certification standards	✓	✓	✓	✓	All
35. Hire and train workers from within communities served	✓	✓			All
36. Support on-the-job or hands-on training for disadvantaged workers	✓	✓			All
37. Control of CCA program and revenue stream by local governments		✓		✓	All
38. Align household and building eligibility requirements with other state and federal agencies		✓			All
39. Tiered approach to LMI service eligibility	✓	✓			All
40. Automatic referral of social service program recipients into clean energy programs	✓	✓			All
41. Reduce Mortgage Insurance Premiums or establish other standard cost savings for affordable housing properties		✓	✓		All
42. Create pre-development funding source and construction funding for clean energy improvements for Public Housing Authorities		✓			All
43. Consider models for leveraging ratepayer with federally funded programs	✓	✓	✓		All

Table 10: Barriers Addressed by Recommendation

Barrier to Clean Energy Adoption	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Residents																																											
Financial/access to capital							✓					✓	✓	✓	✓					✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓					✓			✓			✓
Competing interests		✓					✓						✓		✓																									✓			
Lack of information	✓	✓	✓					✓	✓	✓			✓	✓	✓									✓						✓		✓				✓	✓	✓	✓			
Building structural issues																									✓																	
Split incentive											✓																	✓														
Building Owners																																										
Financial/access to capital							✓					✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓		✓									✓	✓	✓
Competing interests							✓						✓		✓	✓	✓	✓	✓								✓	✓														
Lack of information	✓	✓	✓					✓	✓	✓			✓	✓	✓	✓	✓							✓						✓		✓					✓	✓			
Building structural issues																									✓																	
Split incentive											✓																	✓														
Systemic																																										
Limited budgets				✓	✓	✓			✓	✓			✓	✓											✓																	✓
Fragmented program delivery	✓	✓	✓																																			✓	✓	✓			✓
Identifying LMI customers	✓	✓		✓				✓																																✓			✓
High cost of delivering programs				✓	✓	✓	✓	✓					✓	✓											✓								✓					✓	✓	✓			✓

8. Working Group Member Comments/Dissenting Opinions

<<To be incorporated into the final report>>

Appendix A: LMI Working Group Scope

Low & Moderate Income Clean Energy Initiatives Working Group Scope

Purpose:

The Low & Moderate Income (LMI) Clean Energy Initiatives Working Group will provide the venue for NYSERDA, the Utilities, and other interested stakeholders to actively evaluate alternative approaches for the delivery of services to LMI customers that can improve consumer value, for the customers served as well as for the rate-payer funding invested.

Guiding Principles & Clean Energy Advisory Council (CEAC) Protocols:

Working Group activities in support of feasible and impactful findings are expected to include:

- Conducting and implementing Working Group activities with transparency and openness;
- Planning and implementing a work agenda and schedule of activities in support of the Working Group objectives;
- Compiling research;
- Directing analysis and studies;
- Soliciting expert advice;
- Developing options and proposals for consideration with particular focus and emphasis on implications and benefits to customers;
- Assessing options and proposals against objectives, and arriving at written feasible recommendations that provide the underlying rationale and, as needed, documents dissenting views along with associated rationale;
- Informing the development and implementation of programs among New York's clean energy program administrators;
- Providing regular written updates on the Working Group's activities and progress; and
- Sharing final work products and notable interim work products.

Protocols regarding CEAC Steering Committee and Working Group interactions include:

- Working Group scopes are authorized by the Steering Committee. Working Groups may at any time propose revisions and additions to the Working Group scopes for Steering Committee consideration but the initial objectives and deliverables of each group will focus on Commission assigned activities. The Steering Committee will guide and authorize Working Group scopes that lead to recommendations that help inform the future development of programs.
- Each Working Group will establish its own work plan and schedule and should incorporate opportunities for non-member input and feedback, as appropriate and feasible and shall provide routine updates to the Steering Committee on its progress. The Steering Committee will identify potential overlap and coordination between Working Group activities and will suggest opportunities for integration or sharing resources between and among Working Group activities.
- Working Group reports and other documents will typically be provided to the Steering Committee for review and comment two to three weeks prior to final deliverable due dates. The Steering Committee will review and assess Working Group products against the overall

objectives and purpose of the Clean Energy Advisory Council and Working Groups. The Working Group shall consider Steering Committee comments and shall document whether it has incorporated or rejected each comment with associated rationale in a new section of the report or in an appendix to the report. The Working Group retains ownership of final work products and is under no obligation to revise its recommendations in response to Steering Committee feedback. The Working Group shall work with Staff to ensure all final work products are filed in DMM and posted to the DPS website.

Initial Objectives:

The Low-Moderate Income (LMI) Clean Energy Initiatives Working Group is initially tasked with:

(1) Report on Alternative Approaches to Providing Low-Moderate Income (LMI) Clean Energy Services – Investigate and evaluate alternatives to the current delivery of services to LMI customers that can improve consumer value. These services include, among other things, bill reduction, energy efficiency services and renewable generation. Tasks include an assessment of the strengths and weaknesses of current approaches to delivery of the aforementioned services to LMI customers in New York; identification and documentation of alternative approaches deployed in other jurisdictions including the strengths and weaknesses of each; and a summary of findings regarding opportunities for improved delivery of services, including the potential for coordinating the delivery of energy efficiency and renewable generation to the LMI population. The Working Group will develop a report documenting its findings. The report will outline well-defined good practice approaches and specific transitional considerations. The Working Group's report will inform the LMI Chapter of NYSERDA's Investment Plan and Utilities' future Energy Efficiency Transition Implementation Plans and Budgets and Metrics Filings, as well as other clean energy activities.

(2) Recommendation Regarding Continuation of Working Group Activities - Determination as to whether the Working Group has fulfilled its purpose upon the completion of the initial objectives or recommended additional objectives and tasks for the Working Group to pursue.

Clean Energy Advisory Council — Working Group Scope

Tasks/Deliverables:

Task/Deliverable	Expected Completion Date
Final Low & Moderate Income (LMI) Clean Energy Initiatives Working Scope, including member list and member roles provided to Steering Committee	
• Provide to DPS Staff	6/10/16
• Final Filed in DMM	6/17/16
Initial detailed Low & Moderate Income (LMI) Clean Energy Initiatives Work Plan	
• Draft submitted to CEAC Steering Committee for Comment	7/1/16
• Final filed in DMM	8/1/16
Report on Alternative Approaches to Providing Low & Moderate Income Clean Energy Services, including the components described in the objective above.	
• Outline Submitted to CEAC Steering Committee for Comment	8/10/16
• Draft Submitted to CEAC Steering Committee for Comment	12/2/16
• Final Filed in DMM	1/17/17
Provide a Recommendation to the Steering Committee as to whether the Working Group has completed its purpose and should be folded or provide a revised Working Group Scope with additional objectives, tasks and deliverables.	At any time, but no later than 90 days following the completion of previously assigned deliverables

Clean Energy Advisory Council — Working Group Scope

Members:

Name	Role	Company/Organization	Email
Marty Insogna	Co-Chair	DPS	Martin.Insogna@dps.ny.gov
Chris Coll	Co-Chair	NYSERDA	Christopher.Coll@nyserda.ny.gov
Adam Flint	Designee	Binghamton Regional Sustainability Coalition	SustainabilityBinghamton@gmail.com
Eric Walker	Alternate Designee	Erie County Dept. of Public Work	eric.walker2@erie.gov
Brittney Pietro	Secretary	National Grid	brittney.pietro@nationalgrid.com
Dave Hepinstall	Member	AEA	hepinstall@aea.org
Thomas Rizzo	Member	Central Hudson	TRizzo@cenhud.com
Kim Darga	Member	City of New York	dargak@hpd.nyc.gov
Peter Weeks	Member	Clean Energy Works	weeks.peter@gmail.com
Mike Burke	Member	CLEAResult	Mike.Burke@clearesult.com
Philip Madnick	Member	Con Edison	madnickp@coned.com
Laurie Schoeman	Member	Enterprise Community	lschoeman@enterprisecommunity.org
Rory Christian	Member	Environmental Defense Fund	rchristian@edf.org
Cecilia Pineda	Member	GOLES	ceci@goles.org
Jay Best	Member	Green Audit USA	jay@greenauditusa.com
Ingrid Schwingler	Member	GRID Alternatives	ischwingler@gridalternatives.org
Hal Smith	Member	Halco	hal@halcoenergy.com
Tom Carey	Member	HCR	Thomas.Carey@nyshcr.org
Mark Smith	Member	LIPA	msmith@lipower.org
Ken Gossel	Member	NFG	GosselK@natfuel.com
Pam Rivera	Member	Natural Resources Defense Council	privera@nrdc.org
Charmaine Cigliano	Member	O&R	ciglianoc@oru.com
Radina Valova	Member	Pace Energy and Climate Center	rvalova2@law.pace.edu
Karla Loeb	Member	PosiGen	kloeb@posigen.com
Saul Rigberg	Member	PULP	srigberg@utilityproject.org
Clarke Gocker	Member	PUSH Buffalo	clarke@pushbuffalo.org
Shirley Anderson	Member	TRC	sanderson@trcsolutions.com
Gregg Collar	Member	UIU	Gregg.Collar@dos.ny.gov

Appendix B: LMI Working Group Meeting Schedule

<<To be incorporated into final report>>

Appendix C: Focus Group Discussion Questions

CEAC LMI Working Group
Consumer Focus Group Scope
Questions for Discussion

Energy Awareness

1. How often do you review your energy bill? Are the charges on your electric or heating bill clear and understandable?

2. What do you know about the amount of energy consumed by various appliances and equipment in your home?

3. Where do you turn to for information about your energy use? OR Who do you trust as a source of information on your energy use?

Energy Affordability

1. Are you concerned about the amount of electricity, natural gas, or heating fuel that you use?

2. Do you have difficulty paying your electric or heating bills? How often does paying your utility bill pose a problem for you? Every month? Only in winter? Only when other unexpected bills come up? Have you experienced a termination?

3. Have you taken any steps to try to reduce your electric or heating costs?
    a. If so, provide details -- for example, do you cut back on using certain appliances? Have you purchased more efficient appliances?
    b. Are there features of your home or apartment that make it difficult to save energy – for example, poor insulation, drafty windows, other? What would help you reduce your energy use, if cost was not an obstacle?

Program Participation

1. Have you participated in any programs to help you manage your energy costs?
    a. If so, which ones? (e.g.: HEAP, budget billing, WAP, EmPower) How did you hear about the program?
    b. Were you able to get help from these programs? Has it made a difference?
    c. If not, why not? Were there barriers to your participation?

2. If not, are there things about those programs you would like to see changed? What are they? How should they change? What kinds of programs would you like to see offered instead?

3. Is there anything else you would like to say about reducing energy costs before we wind up?

Appendix D: Focus Group Demographic Questionnaire

Energy Affordability Focus Group
Participant Questionnaire

Thank you for taking the time to participate in this energy affordability focus group. Your answers to the following questions will assist us with understanding tonight's conversation.

Our discussion tonight is confidential to this room. There will be no audio or video recordings. A few people in the room may be taking some notes so that we can remember what you said and represent it accurately, but these notes will not contain any identifying information about you.

If you have any questions or concerns about your participation after tonight's discussion, please feel free to contact Mishel Filisha at 518-862-1090 ext.3628.

1. First Name: _____

2. How many people live in your home? _____

3. Does your household contain a member who is under age 6, age 60 or older, or permanently disabled? If so, which?
   - ☐ under age 6
   - ☐ age 60 or older
   - ☐ permanently disabled

4. Do you own or rent your home?
   - ☐ own
   - ☐ rent

5. What type of building do you live in?
   - ☐ single family
   - ☐ 2-4 family home
   - ☐ multifamily building, with greater than 5 units

6. What is your primary source of heating?
   - ☐ electric
   - ☐ natural gas
   - ☐ oil or propane

[Continued on back of page}

7. Please estimate your annual household income:

- ☐ less than $10,000
- ☐ $10,000 - $19,999
- ☐ $20,000 - $29,999
- ☐ $30,000 - $39,999
- ☐ $40,000 - $49,999
- ☐ $50,000 - $59,999
- ☐ $60,000 - $69,999
- ☐ $70,000 - $79,999+

8. Please estimate your monthly energy costs?

- ☐ less than $100
- ☐ $100 - $149
- ☐ $150 - $199
- ☐ $200 - $250
- ☐ greater than $250

9. Please estimate your monthly housing cost (rent or mortgage)?

- ☐ less than $250
- ☐ $250 - $499
- ☐ $500 - $749
- ☐ $750 - $999
- ☐ $1000 - $1249
- ☐ $1250 - $1500
- ☐ greater than $1500

Appendix E: Focus Group Summary

<<To be included in final report>>

Appendix F: Service Provide Survey Instrument

<<To be included in final report>>

Appendix G: Service Provider Survey Summary

<<To be included in final report>>

Appendix H: Findings from 2009 NEADA National Energy Assistance Survey

Inability to Pay Energy Bills During Past Year (2009) [142]

	n=1,828 % of Respondents
Skipped paying or paid less than entire home energy bill	50%
Received notice or threat of disconnect or discontinuance of electricity or home heating fuel	36%
Electricity shut off due to nonpayment	9%
Heating system broken and unable to pay for repair or replacement	13%
Unable to use main source of heat because unable to pay for a fuel delivery	11%
Unable to use main source of heat because utility company discontinued gas or electric service due to non-payment	11%
Had to Go Without Showers or Baths Due to Lack of Hot Water	10%
Had to Use Candles or Lanterns Due to Lack of Lights	8%

Housing Problems Due to Energy Bills in the Past Five Years[143]

	n=1,828 % of Respondents
Did not make full rent or mortgage payment	31%
Evicted from home or apartment	5%
Had mortgage foreclosure	4%
Moved in with friends or family	12%
Moved into shelter or was homeless	3%

[142] Table IV-25. National Energy Assistance Directors' Association. 2009 National Energy Assistance Survey, April 2010

[143] Table IV-26A. National Energy Assistance Directors' Association. 2009 National Energy Assistance Survey, April 2010

Medical and Health Problems Due to Energy Bills in the Past Five Years, by Vulnerable Group[144]

	Senior	Disabled	Child Under 18	Non-Vulnerable
n	757	788	770	152
Went without food for at least one day	20%	36%	33%	49%
Went without medical or dental care	29%	41%	45%	72%
Didn't fill prescription or took less than full dose	26%	40%	37%	40%
Unable to pay energy bill due to medical expenses	16%	28%	26%	24%

[144] Table IV-29B. National Energy Assistance Directors' Association. 2009 National Energy Assistance Survey, April 2010

Appendix I: Acronyms and Abbreviations

ACEEE- American Council for an Energy Efficient Economy

ACS- American Community Survey

AHPwES- Assisted Home Performance with ENERGY STAR

AMI- Area Median Income

CBO- Community Based Organization

CCA- Community Choice Aggregation

CDG- Community Distributed Generation

CEAC- Clean Energy Advisory Council

CEF- Clean Energy Fund

DER- Distributed Energy Resource

DOE- United States Department of Energy

DOH- New York State Department of Health

DPS- New York State Department of Public Service

EAM- Earnings Adjustment Mechanism

EEPS- Energy Efficiency Portfolio Standard

EDA- New York State Energy Democracy Alliance

EPA- United States Environmental Protection Agency

EIA- United State Energy Information Administration

FPL- Federal Poverty Level

GJGNY- Green Jobs, Green New York

HCR- New York State Homes and Community Renewal

HUD- United States Department of Housing and Urban Development

LIPA- Long Island Power Authority

LMI- Low-to Moderate Income

MPP- Multifamily Performance Program

NEADA- National Energy Assistance Directors' Association

NYGB- New York Green Bank

NYSERDA- New York State Energy Research and Development Authority

NYPA- New York Power Authority

OTDA- New York State Office of Temporary and Disability Assistance

PSC- New York State Public Service Commission

PSEG- Public Service Electric and Gas

REAP- PSEG's Residential Energy Affordability Partnership Program

RECS- United States Department of Energy Residential Energy Consumption Survey

REV- Reforming the Energy Vision

SBC- System Benefits Charge

SMI- State Median Income

Steering Committee Update
EE Procurement and Markets Working Group, Matter #16-01006

Energy Efficiency (EE) Market Procurement Recommendations Report:

Recent Progress:

The Energy Efficiency (EE) Procurement and Markets Working Group and its subgroups have held several meetings since the October update to the Steering Committee. The group is now focused on the deliverables for Work Stream 2, addressing the issues of procurement and market design. The subgroup has met weekly, and the entire group met on December 9 in both Albany and New York City, connected via video conferencing.

In that session, the group began to discuss a report to the Working Group from the Joint Utilities on alternative approaches for acquiring energy efficiency. The utilities held a brainstorming session amongst their representatives on the Working Group to identify approaches that will engage third party actors while increasing the acquisition of EE resources. Their report, presented by Co-Chair Raghu Sudhakara, Con Edison, was well-received and appreciated by the other group members as a foundational document for the final report.

Along with some new concepts, it includes several ideas under experimentation currently in the REV demo projects, as well as non-wires alternatives, rate-basing EE, and standing tariffs. It describes some procurement approaches – auctions, mid- and upstream mechanisms, code enforcement, among others – and enumerates possible financing options. It also touches on issues of data access but concludes that the complexity of issues around data, such as privacy and cybersecurity will require review in other processes, and that the Working Group should allow the ongoing proceedings to handle the subject.

The group also thanked Vanessa Ulmer for her strong leadership as Co-Chair of the Working Group, after she had announced that she would be changing assignments at NYSERDA (though continuing to work with the group). Megan Fisher was welcomed as the new NYSERDA lead and will be serving as Co-chair with Raghu.

Areas of ongoing discussion:

The group began a deep dive into the JU report and launched a robust discussion about the various business and procurement models identified in the report. Some new categories were suggested, as well, including adding a section on what market barriers the various solutions were addressing, such as customer acquisition, scalability, upfront costs, etc. In another section, public policy goals such as emissions reductions, LMI sector concerns, and health and safety were raised as a possible new category to add to the working matrix. A recurring point in many of the group's discussions is the continued need to determine the value of EE in a transparent

way so that proper price signals are set and utilities and third parties will be motivated to pursue more EE. The group will continue to work through the many ideas in the JU report, adding and elaborating on the suggested categories of procurement and the various roles and responsibilities of utilities, third parties, and customers in preparation of the draft report.

Because of its relevance to the group's work of envisioning a thriving market for EE, the BCA Framework was on the agenda of the Dec. 9 meeting. John Garvey, of DPS staff, presented a summary of the BCA Framework, and the group discussed a few challenges raised by the BCA and its practice, as expressed in each utility's BCA Handbook. Among these were concerns about the cost-effectiveness methodology that includes customer contributions on the cost side but doesn't count all the benefits on the benefit side of the equation, thus potentially skewing the value of EE and undermining the market transaction between customer and third party. Others advocated for the existing Societal Cost Test approach. The group acknowledged that the BCA policy is established by a Commission Order but will consider noting any relevant concerns in the final report.

Updates to the Work Plan:

The Working Group was unanimous that it needed more time to produce the Market Procurement Recommendations Report and would need to request an extension from the Steering Committee. In order to schedule two full-day in-person meetings, coordinate with additional stakeholders, and draft the report in a realistic timeframe, the group agreed to ask the Steering Committee to:

a) Extend the draft report due date from December 22, 2016 to April 20, 2017 for discussion and feedback at the April 27, 2017 Steering Committee meeting.

b) Extend the final report due date from January 25, 2017 to May 19, 2017 (or ~three weeks after the Steering Committee feedback meeting).

At this writing, the Steering Committee appeared to support the request.

Energy Efficiency Market Procurement Recommendations Report

Next steps include:

- Continue to review, elaborate on, and contribute new ideas to the JU Report, which will form the basis of the report
- Continued identification of relevant resources and subject matter experts, possibly inviting SMEs to present to the group
- Schedule full day, in person meetings in coming months
- Coordinate with REVConnect representatives to attend one of the full day meetings
- Assign writing tasks and establish a preliminary schedule for the various sections of the report

Expected Coordination/Task Dependencies:

We will continue coordination with the Low & Moderate Income Clean Energy Initiatives Working Group that is focused on efficiency services for underserved populations, as well as with other relevant working groups.

Energy Efficiency Procurement & Markets Working Group Work Plan

Background:

By order issued January 21, 2016 (January CEF Order),[1] the New York Public Service Commission (the Commission) established the Clean Energy Advisory Council (CEAC). The Commission required that the CEAC address specific issues and provide the Commission or Staff with recommendations and reports regarding such issues. To comply with the Commission directives, the CEAC developed a structure that relies upon Working Groups to conduct the necessary research and analysis and to prepare reports regarding their findings and recommendations.

The CEAC established the Energy Efficiency Procurement & Markets Working Group to develop strategies to create vibrant markets for energy efficiency as an attractive business opportunity. This Working Group initially is responsible for developing (1) recommendations for an energy efficiency target or set of targets which will support an earning opportunity metric for utilities and (2) options for and a recommended approach to developing a sustainable market for procuring energy efficiency as a demand reducing resource. In each instance, the Working Group will document its research and recommendations, including any alternative viewpoints, in a final report which shall be filed with the Commission for consideration.

Overview:

To complete the work set forth in the Working Group Scope filed with the Commission on June 20, 2016, the Working Group expects to meet biweekly. Between meetings, the Working Group members will carry out work through sub-groups tasked with conducting research and analysis that the Working Group has organized into "work streams."

The Working Group intends to provide updates regarding progress and working schedule to the Steering Committee at the Steering Committee's public meetings.

[1] Case 14-M-0094 et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework (issued January 21, 2016).

Schedule:

Task	Responsibility	Due Date	Status
Updates to Steering Committee:			
Send draft of written update to Working Group	*Steering Committee Designee*	*7/5/16*	*complete*
Send written update to Steering Committee	*Steering Committee Designee*	*7/6/16*	*complete*
Send draft of written update to Working Group	*Steering Committee Designee*	*8/8/16*	*complete*
Send written update to Steering Committee	*Steering Committee Designee*	*8/10/16*	*complete*
Send draft of written update to Working Group	*Steering Committee Designee*	*9/8/16*	*complete*
Send written update to Steering Committee	*Steering Committee Designee*	*9/12/16*	*complete*
			N/A
			N/A
Send draft of written update to Working Group	*Steering Committee Designee*	*10/25/16*	*complete*
Send written update to Steering Committee	*Steering Committee Designee*	*10/27/16*	*complete*
Send draft of written update to Working Group	*Steering Committee Designee*	*12/2/16*	*N/A*
Send written update to Steering Committee	*Steering Committee Designee*	*12/6/16*	*N/A*
Send draft of written update to Working Group	*Steering Committee Designee*	*12/21/16*	*complete*
Send written update to Steering Committee	*Steering Committee Designee*	*1/3/16*	*complete*
Send draft of written update to Working Group	*Steering Committee Designee*	*1/27/16*	
Send written update to Steering Committee	*Steering Committee Designee*	*1/31/16*	
Energy Efficiency (EE) Targets and Metrics Recommendations Report:			
Work stream 1.1 - Subgroup to compile background, foundational data, and analysis of EE potential in NYS			
Work stream 1.2 - Subgroup to identify and analyze options for EE targets, metrics, and alternative utility earnings opportunities			
Work stream 1.3 - Subgroup to assemble and analyze available data to balance goals across metrics: energy efficiency, peak reduction, load factor			
Coordinate with Metrics, Tracking, and Performance Assessment Working Group	Co-Chairs and Work stream subgroup 1.2	ongoing	*in progress*
Send Draft Outline, interim data tables, and key questions from work stream 1.1 to other Working Group members	Work stream subgroup 1.1	7/13/16	*complete*

Task	Responsibility	Due Date	Status
Send Draft Outline and key questions from work stream 1.2 to other Working Group members	Work stream subgroup 1.2	7/13/16	*complete*
Send Draft Outline and key questions from work stream 1.3 to other Working Group members	Work stream subgroup 1.3	7/13/16	*complete*
Written feedback on Draft Outlines from Working Group members to subgroups	All Working Group Members	7/19/16	*verbal feedback @ 7/21 mtg*
Create Report Outline compiled of work stream 1.1-1.3 Draft Outline	Co-Chairs	7/20/16	*complete*
All day working session	All WG Members	7/21/16	*complete*
Send Revised Work Stream Outlines to other Working Group members, for comment by 8/2/16	Work stream subgroups 1.1-1.3	7/29/16	*complete*
Finalize Report Outline	Co-Chairs/ Work stream leads	8/5/16	*complete*
Send Outline to Steering Committee	*Co-Chair*	*8/10/16*	*complete*
Incorporate Steering Committee Feedback Report Outline	Work stream subgroups	8/22/16	*complete*
All day working session	All WG Members	8/30/16	*complete*
Send Draft (v1) report section from work stream 1.1 to other Working Group members	Work stream subgroup 1.1	9/21/16	*complete*
Send Draft (v1) report section from work stream 1.2 to other Working Group members	Work stream subgroup 1.2	9/26/16	*complete*
Send Draft (v1) report section from work stream 1.3 to other Working Group members	Work stream subgroup 1.3	9/28/16	*complete*
Written feedback on Draft (v1) report from other Working Group members to Co-Chairs and work stream leads	All Working Group Members	10/5/16	*complete*
Finalize Draft Report	Co-Chairs/ Work stream leads	10/7/16	*complete*
Send Draft Report to Steering Committee, present on 11/20	*Co-Chair*	*10/11/16*	*complete*
Full day working session Incorporate Steering Committee Feedback into Report and send to other working group members	All Members drafting leads	10/19/16 10/26/16	*complete*
Feedback on Draft (v2) Report sections from other Working Group members	All Working Group Members	10/28/16	*revised*
Send Revised Draft (v2) Report to Working Group	Work stream subgroups 1.1-1.3	10/31/16	
Finalize Report	Co-Chairs/ Work stream leads	11/2/16	
File Final Energy Efficiency Targets and Metric Recommendations Report	***Co-Chair***	***11/3/16***	***revised per Scope***
Energy Efficiency Market Procurement Recommendations Report:			
Work stream 2.1 - Subgroup to identify and analyze alternative "approaches" to utility procurement of energy EE (MWh,			

Task	Responsibility	Due Date	Status
MW, and Dth) including recommendations regarding potential future EE market states. Work Stream 2.2 – Subgroup to determine how to find and monetize the total value in a unit of energy efficiency in order to create cash flows for securitization			
Share relevant insights from initial analysis that inform work streams 1.1 - 1.3	Work stream subgroup 2.1	ongoing	*in progress*
Discuss revised Work Plan with refined work stream subgroups (as appropriate) during 8/30/16 meeting	Work stream 2.1 lead	8/30/16	*complete*
Finalize revised Work Plan and work stream subgroups	Work stream 2.1 lead/ Co-Chairs	9/9/16	*complete*
Send revised Work Plan to Steering Committee	*Co-Chair*	*9/13/16*	*complete*
Send Draft Outline from work stream 2.1 and 2.2 to other Working Group members	Work stream subgroup 2.1 and 2.2 leads	10/12/16	*complete*
Written feedback on Draft Outline from Working Group members to subgroups	All Working Group Members	10/17/16	*complete*
Create Report Outline	Co-Chairs	10/19/16	*complete*
All day working session	All WG Members	10/19/16	*complete*
Revised Work Stream Outline	Work stream subgroup 2.1 (+)	10/21/16	*complete*
Finalize Report Outline	Co-Chairs/ Work stream lead	10/25/16	*complete*
Send Outline to Steering Committee	*Co-Chair*	*10/26/16*	*complete*
Revise outline based on Steering Committee Feedback and JU business and procurement model concept document; assign sections to new subgroups	All Working Group Members	2/3/17	revised
All day working session	All WG Members	TBD	
All day working session	All WG Members	TBD	revised
Send Draft (v1) report section to full Working Group	Work stream subgroups	3/27/17	revised
Written feedback on Draft (v1) report from other Working Group members to subgroup responsible for each section	All Working Group Members	4/5/17	revised
Finalize Draft Report	Co-Chairs/ Work stream leads	4/13/17	revised
Send Draft Report to Steering Committee	*Co-Chair*	4/20/17	revised
Incorporate Steering Committee Feedback into each Report sub-section and send to working group members creating (v2)	Work stream subgroups	5/5/17	revised
Feedback on Draft (v2) Report sections from other Working Group members	All Working Group Members	5/11/17	revised
Send Revised Draft (v2) Report to Working Group	Work stream subgroups	5/16/17	revised
Finalize Report	Co-Chairs/ Work stream leads	5/18/17	revised
File Energy Efficiency Market Procurement Recommendations Report	***Co-Chair***	***5/19/17***	revised

Task	Responsibility	Due Date	Status
Consideration of Additional Work Scope:[2]			
Discuss & Prioritize Additional Tasks	Working Group	6/9/17	revised
Send Draft Scope & Justification to Working Group for Feedback	Assigned Member(s)	6/23/17	revised
Revise Draft Scope & Justification	Assigned Member(s)	6/30/17	revised
Send Revised Scope to Working Group	Assigned Member(s)	7/5/17	revised
Finalize Revised Scope	Working Group	7/19/17	revised
File Revised Work Scope	***Co-Chair***	***7/21/17***	revised

Revisions:

This Work Plan is a living document and the Working Group will revise it on a regular basis to include additional tasks assigned to the Working Group and to reflect any changes to the Working Group schedule. Revisions to this Work Plan will be included as a component of the Written Update to the Steering Committee. In instances where the Working Group determines that it will be unable to meet the deadlines established by the CEAC Steering Committee, it will comply with the revision process outlined in the CEAC Work Plan and update this Work Plan accordingly.

[2] In accordance with the Working Group's Work Scope, the Working Group may propose additional objectives, tasks, and deliverables to the Steering Committee at any time. However, no later than 90 days following the completion of the previously assigned deliverables, the Working Group must provide the CEAC Steering Committee with a recommendation to either adopt additional scope or fold the Working Group.

Steering Committee Update
Metrics, Tracking and Performance Assessment Working Group

Evaluation Guidelines Recommendations Report:

Recent Progress:

- The Metrics, Tracking and Performance Assessment (MTPA) Working Group submitted the Final Evaluation Guidelines Recommendations Report to the Steering Committee and filed the report in DMM on the due date.
- The MTPA Working Group also drafted companion content for the new Guidelines. This content was saved in the MTPA SharePoint site for reference by DPS staff.

Updates to the Work Plan:

- None. This work task has been completed.

Expected Coordination/Task Dependencies:

- Evaluation Guidelines should be viewed as a living document and updated, as needed, based on later work product and outcomes of the MTPA working group and other working groups. For example, as performance metrics for market transformation programs are finalized, the Evaluation Guidelines may require updates to address these metrics and methods. Furthermore, other working groups should be informed of elements of the guidelines, e.g., advanced M&V.

Performance Metrics Report:

Recent Progress:

- This work is parsed into two phases. The Phase 1 Performance Metrics Recommendations Report focuses on basic performance metrics to gauge progress across all clean energy programs. The Phase 2 report will focus on performance metrics and measurement for market transformation strategies.
- The sub-group met regularly throughout December to focus on the Phase 1 –report. The work has been progressing well however another month has been requested in order to establish clear definitions and consistent methodologies on several key metrics including emission reductions, customer (participant) bill savings and private investment (leveraged funds).

Updates to the Work Plan:

- On December 16, 2016: the Steering Committee request was sent for an extension on the Phase 1 recommendations report. The new targeted due date is January 24, 2017 for review and feedback during the February 7, 2017 CEAC meeting.
- The Phase 2 deadlines have been specified as follows in the revised Scope:

- Phase 2 Outline: originally targeted for Q1 2017, but now scheduled for 4/20/2017
- Phase 2 Draft report: Q3 2017

Expected Coordination/Task Dependencies:

- Performance Metrics Recommendations will need coordination with:
  - Clean Energy Implementation & Coordination (CEIC) working group: for more detailed information regarding the central database and tracking of data
  - Data Tracking E2 Working Group: to obtain documentation on metrics previously identified and to leverage the output of this group, as applicable, in forward-looking metrics

Online Dashboard Recommendations Report:

Recent Progress:

- The Dashboard subcommittee has reviewed existing practices as well as other dashboard best practice examples. The draft Dashboard Recommendations Outline was submitted for feedback and reviewed during the November 30, 2016 committee meeting. Discussion of the outline addressed key metrics to include, technical requirements and other considerations like involvement of third parties and location of the Dashboard itself.
- The Dashboard subcommittee is meeting on 1/5/16 for a demonstrations of the current DPS Energy Efficiency Portfolio Standard on-line reporting system and NYSERDA's Open NY content. The group will identify best practices and opportunities within these systems to inform or aid in Dashboard development.

Updates to the Work Plan:

- The Dashboard Recommendations Report outline was submitted on-schedule
- An extension has been requested on December 16, 2016 for the draft Phase I Dashboard Recommendations report to March 10,2017 for feedback during the March 21,2017 meeting
- An extension has been requested on December 16, 2016 for the final Phase I Dashboard Recommendations report to April 14, 2017 after Steering Committee feedback.

Expected Coordination/Task Dependencies:

- The MTPA Working Group's Performance Metrics Phase 1 report will inform key metrics to be presented in the Dashboard. The requested extensions help maintain a sequenced approach.
- The Dashboard development should be viewed as a work in progress given the identification of additional metrics in phase 2 of the Working Group's Performance Metrics report

EM&V Coordination Report:

Recent Progress:

- A draft of the EM&V Coordination plan outline has been developed.
- Work on this task was paused during late September and early October in order to focus effort on meeting deadlines associated with earlier MTPA deliverables.

Updates to the Work Plan:

- In mid-October, the Steering Committee approved a revised Work Scope which extended the outline due date to Q2 2017
- In mid-October, the Steering Committee approved a revised Work Scope which extended the draft report into Q4 2017.

Expected Coordination/Task Dependencies:

- EM&V Coordination Plan requires understanding of the work underway by the CEIC working group.

Metrics, Tracking and Performance Assessment Working Group Work Plan

Background:

By order issued January 21, 2016 (January CEF Order),[1] the New York Public Service Commission (the Commission) established the Clean Energy Advisory Council (CEAC). The Commission required that the CEAC address specific issues and provide the Commission or Staff with recommendations and reports regarding such issues. To comply with the Commission directives, the CEAC developed a structure that relies upon Working Groups to conduct the necessary research and analysis and to prepare reports regarding their findings and recommendations.

The CEAC established the Metrics, Tracking and Performance Assessment Working Group to develop recommendations for a consistent approach to metrics, data tracking and performance assessment, inclusive of evaluation, measurement & evaluation (EM&V) that looks to advances in technology and approaches to reduce and limit the dollars required for these functions while maintaining needed reliability, which will increase the dollars available for program delivery. The Working Group will also identify and recommend metrics and approaches for evaluating market development and transformation.

Overview:

To complete the work assigned by the Steering Committee in accordance with the schedule established in its work scope, the Metrics, Tracking and Performance Assessment Working Group plans to meet weekly. The Working Group expects most of its meetings to be conducted as teleconferences, however, the Working Group will also conduct webinars and in-person meetings if necessary. One in-person meeting has been scheduled for July 20, 2016. Between meetings, the Working Group members will conduct work through sub-group teleconference meetings and via email. Subgroups have been established and preliminarily staffed, based upon initial member interest for each major work area. Further drilldown on specific sub-group assignments will be finalized in the near future.

Objectives:

The Working Group will focus on five main objectives that are closely linked and therefore will develop a foundation that directs its work plan to meet the discrete needs of each deliverable while ensuring that each objective is informed by one another. These areas are as follows:

1. Evaluation Guidelines Recommendations Report
2. Coordination of EM&V Activities
3. Performance Metrics
4. On-line Dashboard
5. Recommendations Regarding the Continuation of Working Group Activities

[1] Case 14-M-0094 et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework (issued January 21, 2016).

The Working Group intends to provide updates regarding progress and working schedule to the Steering Committee at the Steering Committee's public meetings.

Schedule & Status Tracking:

Task	Responsibility	Due Date	Status
Updates to Steering Committee:			
Send Written Update to Steering Committee	*Steering Committee Designee*	*7/6/16*	*Completed*
Send Written Update to Steering Committee	*Steering Committee Designee*	*8/10/16*	*Completed*
Send Written Update to Steering Committee	*Steering Committee Designee*	*9/12/16*	*Completed*
Send Written Update to Steering Committee	*Steering Committee Designee*	*10/13/16*	*Completed*
Send Written Update to Steering Committee	*Steering Committee Designee*	*10/27/16*	*Completed*
Send Written Update to Steering Committee	*Steering Committee Designee*	*11/23/16*	*Completed*
Send Written Update to Steering Committee	*Steering Committee Designee*	*12/6/16*	*Completed*
Send Written Update to Steering Committee	*Steering Committee Designee*	*1/3/16*	*Completed*
Send Written Update to Steering Committee	*Steering Committee Designee*	*1/31/16*	
Evaluation Guidelines Recommendations Report:			
Discuss Current Guidelines, Working Group (WG) Members Identify Interest in Task	Co-Chairs and WG	6/16/16	*Completed*
Identify Revision Areas, Assign Sub-Group of Interested WG Members to Undertake Task	Co-Chairs and WG	6/23/16	*Completed*
Further Refine Areas for Revision/Addition, Begin Developing Outline, Assign Recommendations Text, Begin Developing Specific Revisions	Co-Chairs and Sub-Group	6/30/16	*Completed*
Draft Evaluation Guidelines Recommendations Report Outline V1 sent to Sub-Group	Assigned Member	7/5/16	*Outline Completed & Submitted to Steering Committee*
Written Feedback on Draft Outline V1 Provided by Subgroup	Sub-Group	7/7/16	
Subgroup Feedback Incorporated and Draft Outline V2 Sent to Full Working Group	Assigned Member	7/8/16	
Written Comments on Outline V2 Provided by Full Working Group	Working Group Members	7/12/16	
Draft Evaluation Guideline Text V1 provided to Sub-Group	Assigned Member(s)	7/12/16	
Revised Draft Outline V3 Provided to Full Working Group	Assigned Member	7/14/16	
Written Subgroup Feedback on Draft Evaluation Guideline Text V1	Sub-Group	7/14/16	
Evaluation Guideline Text V2 Compiled and Provided to Full Working Group	Assigned Member	7/18/16	

Task	Responsibility	Due Date	Status
Full Working Group Provides Comments on Draft Evaluation Guideline Text V2 (In-person Meeting)	Working Group	7/20/16	
Draft Outline V3 Submitted to CEAC Steering Committee for Comment	***Co-Chair***	***8/10/16***	
Receive CEAC Steering Committee Comments on Outline V3	Designee/Co-Chairs	8/17/16	Draft Report Completed and Submitted to Steering Committee
Finalize Outline V4	Assigned Member	8/19/16	
Draft Evaluation Guidelines Recommendations Report V1 and Evaluation Guideline Text V3 provided to Working Group	Assigned Member(s)	9/2/16	
Written Comments from Working Group on Evaluation Guidelines Recommendation Report V1	Working Group	9/6/16	
Draft Evaluation Guidelines Recommendations Report V2 Submitted to CEAC Steering Committee for Comment	*Co-Chair*	*9/9/16*	
Receive CEAC Steering Committee Comments	Designee/Co-Chairs	9/19/16	Final Report Completed and sent to Steering Committee and filed in DMM
Revised (if needed) Draft Evaluation Guidelines Recommendations Report V3 Provided to Full Working Group	Assigned Member	9/26/16	
Finalize Evaluation Guidelines Recommendations Report	Assigned Member	9/30/16	
File Final Evaluation Guidelines Recommendations Report and Provide Evaluation Guideline Text To DPS Staff[2]	***Co-Chair***	***10/3/16***	Guideline text provided to DPS Staff
Evaluation Guidelines Issued	***DPS***	***11/1/16***	

[2] The 1/21/16 CEF Framework Order in Case 14-M-0094 directed DPS Staff to issue revised Evaluation Guidelines by November 1, 2016. The output of this Working Group activity will be both a summary level Evaluation Guidelines Recommendations Report as well as suggested Evaluation Guideline Text to aid DPS staff in making revisions to the Guidelines document.

EM&V Coordination Plan:			
Discuss Coordination Plan, Working Group (WG) Members Identify Interest in Task	Co-Chairs and WG	6/16/16	Completed
Assign Interested WG Members to Sub-Group to Undertake Task	Co-Chairs and WG	6/23/16	Completed
Begin Development of Strawman for Coordination Efforts (i.e., Identify Activities/Outcomes Requiring Coordination, Possible Coordination Approaches, Etc.)	Co-Chairs and Sub-Group	6/30/16	Completed
Gather Further Input from Sub-Group Members on Coordination Needs and Approaches	Assigned Member	7/7/16 and continuing	Ongoing
Discuss EM&V Coordination Plan with Full WG at In-Person Meeting	Working Group	7/20/16	Complete
Revised Strawman V21 and Construct for EM&V Coordination Plan Outline V2 Shared with Full WG	Assigned Member	7/26/16	Date to be revised
~~Coordinate with Clean Energy Implementation Coordination Working Group on Approach for Utility/NYSERDA Coordination~~	~~Co-Chairs and Sub-Group~~	~~Early August TBD~~	~~Ongoing~~
~~Incorporate Full WG Input into Outline and Strawman (Transitioning Strawman into Agreed Upon Plan Structure in Alignment with Outline) and Send Back to Full WG~~	~~Assigned Member~~	~~8/16/16~~	
~~Full WG Provide Written Comments on Strawman/Plan and Draft Outline V3~~	~~Co-Chairs and WG~~	~~8/30/16~~	
~~Incorporate Full WG Comments and Develop Draft Final V4 Outline and Plan, Distribute to Full WG~~	~~Assigned Member~~	~~9/23/2016~~	~~*New date*~~
Submit EM&V Coordination Plan Outline to CEAC Steering Committee for Comment	***Co-Chairs***	***~~10/7/16~~Q2 2017***	
~~Receive CEAC Steering Committee Comments on Outline, Continue Development of Draft Coordination Plan~~	~~Co-Chairs and Sub-Group~~	~~10/20/16~~	
~~Provide Draft Plan to Full Working Group for Comment~~	~~Assigned Member~~	~~11/1/16~~	
~~Written Comments from Full WG on Draft Plan V1~~	~~WG~~	~~11/10/16~~	
~~Incorporate Working Group Comments in Revised Draft and Provide Revised Plan V2 to Full WG~~	~~Assigned Member~~	~~11/15/16~~	
~~Final Written Comments on Plan V2 from Full WG~~	~~WG~~	~~11/17/16~~	
Submit Draft Coordination Plan V3 to CEAC Steering Committee for Comment	***Co-Chairs***	***Q4 2017~~12/1/16~~***	
~~Steering Committee Comments Received~~	~~Co-Chairs and Sub-Group~~	~~12/13/16~~	

~~Finalize Coordination Plan based on Steering Committee Input and Provide to Full WG for Last Review of Any Substantive Changes~~	~~Assigned Member~~	~~12/20/16~~	
File Final EM&V Coordination Plan	***Co-Chairs***	***Q4 2017~~11/9/17~~***	

Performance Metrics Recommendations Report:			
Discuss Metrics Recommendation Report, Working Group (WG) Members Identify Interest in Task	Co-Chairs and WG	6/16/16	Completed
Assign Interested WG Members to Sub-Group to Undertake Task	Co-Chairs and WG	6/23/16	Completed
Coordinate with Data Tracking E2 Working Group to Obtain Documentation on Metrics Previously Identified, Coordinate with Energy Efficiency Procurement & Markets Working Group	Co-Chairs and Sub-Group	Early July TBD	Ongoing
Discuss Potential Metrics with WG Members, Including New Areas Requiring Metrics, at In-Person Meeting	Co-Chairs and WG	7/20/16	Complete
Develop Draft Outline V1 of Performance Metrics Recommendation Report, Provide to Full WG	Assigned Member	8/16/16	Complete
Full WG Provide Written Comments on Draft Outline	Working Group	8/19/16	Outline Completed and Submitted to Steering Committee
Create Revised Draft Outline V2 based on Full WG Comments	Assigned Member	8/23/16	
Submit Outline V2 to CEAC Steering Committee for Comment	***Co-Chairs/DPS***	***9/9/16***	
Receive Steering Committee Comments on Outline	Co-Chairs and Sub-Group	Completed	Completed
~~Provide Draft of Performance Metrics Recommendations Report V1 to Full WG for Review and Comment~~	~~Co-Chairs and Sub-Group~~	~~10/04/16~~	
~~Full WG Written Comments Due on Performance Metrics Recommendations Report V1~~	~~Working Group~~	~~10/11/16~~	
~~Finalize Draft Performance Metrics Recommendations Report V2~~	~~Co-Chairs and Sub-Group~~	~~12/9/16~~	
Performance Metrics Subcommittee Develop Draft Report Content	Co-Chairs and Sub Group	11/10/16	*Completed*
Performance Metrics Subcommittee Review Draft Report	Co-Chairs and Sub Group	12/8/16	*Completed*
Review of Draft Report by full Working Group	Working Group	12/15/16	*Completed*

Submit Draft Performance Metrics Report V2 to CEAC Steering Committee for Comment	***Co-Chairs***	***~~12/23/16~~***	*extended to 1/24/17*
Receive Steering Committee Comments, Prepare Final Draft	Working Group	~~1/10/17~~	extended to 2/7/2017
Revise Performance Metrics Report as Needed Based on Steering Committee Comments, Provide to Full Working Group for Final Review of Substantive Changes	Co-Chairs and Sub-Group	~~1/17/17~~	
Full Working Group Written Comments Due	Working Group	~~1/19/17~~	
File Final Performance Metrics Phase 1 Recommendations Report	***Co-Chairs***	***~~1/25/17~~***	***extended to 2/28/2017***
Submit Outline Performance Metrics Report Phase 2 to CEAC Steering Committee for Comment	***Co-Chairs/DPS***	***Q1 2017***	
Submit Draft Performance Metrics Report Phase 2 to CEAC Steering Committee for Comment	***Co-Chairs***	***Q3 2017***	
File Final Performance Metrics Phase 2 Recommendations Report	***Co-Chairs***	***Q3 2017***	

On-line Dashboard Recommendations Report:			
Discuss Dashboard Recommendation Report, Working Group (WG) Members Identify Interest in Task	Co-Chairs and WG	6/16/16	Completed
Assign Interested WG Members to Sub-Group to Undertake Task	Co-Chairs and WG	6/23/16	Completed
Initial discussion among full working group regarding dashboard requirements and timeline	Working Group	8/4/16	Completed
Work Group Continued Discussion of Dashboard Requirements	Working Group	8/11/16	Completed
Discussion of Outline V1 Based on WG Input to Help Inform NYSERDA Reporting Plan (Due September 1, 2016)	Co-Chairs and Sub-Group	8/18/16	Completed
~~Provide First Draft On-Line Dashboard Recommendations Report V1 to Full WG~~	~~Co-Chairs and Sub-Group~~	~~10/18/16~~	
~~Comments Due on First Draft Report V1 from Full WG~~ Review Outline with Sub-Group and Identify Next Steps to Draft Report Development	Co-Chairs and ~~WG~~ Sub-Group	10/27/16	
Sub-Group Develops Draft Report Content	Co-Chairs and Sub-Group	11/10/16	
Full Working Group Reviews Outline	Working Group	11/10/16	*Completed*
Submit Outline to Steering Committee	***Co-Chairs***	***11/17/16***	*completed*
Incorporate Steering Committee Feedback into Outline and Draft Report	Co-Chairs and Sub-Group	TBD	
Send Draft Report to Full WG for Comment	Co-Chairs and Sub-Group	~~11/29/16~~	
Comments on Draft Report due from Full WG	Co-Chairs and WG	~~12/8/16~~	

Finalize Draft Report	Co-Chairs and Sub-Group	~~12/15/16~~	
Submit Draft Report to CEAC Steering Committee for Comment	***Co-Chairs***	***~~1/26/17~~***	*extended to 3/10/17*
Receive CEAC Steering Committee Comments and Finalize, Provide to Full Working Group for Final Review of Substantive Changes	Co-Chairs and Sub-Group	~~2/15/17~~	extended to 3/21/2017
Full Working Group Written Comments Due	Working Group	~~2/17/17~~	
File Final On-Line Dashboard Recommendations Report	***Co-Chair***	***~~2/23/17~~***	***extended to 4/14/2017***

Recommendation to Steering Committee on Continuation of Working Group Activity:			
Develop List of Items to Potentially be Addressed by Working Group in the Future	Co-Chairs	Q4 2017 ~~3/7/17~~	
Provide Comments on List of Items to Potentially be Addressed by Working Group in the Future and Discuss Whether the Group Should Continue	Co-Chairs Working Group Members	Q4 2017 ~~3/16/17~~	
Finalize Recommendations to Steering Committee on Future Working Group Activities	Co-Chairs	3/21/17	
Provide Recommendation to Steering Committee Regarding the Continuation of Working Group Activities	***Co-Chairs***	***No later than ~~5/23/17~~Q1 2018***	

Revisions:

This Work Plan is a living document and the Working Group will revise it on a regular basis to include additional tasks assigned to the Working Group and to reflect any changes to the Working Group schedule. Revisions to this Work Plan will be included as a component of the Written Update to the Steering Committee. In instances where the Working Group determines that it will be unable to meet the deadlines established by the CEAC Steering Committee, it will comply with the revision process outlined in the CEAC Work Plan and update this Work Plan accordingly.

Steering Committee Update

Voluntary Investment and Other Market Development Working Group

A Revised Work Plan reflecting the updates to the Work Plan described below and highlighting those activities expected to occur prior to the January 10, 2017 Clean Energy Advisory Council (CEAC) Steering Committee Meeting is attached. None of the revisions to the Working Group's Work Plan affect the CEAC Work Plan.

Voluntary Investment Parameters Report:

Recent Progress:

Complete. NYSERDA, in consultation with DPS, has agreed to take the output of the Report and develop a Clean Energy Fund mechanism to facilitate development of pilots that adhere to the Report's core criteria, including but not limited to additionality.

Research and Recommendations Report:

Recent Progress:

The VIOMD WG plans to revisit this deliverable and the work group members that will be involved this month.

Community Choice Aggregation Report:

Recent Progress:

A CCA subgroup of 17 members has been formed. The subgroup member list is below. Members joined an hour and a half kickoff meeting/call on December 2, 2016. Background on the CEAC, VIOMD, and the CCA subgroup's formation was provided and the relevant portions of the VIOMD's work scope were discussed. Worksheets and surveys will be provided to subgroup members in January to facilitate subgroup coordination as well as additional thinking on the subgroup's work product ahead of a tentatively-scheduled late January subgroup meeting. A work plan has yet to be developed for this report.

Name	Affiliation
Jen Metzger	Citizens for Local Power
Brad Tito	NYSERDA
Kelly Connell	DPS
Paul Fenn	Local Power, Inc.
Michael Rauch	Renewable Highlands
Leo Wiegman	Croton Energy Group
Radina Valova	Pace Energy and Climate Center

Valerie Strauss	Association for Energy Affordability
Brian Bowe	Constellation
Sam Morgan	Constellation
Arjun Makhijani	Institute for Energy and Environmental Research
Kerri Ann Kirschbaum	ConEd
Sara Margaret Geissler	ConEd
Jason Miller	ConEd
Elena Futoryan	ConEd
JoAnne D Seibel	Orange and Rockland
Kevin Schmalz	AVANGRID
Marc Webster	AVANGRID
Glenn Weinberg	Joule Assets
Louise Gava	MEGA
Dan Welsh	Sustainable Westchester
Juliana Griffiths	National Grid
Maggie Downey	Cape Light Compact
Irene Weiser	Tompkins County Council of Governments

Expected Coordination/Task Dependencies:

We will continue coordination with the Low & Moderate Income Clean Energy Initiatives Working Group that is focused on efficiency services for underserved populations, as well as with other relevant working groups.

Voluntary Investment & Other Market Development Working Group Work Plan

Background:

By order issued January 21, 2016 (January CEF Order),[1] the New York Public Service Commission (the Commission) established the Clean Energy Advisory Council (CEAC). The Commission required that the CEAC address specific issues and provide the Commission or Staff with recommendations and reports regarding such issues. To comply with the Commission directives, the CEAC developed a structure that relies upon Working Groups to conduct the necessary research and analysis and to prepare reports regarding their findings and recommendations.

The CEAC established the Voluntary Investment & Other Market Development Working Group to develop strategies to maximize energy efficiency, renewable energy and distributed energy resources (DER) deployment, identifying approaches for adoption in the non-residential sectors, which may also include approaches that encourage and recognize voluntary investments in clean energy technology and solutions that help accelerate and increase achievement of the Clean Energy Standard and State Energy Plan (SEP) goals more broadly.

Overview:

To complete the work assigned by the Steering Committee in accordance with the schedule established in the Voluntary Investment & Other Market Development Working Group Scope, the Working Group expects to meet every two weeks for two hours. The Working Group expects most of its meetings to be conducted as both in-person meetings and webinars. Between meetings, the Working Group members will conduct work through email.

The Working Group intends to provide updates regarding progress and working schedule to the Steering Committee at the Steering Committee's public meetings.

[1] Case 14-M-0094 et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework (issued January 21, 2016).

Schedule:

Task	Responsibility	Due Date	Status
Updates to Steering Committee:			
Send Written Update to Steering Committee	*Co-Chairs*	*7/6/16*	*Completed*
Send Written Update to Steering Committee	*Co-Chairs*	*8/10/16*	*Completed*
Send Written Update to Steering Committee	*Co-Chairs*	*9/12/16*	*Completed*
Send Written Update to Steering Committee	*Co-Chairs*	*10/13/16*	*N/A*
Send Written Update to Steering Committee	*Co-Chairs*	*10/27/16*	*Completed*
Send Written Update to Steering Committee	*Co-Chairs*	*11/23/16*	*N/A*
Send Written Update to Steering Committee	*Co-Chairs*	*12/6/16*	*N/A*
Send Written Update to Steering Committee	*Co-Chairs*	*1/3/17*	*Completed*
Send Written Update to Steering Committee	*Co-Chairs*	*1/31/17*	
Voluntary Investment Pilot Parameters Report:			
Send Draft Outline to Working Group	Co-Chairs	7/8/16	Completed
Finalize Outline	Working Group	7/13/16	Completed
Send Outline to Steering Committee	*Co-Chair*	*8/10/16*	*Completed*
Submit Amended Work Scope to Steering Committee	Co-Chairs	10/17/16	*Completed*
Send Draft (v1) Outline to Working Group	Co-Chairs	10/18/16	Completed
Send Revised Draft (v2) Outline to Working Group	Co-Chairs	10/24/16	Completed
Send Revised Draft (v1) Report to Working Group	Co-Chairs	11/1/16	Completed
Send Revised Draft (v2) Report to Working Group	Co-Chairs`	11/10/16	Completed
Finalize Draft Report	Working Group	11/22/16	Completed
Send Draft Report to Steering Committee	*Co-Chairs*	*11/23/16*	*Completed*
Incorporate Steering Committee Feedback into Report	Co-Chairs	12/1/16	Completed
Send Revised Draft (v3) Report to Working Group	Co-Chairs	12/1/16	Completed
Finalize Report	Working Group	12/20/16	Completed
File Final Voluntary Investment Report	***Co-Chairs***	***12/21/16***	***Completed***
FILE VOLUNTARY INVESTMENT PROPOSAL	***DPS***	***3/1/17~~TBD~~***	
Consideration of Additional Work Scope[2]			
Discuss & Prioritize Additional Tasks	Working Group	January, 2017	
Assign Working Group Member	Working Group	TBD	
Send Draft Scope & Justification to Working Group	Co-Chairs	TBD	
Finalize Draft Scope & Justification	Working Group	TBD	

[2] In accordance with the Working Group's Work Scope, the Working Group may propose additional objectives, tasks, and deliverables to the Steering Committee at any time. However, no later than 90 days following the completion of the previously assigned deliverables, the Working Group must provide the CEAC Steering Committee with a recommendation to either adopt additional scope or fold the Working Group.

Task	Responsibility	Due Date	Status
Send Draft Scope & Justification to Steering Committee	*Co-Chairs*	*TBD*	
Incorporate Steering Committee Feedback into Scope	Co-Chairs	TBD	
Send Revised Scope to Working Group	Co-Chairs	TBD	
Finalize Revised Scope	Working Group	TBD	
File Revised Work Scope	***Co-Chairs***	***TBD***	

Revisions:

This Work Plan is a living document and the VIOMD WG will revise it on a regular basis to include additional tasks assigned to the Working Group and to reflect any changes to the Working Group schedule. Revisions to this Work Plan will be included as a components of the Written Update to the Steering Committee.

Steering Committee Update

REV Energy Efficiency Best Practices Working Group

Administrative Matters:

The Working Group filed our last Update on October 27, 2016 for the CEAC Steering Committee's November 3, 2016 meeting. On October 27, 2016, we also filed the Outline for our REV Energy Efficiency Best Practices Guide with the goal of filing a Draft Report on January 24, 2017.

Since the filing of our last Update, the Working Group has been actively engaged in the development of its Draft Report. The Working Group has held four additional conference call meetings on November 16, November 30, December 21 and today January 4, 2017. A smaller executive group has held additional conference calls, including a briefing on best practices with the Northeast Energy Efficiency Partnership (NEEP), to focus and advance work on our Draft Report.

Smaller working groups and individuals have been assigned responsibility for initial drafting of segments of the guide.

Biweekly meetings are scheduled to continue as the Working Group focuses on its next goal, the drafting and completion of its Draft Best Practices Report, which is due on January 24, 2017.

Work Plan:

The Working Group initially identified approximately 50 Best Practice candidates covering both Regulatory/Policy and Program initiatives. Through extensive discussions, the Working Group reduced this list to 30 items.

The Working Group then identified, through prioritization based on potential need and impact within a REV framework, six specific best practices for which it has taken a "deep dive" as illustrative of the type of information that should accompany any description of a Best Practice. These topics, which reflect Regulatory and Policy as well as Program Best Practices, include:

Create a "One-Stop" Shop for Building Retrofits

Pay for Performance Metered Savings

Integration of Energy Efficiency and Demand Management

Customer Segmentation and Targeting

Energy Efficiency Potential Studies

Clear Framework to Define How 3rd Parties Can Transact for Energy Efficiency Service in Competitive Market

The current format for the guide, as reflected in the discussion of these six best practices, includes a clear statement of the Best Practice, the rationale for its inclusion, an outline of the expected outcomes within a New York REV context, and identification of a path to implementation in New York.

Next Steps/Steering Committee Guidance & Interdependencies:

The Working Group is focused on its next goal, completion of a Draft Best Practices Guide currently due on January 24, 2017. We look forward to Steering Committee's review and reaction at its February 7, 2017 meeting.

REV Energy Efficiency Best Practices Working Group Work Plan

Background:

The REV Track One Order[1] directed Staff to develop a REV Energy Efficiency Best Practices Guide to develop more innovate approaches to energy efficiency programs. The guidance is to support REV's enhanced value of traditional efficiency programs to provide for targeting specific system needs, coordination with a larger market transformation plan or development of technology, tools and information to facilitate customer load management. The REV Energy Efficiency Best Practices Guide has since been tasked to the Clean Energy Advisory Council through the Clean Energy Fund Framework[2] Order.

The Working Group will develop a REV Energy Efficiency Best Practices Guide outlining energy efficiency program best practices under a REV framework, and including a process for future revisions and updates. To inform development of the Guide, the Working Group shall conduct research and analysis of program data and shared performance assessments across New York State program administrators. It also will investigate relevant best practices from outside the state to identify replicable, high impact activities and promising innovative strategies, including pilots and demonstrations of new approaches. The Group is expected to update and revise the Guide such that the information in the Guide changes with the pace of technology and Commission directives.

Overview:

This Work Plan was developed by interpreting this mandate in the broadest sense, in line with the desire to encourage experimentation with innovative approaches, learn from early demonstrations and share best practices and lessons learned.

To complete the work, the REV Energy Efficiency Best Practices Working Group expects to meet bi-weekly. The Working Group expects most of its meetings to be conducted as teleconferences, however, if necessary, the Working Group will also conduct webinars and in-person meetings. Between meetings, the Working Group members will conduct work through email. It is anticipated that research and analysis will be conducted by members of DPS, NYSERDA and utility staff, working group members with along with possible consultant support.

The Working Group will be exploring opportunities to collaborate with other Working Groups and seek to identify intersections and leverage points with their activities. The Working Group will also seek perspectives from experts in the energy efficiency field and stakeholders, where needed. The Working Group intends to provide updates regarding progress and working schedule to the Steering Committee at the Steering Committee's public meetings.

[1] Case 14-M-0101, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2016)
[2] Case 14-M-0094, Oder Authorizing the Clean Energy Fund Framework (issued January 21, 2016)

Schedule:

Task	Responsibility	Due Date	Status
Updates to Steering Committee:			
Send Written Update to Steering Committee	*Designee*	*7/6/2016*	*Complete*
Send Written Update to Steering Committee	*Designee*	*8/10/2016*	*Complete*
Send Written Update to Steering Committee	*Designee*	*9/12/2016*	*Complete*
~~*Send Written Update to Steering Committee*~~	~~*Designee*~~	~~*10/13/2016*~~	*N/A*
Send Written Update to Steering Committee	*Designee*	*10/27/2016*	*Complete*
~~*Send Written Update to Steering Committee*~~	~~*Designee*~~	~~*11/23/2016*~~	
Send Written Update to Steering Committee	*Designee*	*12/6/2016*	
Send Written Update to Steering Committee	*Designee*	*1/3/2017*	
Send Written Update to Steering Committee	*Designee*	*1/31/2017*	
REV Energy Efficiency Best Practices Guide:			
Best Practices Compendium			
Assign tasks of the Best Practices Compendium	Co-Chair	7/13/2016	Complete
Develop criteria to identify promising REV programs, pilots and demonstrations	Assigned Member	8/3/2016	Complete
Compile research of relevant program data and performance assessments from NYS EE program administrators	Assigned Members	8/26/2016	~~On Going~~Complete
Analyze program data and performance assessments from NYS EE program administrators	Assigned Member	9/30/2016	In Progress
Compile research of replicable, high impact activities and promising innovative strategies, pilots and demonstrations, within and outside of NYS	Assigned Member	8/26/2016	~~On Going~~Complete
Analyze research, extracting insight and promising innovative strategies for Best Practices under the REV Framework	Assigned Member	9/17/2016	*Complete*~~In Progress~~
Off-site meeting to review and identify Best Practices	Working Group	9/30/2016	*Complete*
Draft Best Practices Compendium	Assigned Member	10/5/2016	*Complete*
Send Draft Best Practices Compendium to Working Group	Assigned Member	10/9/2016	*Complete*
Incorporate Feedback into Best Practices Compendium	Assigned Member	10/13/2016	*Complete*
Finalize Best Practices Compendium	Working Group	10/13/2016	*Complete*
Delivery Platform and Shared Learnings Mechanism			
Assign key tasks	Co-Chair	7/13/2016	Complete
Needs Assessment / Voice of Customer - utilities, program administrators	Working Group	9/23/2016	In Progress
Identify current approaches to Best Practices and shared learning across Program Administrators	Working Group	~~8/17/2016~~9/23/2016	In Progress
Develop approach to update and revise Best Practice Guide	Working Group	9/23/2016	In Progress
Off-site meeting to evaluate needs for shared learnings and promising mechanism for Best Practices	Working Group	9/30/2016	*Complete*

Send Draft Delivery Recommendation(s) and Shared Learnings Mechanisms for Guide to Group	Assigned Member	TBD	
Incorporate Working Group Feedback into Delivery Recommendation(s) and Shared Learnings Mechanisms for Guide	Assigned Member	TBD	
Finalize Delivery Platform and Shared Learning Mechanism(s) Recommendations for Guide	Working Group	TBD	
Best Practices Draft Outline			
Assign Components and task of Outline to Working Group Member	Co-Chair	7/13/2016	Complete
Synthesize Components into a draft outline and send Draft Outline to Working Group	Assigned Member	9/30/2016	*Complete*
Incorporate Working Group Feedback into Outline	Assigned Member	10/5/2016	*Complete*
Finalize Outline	Working Group	10/6/2016	*Complete*
Send Draft Outline to Steering Committee	*Co-Chair*	~~*10/13/2016*~~*10/27/16*	*Complete*
Steering Committee to Provide Comments	Steering Committee	~~10/20/2016~~11/3/16	*Complete*
Incorporate Best Practice Compendium, Delivery Platform Recommendation and Shared Learning Mechanism(s) to develop Draft Report	Assigned Member	~~10/26/2016~~11/15/16	*Complete*
Send Revised Draft (v1) Report to Working Group	Assigned Member	11/30/2016	*Complete*
Finalize Draft Report	Working Group	*12/28/2016*	*In progress*
Send Draft Report to Steering Committee	*Co-Chair*	*1/24/2017*	
Steering Committee to Provide Comments	Steering Committee	2/7/2017	
Incorporate Steering Committee Feedback into Report	Assigned Member	2/10/2017	
Send Revised Draft (v2) Report to Working Group	Assigned Member	2/17/2017	
Finalize Report	Working Group	***2/17/2017***	
File Final REV Energy Efficiency Best Practices Guide	***Co-Chair***	***2/21/2017***	
Consideration of Additional Work Scope			
Discuss & Prioritize Additional Tasks	Working Group	3/1/2017	
Draft Scope & Justification to Working Group	Assigned Member	3/29/2017	
Send Draft Scope & Justification to Steering Committee	*Co-Chair*	*4/12/2017*	
Finalize Revised Scope	Working Group	5/19/2017	
File Revised Work Scope	***Co-Chair***	***5/22/2017***	

Revisions:

This Work Plan is a living document and the Working Group will revise it on a regular basis to include additional tasks assigned to the Working Group and to reflect any changes to the Working Group schedule. Revisions to this Work Plan will be included as a component of the Written Update to the Steering Committee. In instances where the Working Group determines that it will be unable to meet the

deadlines established by the CEAC Steering Committee, it will comply with the revision process outlined in the CEAC Work Plan and update this Work Plan accordingly.

Clean Energy Implementation & Coordination Working Group Scope

Purpose:

The purpose of the Clean Energy Implementation and Coordination Working Group is to coordinate planning and implementation among New York's clean energy program administrators, in consultation with DPS Staff to better support New York's clean energy policy objectives, provide clarity to the market, and serve ratepayers.

Guiding Principles & Clean Energy Advisory Council (CEAC) Protocols:

Working Group activities in support of feasible and impactful findings are expected to include:

- Conducting and implementing Working Group activities with transparency and openness;
- Planning and implementing a work agenda and schedule of activities in support of the Working Group objectives;
- Compiling research;
- Directing analysis and studies;
- Soliciting expert advice;
- Developing options and proposals for consideration with particular focus and emphasis on implications and benefits to customers;
- Assessing options and proposals against objectives, and arriving at written feasible recommendations that provide the underlying rationale and, as needed, documents dissenting views along with associated rationale;
- Informing the development and implementation of programs among New York's clean energy program administrators;
- Providing regular written updates on the Working Group's activities and progress; and
- Sharing final work products and notable interim work products.

Protocols regarding CEAC Steering Committee and Working Group interactions include:

- Working Group scopes are authorized by the Steering Committee. Working Groups may at any time propose revisions and additions to the Working Group scopes for Steering Committee consideration but the initial objectives and deliverables of each group will focus on Commission assigned activities. The Steering Committee will guide and authorize Working Group scopes that lead to recommendations that help inform the future development of programs.
- Each Working Group will establish its own work plan and schedule and should incorporate opportunities for non-member input and feedback, as appropriate and feasible and shall provide routine updates to the Steering Committee on its progress. The Steering Committee will identify potential overlap and coordination between Working Group activities and will suggest opportunities for integration or sharing resources between and among Working Group activities.

- Working Group reports and other documents will typically be provided to the Steering Committee for review and comment two to three weeks prior to final deliverable due dates. The Steering Committee will review and assess Working Group products against the overall objectives and purpose of the Clean Energy Advisory Council and Working Groups. The Working Group shall consider Steering Committee comments and shall document whether it has incorporated or rejected each comment with associated rationale in a new section of the report or in an appendix to the report. The Working Group retains ownership of final work products and is under no obligation to revise its recommendations in response to Steering Committee feedback. The Working Group shall work with Staff to ensure all final work products are filed in DMM and posted to the DPS website.

Initial Objectives:

The Clean Energy Implementation and Coordination Working Group is initially tasked with:

(1) E^2 Working Group Transition – Conduct an orderly transition and completion of any outstanding tasks of the E^2 Working Group and ensure any relevant needs, previously met by the E^2 Working Group, are accounted for in the operation of the CEAC. Specifically, the Working Group shall inventory any remaining tasks and associated deliverables and identify timelines for completion or transition of select tasks to appropriate Clean Energy Advisory Council Working Groups, if appropriate.

(2) Recommendations Regarding Multiple Incentives – Undertake a review designed to identify overlapping incentives and market development activities from various funding streams, to eliminate wasteful duplication and leverage complementary efforts. Specifically, the Working Group shall inventory or otherwise gather program, funding source and incentive information about the various program administrator clean energy programs and initiatives, including but not limited to utility, NYSERDA, NYPA and LIPA/PSEG clean energy programs and initiatives, demand response and load management programs, and REV demonstration and non-wires alternative projects to identify overlapping or duplicative programs or initiatives and current instances of multiple incentives from various funding streams. It shall develop recommendations for Staff guidance including the identification of tests to determine where layered incentives would be appropriate and where they should be forbidden as well as processes for sharing of information to determine when the tests should be applied.

(3) Utility / NYSERDA Coordination – Provide recommendations for using the CEAC as a venue for planning and collaboration among program administrators that supports effective development and deployment of program offerings and initiatives.

(4) Recommendation Regarding Continuation of Working Group Activities – Determination as to whether the Working Group has fulfilled its purpose upon the completion of the initial objectives or recommended additional objectives and tasks for the Working Group to pursue.

Tasks/Deliverables:

Task/Deliverable	Expected Completion Date
Final Clean Energy Implementation & Coordination Work Scope, including member list and member roles provided to Steering Committee	
• Provide to DPS Staff	5/25/16
• Final Filed in DMM	6/17/16
Initial detailed Clean Energy Implementation & Coordination Work Plan	
• Draft submitted to CEAC Steering Committee for Comment	6/9/16
• Final Filed in DMM	8/1/16
E^2 Working Group Transition Recommendations Report, including an inventory of remaining E^2 Working Group tasks, recommendations and schedule submitted to CEAC Steering Committee	
• Draft Submitted to CEAC Steering Committee for Comment	7/1/16
• Final Filed in DMM	7/29/16
Multiple Incentives Report detailing recommendations for treatment of multiple incentives submitted to the CEAC Steering Committee	
• Outline Submitted to CEAC Steering Committee for Comment	7/6/16
• Draft Submitted to CEAC Steering Committee for Comment	8/8/16
• Final Filed in DMM	9/6/16
Note: The 1/21/2016 CEF Framework Order in Case 14-M-0094 directed Staff to file a guidance that identifies tests to determine where layered incentives would be appropriate, as well as processes for sharing information to determine when these tests should be run by October 3, 2016.	
Utility / NYSERDA Coordination Report providing recommendations and a plan for using the CEAC venue as means for facilitating greater collaboration and coordination regarding programs and initiatives.	
• Outline Submitted to CEAC Steering Committee for Comment	10/27/16
• Draft Submitted to CEAC Steering Committee for Comment	12/2/16
• Final Filed in DMM	~~1/17/17~~1/30/17
Provide a Recommendation to the Steering Committee as to whether the Working Group has completed its purpose and should be folded or provide a revised Working Group Scope with additional objectives, tasks and deliverables.	At any time, but no later than 90 days following the completion of previously assigned deliverables

Members[1]*:*

Name	Role	Company/Organization	Email
Jesse Feinberg	Co-Chair[2]	Con Edison	feinbergj@coned.com
Chris Corcoran	Co-Chair	NYSERDA	chris.corcoran@nyserda.ny.gov
Gayle Pensabene	Secretary	National Grid	gayle.pensabene@nationalgrid.com
Amanda Sucato	Member	Central Hudson	asucato@cenhud.com
Katie Mammen	Member	DPS	kathryn.mammen@dps.ny.gov
Michael Deering	Member	LIPA	mdeering@lipower.org
Erik Solomon	Member	NFG	solomone@natfuel.com
Amber Sisson	Member	NYPA	amber.sisson@nypa.gov
Dave Gridley	Member	NYSEG/RG&E	dlgridley@nyseg.com
Charmaine Cigliano	Member	O&R	ciglianoc@oru.com
Dan Zaweski	Member	PSEG LI	daniel.zaweski@pseg.com

[1] Due to the nature of the work of this Working Group, membership is limited to DPS, NYSERDA, the Utilities, NYPA, LIPA and PSEG. However, the Working Group will reach out to stakeholders and topical experts on an as needed basis to inform discussions

[2] This Working Group will not include a Steering Committee Designee, instead one of the Co-Chairs will attend Steering Committee Meetings and provide monthly progress reports to the Steering Committee on behalf of the Working Group.

Energy Efficiency Procurement & Markets Working Group Scope

Purpose:

The overall purpose of the Energy Efficiency Procurement and Markets Working Group is to develop strategies to create vibrant markets for energy efficiency as an attractive business opportunity, resulting in greater market-wide levels of energy efficiency with less need for direct ratepayer support. A focal point for this work will be investigating promising market mechanisms, standards, and business models that can realize the value of energy efficiency to participating customers, as a system resource, and as a cost-effective means of achieving State Energy Plan goals – in a manner that is responsive to customer needs for distributed energy solutions.

Guiding Principles & Clean Energy Advisory Council (CEAC) Protocols:

Working Group activities in support of feasible and impactful findings are expected to include:

- Conducting and implementing Working Group activities with transparency and openness;
- Planning and implementing a work agenda and schedule of activities in support of the Working Group objectives;
- Compiling research;
- Directing analysis and studies;
- Soliciting expert advice;
- Developing options and proposals for consideration with particular focus and emphasis on implications and benefits to customers;
- Assessing options and proposals against objectives, and arriving at written feasible recommendations that provide the underlying rationale and, as needed, documents dissenting views along with associated rationale;
- Informing the development and implementation of programs among New York's clean energy program administrators;
- Providing regular written updates on the Working Group's activities and progress; and
- Sharing final work products and notable interim work products.

Protocols regarding CEAC Steering Committee and Working Group interactions include:

- Working Group scopes are authorized by the Steering Committee. Working Groups may at any time propose revisions and additions to the Working Group scopes for Steering Committee consideration but the initial objectives and deliverables of each group will focus on Commission assigned activities. The Steering Committee will guide and authorize Working Group scopes that lead to recommendations that help inform the future development of programs.
- Each Working Group will establish its own work plan and schedule and should incorporate opportunities for non-member input and feedback, as appropriate and feasible and shall provide routine updates to the Steering Committee on its progress. The Steering Committee will identify

potential overlap and coordination between Working Group activities and will suggest opportunities for integration or sharing resources between and among Working Group activities.

- Working Group reports and other documents will typically be provided to the Steering Committee for review and comment two to three weeks prior to final deliverable due dates. The Steering Committee will review and assess Working Group products against the overall objectives and purpose of the Clean Energy Advisory Council and Working Groups. The Working Group shall consider Steering Committee comments and shall document whether it has incorporated or rejected each comment with associated rationale in a new section of the report or in an appendix to the report. The Working Group retains ownership of final work products and is under no obligation to revise its recommendations in response to Steering Committee feedback. The Working Group shall work with Staff to ensure all final work products are filed in DMM and posted to the DPS website.

Initial Objectives:

The Energy Efficiency Procurement & Markets Working Group is initially tasked with:

(1) Energy Efficiency Targets and Metrics Recommendations Report – Develop recommendations for an energy efficiency target or set of targets which will support an earning opportunity metric for utilities. This will include consideration of (i) the appropriate trajectory over time for utility electric efficiency targets, (ii) the level and forms of these targets, (iii) normalization for relevant factors, and (iv) whether to adopt similar gas efficiency targets. The proposed target or targets will be tied to State Energy Plan and Clean Energy Standard goals, and toward reducing the cost of achieving these goals through cost-effective and market-based efficiency. The Working Group will develop recommendations for alternative utility earning opportunity metrics to be supported by such targets, one of which shall be a type of electric usage intensity metric across the utility's territory. Pros and cons of these alternatives will be articulated. In addition, "shared savings" approaches which allow the utility to share some portion of the associated net benefits will be investigated and compared with other approaches. As part of these recommendations, the Working Group may generally comment on how to structure and size utility earning opportunities related to energy efficiency so as to provide a financially meaningful incentive for enterprise-wide attention at the utility. It further may consider additional means of spurring development of appropriate market opportunities or conditions and the level of investment needed to provide a realistic pathway to achieve the recommended targets. The Working Group also will generically analyze the potential impacts of energy efficiency measures on peak reduction and load factor, enabling individual utilities to take this analysis into account in proposing energy efficiency, peak reduction, and load factor targets. The Working Group will document its research and recommendations, including any alternative viewpoints, in a final report which shall be filed with the Commission for consideration.

(2) Energy Efficiency Market Procurement Recommendations Report – Develop options for and a recommended approach to developing a sustainable market for procuring energy efficiency as a demand reducing resource (MWh, MW and Dth). The Working Group will consider multiple alternative approaches for utility procurement of energy efficiency as a utility system resource as well as related opportunities for new commercial business models that drive delivery of energy efficiency. This will include consideration of whether there should be a designated approach for energy efficiency under the State's proposed Clean Energy Standard

(CES) or a distinct or compatible market. The Working Group also will incorporate learnings from existing REV demonstration projects. In its design, the recommended approach must recognize the ongoing societal needs of providing efficiency services to underserved populations, including low-income customers. The Working Group will indicate timing considerations related to how the recommended approach could be implemented or tested. The Working Group will document its research and recommendations, including any alternative viewpoints, in a final report which shall be filed with the Commission for consideration.

(3) Recommendation Regarding Continuation of Working Group Activities - Determination as to whether the Working Group has fulfilled its purpose upon the completion of the initial objectives or recommended additional objectives and tasks for the Working Group to pursue.

Tasks/Deliverables:

Task/Deliverable	Expected Completion Date
Final Energy Efficiency Procurement & Markets Coordination Work Scope, including member list and member roles provided to Steering Committee	
• Provide to DPS Staff	6/10/16
• Final Filed in DMM	6/17/16
Initial detailed Energy Efficiency Procurement & Markets Work Plan	
• Draft submitted to CEAC Steering Committee for Comment	7/1/16
• Final filed in DMM	8/1/16
Energy Efficiency Targets and Metrics Recommendations Report, including the components described in the objective above.	
• Outline Submitted to CEAC Steering Committee for Comment	8/10/16
• Draft Submitted to CEAC Steering Committee for Comment	10/11/16
• Final Filed in DMM	11/3/16
Energy Efficiency Market Procurement Recommendations Report, including the components described in the objective above.	
• Outline Submitted to CEAC Steering Committee for Comment	10/26/16
• Draft Submitted to CEAC Steering Committee for Comment	~~12/22/16~~4/20/17
• Final Filed in DMM	~~1/25/17~~5/19/17
Provide a Recommendation to the Steering Committee as to whether the Working Group has completed its purpose and should be folded or provide a revised Working Group Scope with additional objectives, tasks and deliverables.	At any time, but no later than 90 days following the completion of previously assigned deliverables

Members:

Name	Role	Company/Organization	Email
Raghusimha Sudhakara	Co-Chair	Con Edison	Sudhakarar@coned.com
~~Vanessa Ulmer~~Megan Fisher	Co-Chair	NYSERDA	~~Vanessa.Ulmer@nyserda.ny.gov~~megan.fisher@nyserda.ny.gov
Liz Weiner	Designee	CLEAResult	Elizabeth.Weiner@clearesult.com
Robert Callender	Alternate Designee	TRC	rcallender@trcsolutions.com
Andy Frank	Secretary	Sealed	Andy.frank@sealed.com
Bill Dornbos	Member	Acadia Center	wdornbos@acadiacenter.org
Anne Reynolds	Member	Alliance for Clean Energy New York	areynolds@aceny.org
Valerie Strauss	Member	Association for Energy Affordability	vstrauss@aea.us.org
Darren Suarez	Member	The Business Council	darren.suarez@bcnys.org
Amanda Sucato	Member	Central Hudson	asucato@cenhud.com
Susan Leeds	Member	City of New York	sleeds@nyceec.com
Marco Padula	Member	DPS	Marco.Padula@dps.ny.gov
Chris Wentlent	Member	Exelon	Christopher.Wentlent@constellation.com
Adam Procell	Member	Lime Energy	aprocell@lime-energy.com
Patricia Boudreau	Member	National Grid	Patricia.Boudreau@nationalgrid.com
Miles Farmer	Member	NRDC	mfarmer@nrdc.org
Kelli Joseph	Member	NRG Energy	kelli.joseph@nrg.com
Nathan Markey	Member	NYPA	nathan.markey@nypa.gov
Jen Turner	Member	NYSEG/RG&E	jlturner@nyseg.com
Kristen Barone	Member	O&R	baroneKr@oru.com
Marisa Uchin	Member	OPower	marisa.uchin@opower.com
Roni Epstein	Member	Pace Energy and Climate Center	repstein@law.pace.edu
Beth Galante	Member	PosiGen	bgalante@posigen.com
Dan Zaweski	Member	PSEG LI	daniel.zaweski@pseg.com
Carl Hum	Member	Real Estate Board of NY	CHum@rebny.com
Cecil Scheib	Member	Urban Green Council	cs@urbangreencouncil.org

Low & Moderate Income Clean Energy Initiatives Working Group Scope

Purpose:

The Low & Moderate Income (LMI) Clean Energy Initiatives Working Group will provide the venue for NYSERDA, the Utilities, and other interested stakeholders to actively evaluate alternative approaches for the delivery of services to LMI customers that can improve consumer value, for the customers served as well as for the rate-payer funding invested.

Guiding Principles & Clean Energy Advisory Council (CEAC) Protocols:

Working Group activities in support of feasible and impactful findings are expected to include:

- Conducting and implementing Working Group activities with transparency and openness;
- Planning and implementing a work agenda and schedule of activities in support of the Working Group objectives;
- Compiling research;
- Directing analysis and studies;
- Soliciting expert advice;
- Developing options and proposals for consideration with particular focus and emphasis on implications and benefits to customers;
- Assessing options and proposals against objectives, and arriving at written feasible recommendations that provide the underlying rationale and, as needed, documents dissenting views along with associated rationale;
- Informing the development and implementation of programs among New York's clean energy program administrators;
- Providing regular written updates on the Working Group's activities and progress; and
- Sharing final work products and notable interim work products.

Protocols regarding CEAC Steering Committee and Working Group interactions include:

- Working Group scopes are authorized by the Steering Committee. Working Groups may at any time propose revisions and additions to the Working Group scopes for Steering Committee consideration but the initial objectives and deliverables of each group will focus on Commission assigned activities. The Steering Committee will guide and authorize Working Group scopes that lead to recommendations that help inform the future development of programs.
- Each Working Group will establish its own work plan and schedule and should incorporate opportunities for non-member input and feedback, as appropriate and feasible and shall provide routine updates to the Steering Committee on its progress. The Steering Committee will identify potential overlap and coordination between Working Group activities and will suggest opportunities for integration or sharing resources between and among Working Group activities.
- Working Group reports and other documents will typically be provided to the Steering Committee for review and comment two to three weeks prior to final deliverable due dates. The Steering Committee will review and assess Working Group products against the overall

objectives and purpose of the Clean Energy Advisory Council and Working Groups. The Working Group shall consider Steering Committee comments and shall document whether it has incorporated or rejected each comment with associated rationale in a new section of the report or in an appendix to the report. The Working Group retains ownership of final work products and is under no obligation to revise its recommendations in response to Steering Committee feedback. The Working Group shall work with Staff to ensure all final work products are filed in DMM and posted to the DPS website.

Initial Objectives:

The Low-Moderate Income (LMI) Clean Energy Initiatives Working Group is initially tasked with:

(1) Report on Alternative Approaches to Providing Low-Moderate Income (LMI) Clean Energy Services – Investigate and evaluate alternatives to the current delivery of services to LMI customers that can improve consumer value. These services include, among other things, bill reduction, energy efficiency services and renewable generation. Tasks include an assessment of the strengths and weaknesses of current approaches to delivery of the aforementioned services to LMI customers in New York; identification and documentation of alternative approaches deployed in other jurisdictions including the strengths and weaknesses of each; and a summary of findings regarding opportunities for improved delivery of services, including the potential for coordinating the delivery of energy efficiency and renewable generation to the LMI population. The Working Group will develop a report documenting its findings. The report will outline well-defined good practice approaches and specific transitional considerations. The Working Group's report will inform the LMI Chapter of NYSERDA's Investment Plan and Utilities' future Energy Efficiency Transition Implementation Plans and Budgets and Metrics Filings, as well as other clean energy activities.

(2) Recommendation Regarding Continuation of Working Group Activities - Determination as to whether the Working Group has fulfilled its purpose upon the completion of the initial objectives or recommended additional objectives and tasks for the Working Group to pursue.

Tasks/Deliverables:

Task/Deliverable	Expected Completion Date
Final Low & Moderate Income (LMI) Clean Energy Initiatives Working Scope, including member list and member roles provided to Steering Committee	
• Provide to DPS Staff	6/10/16
• Final Filed in DMM	6/17/16
Initial detailed Low & Moderate Income (LMI) Clean Energy Initiatives Work Plan	
• Draft submitted to CEAC Steering Committee for Comment	7/1/16
• Final filed in DMM	8/1/16
Report on Alternative Approaches to Providing Low & Moderate Income Clean Energy Services, including the components described in the objective above.	
• Outline Submitted to CEAC Steering Committee for Comment	8/10/16
• Draft Submitted to CEAC Steering Committee for Comment	12/23/16
• Final Filed in DMM	1/~~17~~30/17
Provide a Recommendation to the Steering Committee as to whether the Working Group has completed its purpose and should be folded or provide a revised Working Group Scope with additional objectives, tasks and deliverables.	At any time, but no later than 90 days following the completion of previously assigned deliverables

Members:

Name	Role	Company/Organization	Email
Marty Insogna	Co-Chair	DPS	Martin.Insogna@dps.ny.gov
Chris Coll	Co-Chair	NYSERDA	Christopher.Coll@nyserda.ny.gov
Adam Flint	Designee	Binghamton Regional Sustainability Coalition	SustainabilityBinghamton@gmail.com
Eric Walker	Alternate Designee	Erie County Dept. of Public Work	eric.walker2@erie.gov
Brittney Pietro	Secretary	National Grid	brittney.pietro@nationalgrid.com
Dave Hepinstall	Member	AEA	hepinstall@aea.org
Thomas Rizzo	Member	Central Hudson	TRizzo@cenhud.com
Kim Darga	Member	City of New York	dargak@hpd.nyc.gov
Peter Weeks	Member	Clean Energy Works	weeks.peter@gmail.com
Mike Burke	Member	CLEAResult	Mike.Burke@clearesult.com
Philip Madnick	Member	Con Edison	madnickp@coned.com
Laurie Schoeman	Member	Enterprise Community	lschoeman@enterprisecommunity.org
Rory Christian	Member	Environmental Defense Fund	rchristian@edf.org
Cecilia Pineda	Member	GOLES	ceci@goles.org
Jay Best	Member	Green Audit USA	jay@greenauditusa.com
Ingrid Schwingler	Member	GRID Alternatives	ischwingler@gridalternatives.org
Hal Smith	Member	Halco	hal@halcoenergy.com
Tom Carey	Member	HCR	Thomas.Carey@nyshcr.org
Mark Smith	Member	LIPA	msmith@lipower.org
Ken Gossel	Member	NFG	GosselK@natfuel.com
Pam Rivera	Member	Natural Resources Defense Council	privera@nrdc.org
Charmaine Cigliano	Member	O&R	ciglianoc@oru.com
Radina Valova	Member	Pace Energy and Climate Center	rvalova2@law.pace.edu
Karla Loeb	Member	PosiGen	kloeb@posigen.com
Saul Rigberg	Member	PULP	srigberg@utilityproject.org
Clarke Gocker	Member	PUSH Buffalo	clarke@pushbuffalo.org
Shirley Anderson	Member	TRC	sanderson@trcsolutions.com
Gregg Collar	Member	UIU	Gregg.Collar@dos.ny.gov

Metrics, Tracking & Performance Assessment Working Group Scope

Purpose:

The overall purpose of the Metrics, Tracking & Performance Assessment Working Group is to develop recommendations for a consistent approach to metrics, data tracking, and performance assessment, inclusive of evaluation, measurement & verification (EM&V) that looks to advances in technology and approaches to reduce and limit the dollars needed for these functions while maintaining needed reliability, thereby increasing the dollars available for program delivery. The Working Group will also identify and recommend metrics and approaches for evaluating market development and transformation.

Guiding Principles & Clean Energy Advisory Council (CEAC) Protocols:

Working Group activities in support of feasible and impactful findings are expected to include:

- Conducting and implementing Working Group activities with transparency and openness;
- Planning and implementing a work agenda and schedule of activities in support of the Working Group objectives;
- Compiling research;
- Directing analysis and studies;
- Soliciting expert advice;
- Developing options and proposals for consideration with particular focus and emphasis on implications and benefits to customers;
- Assessing options and proposals against objectives, and arriving at written feasible recommendations that provide the underlying rationale and, as needed, documents dissenting views along with associated rationale;
- Informing the development and implementation of programs among New York's clean energy program administrators;
- Providing regular written updates on the Working Group's activities and progress; and
- Sharing final work products and notable interim work products.

Protocols regarding CEAC Steering Committee and Working Group interactions include:

- Working Group scopes are authorized by the Steering Committee. Working Groups may at any time propose revisions and additions to the Working Group scopes for Steering Committee consideration but the initial objectives and deliverables of each group will focus on Commission assigned activities. The Steering Committee will guide and authorize Working Group scopes that lead to recommendations that help inform the future development of programs.
- Each Working Group will establish its own work plan and schedule and should incorporate opportunities for non-member input and feedback, as appropriate and feasible and shall provide routine updates to the Steering Committee on its progress. The Steering Committee will identify potential overlap and coordination between Working Group activities and will suggest opportunities for integration or sharing resources between and among Working Group activities.

- Working Group reports and other documents will typically be provided to the Steering Committee for review and comment two to three weeks prior to final deliverable due dates. The Steering Committee will review and assess Working Group products against the overall objectives and purpose of the Clean Energy Advisory Council and Working Groups. The Working Group shall consider Steering Committee comments and shall document whether it has incorporated or rejected each comment with associated rationale in a new section of the report or in an appendix to the report. The Working Group retains ownership of final work products and is under no obligation to revise its recommendations in response to Steering Committee feedback. The Working Group shall work with Staff to ensure all final work products are filed in DMM and posted to the DPS website.

Initial Objectives:

The Working Group will conduct a number of activities that are closely linked and therefore is encouraged to structure itself and its work plan to meet the discrete needs of each initial objective outlined below while ensuring that objectives are informed by one another.

(1) Evaluation Guidelines –Conduct a review of the "New York Evaluation Plan Guidance for EEPS Program Administrators" to determine what changes are necessary to meet the current and future needs of New York's clean energy programs. Recommendations should balance the need for objective analysis with producing more expedient and actionable information to inform policy decisions and improve individual efforts, including the accuracy and reliability of foundational tools, such as the Technical Resource Manual. Scope to be considered in (5) Recommendation Regarding Continuation of Working Group Activities: Integrate learning from REV demonstration projects and other REV activities in the conduct of this task. Integrate new approaches to evaluation of market transformation programs.

(2) Performance Metrics – Phase 1: Develop common definitions and methods for tracking and reporting various performance metrics. This work shall be informed from the review of current data tracking requirements to be completed by the E^2 Working Group that preceded the CEAC. The work shall identify program/initiative specific metrics needed to effectively gauge progress. Phase 2: Develop common definitions and methods for tracking and reporting performance metrics applicable to market transformation strategies. This work shall be informed by information gathering on best practices in market transformation measurement. The work shall identify broad market-level metrics needed to effectively gauge progress.

(3) Online Dashboard – Provide input to NYSERDA for use in developing and implementing an online dashboard that will allow for tracking of key performance metrics of all ratepayer funded clean energy activities. The online dashboard should provide an effective way to provide transparency to stakeholders, while minimizing the administrative burden of compiling more traditional quarterly reporting.

(4) Coordination of EM&V Activities – Serve as a venue for NYSERDA and Utilities to ensure EM&V activities are properly informed and complementary rather than duplicative and that results are effectively shared with one another and other stakeholders.

(5) Recommendation Regarding Continuation of Working Group Activities - Determination as to whether the Working Group has fulfilled its purpose upon the completion of the initial objectives or recommended additional objectives and tasks for the Working Group to pursue.

Tasks/Deliverables:

Task/Deliverable	Expected Completion Date
Final Metrics, Tracking & Performance Assessment Working Group Scope, including member list and member roles provided to Steering Committee	
• Provide to DPS Staff	6/10/16
• Final Filed in DMM	6/17/16
Initial detailed Metrics, Tracking & Performance Assessment Work Plan	
• Draft submitted to CEAC Steering Committee for Comment	7/1/16
• Final filed in DMM	8/1/16
Evaluation Guidelines Recommendations Report	
• Outline Submitted to CEAC Steering Committee for Comment	8/10/16
• Draft Submitted to CEAC Steering Committee for Comment	9/9/16
• Final Filed in DMM	10/3/16
**Note: The 1/21/2016 CEF Framework Order in Case 14-M-0094 directed Staff to issue revised Evaluation Guidelines by November 1, 2016.*	
Performance Metrics Recommendations Report: Phase 1	
• Outline Submitted to CEAC Steering Committee for Comment	9/9/16
• Draft Submitted to CEAC Steering Committee for Comment	~~12/23/16~~1/24/17
• Final Filed in DMM	~~1/25/17~~2/28/17
Performance Metrics Recommendations Report: Phase 2	
• Outline Submitted to CEAC Steering Committee for Comment	~~Q1 2017~~4/20/17
• Draft Submitted to CEAC Steering Committee for Comment	Q3 2017
• Final Filed in DMM	Q3 2017
Online Dashboard Recommendations Report	
• Outline Submitted to CEAC Steering Committee for Comment	11/17/16
• Draft Submitted to CEAC Steering Committee for Comment	~~1/26/17~~3/10/17
• Final Filed in DMM	~~2/23/17~~4/14/17

Task/Deliverable	Expected Completion Date
EM&V Coordination Plan providing recommendations and a plan for using the Council as a means for coordination of activities and information sharing.	
• Outline Submitted to CEAC Steering Committee for Comment	~~Q2 2017~~6/15/17
• Draft Submitted to CEAC Steering Committee for Comment	Q4 2017
• Final Filed in DMM	Q4 2017
Provide a Recommendation to the Steering Committee as to whether the Working Group has completed its purpose and should be folded or provide a revised Working Group Scope with additional objectives, tasks and deliverables.	At any time, but no later than 90 days following the completion of previously assigned deliverables

Members:

Name	Role	Company/Organization	Email
Jennifer Meissner	Co-Chair*	NYSERDA	Jennifer.Meissner@nyserda.ny.gov
Tricia Cioni	Designee	Cascade Energy	tricia.cioni@energysmartindustrial.com
Jon Maxwell	Alternate Designee	ERS	jmaxwell@ers-inc.com
Darren Suarez	Member	Business Council	darren.suarez@bcnys.org
Michael Lauchaire	Member	Central Hudson	mlauchaire@cenhud.com
Mitch Rosenberg	Member	DNV GL	mitch.rosenberg@dnvgl.com
Peggie Neville	Member	DPS	Peggie.Neville@dps.ny.gov
Jake Oster	Member	EnergySavvy	jake@energysavvy.com
Steve Bonanno	~~Member~~Co-Chair	National Grid	Stephen.Bonanno@nationalgrid.com
Evan Crahen	Member	NFG	CrahenE@natfuel.com
Lynn Hoefgen	Member	NMR	lhoefgen@nmrgroupinc.com
Arvind Jaggi	Member	NYISO	AJaggi@nyiso.com
Christine Keta	Member	NYPA	christine.keta@nypa.gov
John Zabliski	Member	NYSEG/RG&E	John_Zabliski@RGE.com
Sandra Eason-Perez	Member	O&R	easonperezs@oru.com
Rosanna Jimenez	Member	Con Edison	jimenezr@coned.com
Sam Swanson	Member	Pace Energy and Climate Center	sswanson@law.pace.edu
Karla Loeb	Member	PosiGen	kloeb@posigen.com
Dimple Gandhi	Member	PSEG LI	dimple.gandhi@pseg.com

~~*Another co-chair will be selected in the coming weeks.~~

Voluntary Investment & Other Market Development Working Group Scope

Purpose:

The overall purpose of the Voluntary Investment & Other Market Development Working Group is to develop strategies to maximize energy efficiency, renewable energy and distributed energy resources (DER) deployment, identifying approaches for adoption in the non-residential sectors, which may also include approaches that encourage and recognize voluntary investments in clean energy technology and solutions that help accelerate and increase achievement of the Clean Energy Standard and State Energy Plan (SEP) goals more broadly.

Guiding Principles & Clean Energy Advisory Council (CEAC) Protocols:

Working Group activities in support of feasible and impactful findings are expected to include:

- Conducting and implementing Working Group activities with transparency and openness;
- Planning and implementing a work agenda and schedule of activities in support of the Working Group objectives;
- Compiling research;
- Directing analysis and studies;
- Soliciting expert advice;
- Developing options and proposals for consideration with particular focus and emphasis on implications and benefits to customers;
- Assessing options and proposals against objectives, and arriving at written feasible recommendations that provide the underlying rationale and, as needed, documents dissenting views along with associated rationale;
- Informing the development and implementation of programs among New York's clean energy program administrators;
- Providing regular written updates on the Working Group's activities and progress; and
- Sharing final work products and notable interim work products.

Protocols regarding CEAC Steering Committee and Working Group interactions include:

- Working Group scopes are authorized by the Steering Committee. Working Groups may at any time propose revisions and additions to the Working Group scopes for Steering Committee consideration but the initial objectives and deliverables of each group will focus on Commission assigned activities. The Steering Committee will guide and authorize Working Group scopes that lead to recommendations that help inform the future development of programs.
- Each Working Group will establish its own work plan and schedule and should incorporate opportunities for non-member input and feedback, as appropriate and feasible and shall provide routine updates to the Steering Committee on its progress. The Steering Committee will identify potential overlap and coordination between Working Group activities and will suggest opportunities for integration or sharing resources between and among Working Group activities.

- Working Group reports and other documents will typically be provided to the Steering Committee for review and comment two to three weeks prior to final deliverable due dates. The Steering Committee will review and assess Working Group products against the overall objectives and purpose of the Clean Energy Advisory Council and Working Groups. The Working Group shall consider Steering Committee comments and shall document whether it has incorporated or rejected each comment with associated rationale in a new section of the report or in an appendix to the report. The Working Group retains ownership of final work products and is under no obligation to revise its recommendations in response to Steering Committee feedback. The Working Group shall work with Staff to ensure all final work products are filed in DMM and posted to the DPS website.

Initial Objectives:

The Voluntary Investment & Other Market Development Working Group is initially tasked with:

(1) Voluntary Investment Pilot Parameters – Develop parameters to guide potential Voluntary Investment Pilots, which at a minimum must identify a known barrier(s) that the pilot must be designed to address, elicit outcomes that demonstrate 'additionality,' 'replicability,' and 'scalability,' as supported through voluntary investment, identify possible 'sectors,' 'categories,' or 'activities' that will be considered appropriate for pilot projects and measurement and verification for how each pilot will prove its effectiveness in eliciting private, third-party investment.

(2) Voluntary Investment Research and Recommendations Report – Develop recommendations for incentives and/or other approaches that foster voluntary investments in energy efficiency, renewable energy and DER. The Working Group shall explore opportunities that maximize energy efficiency and DER deployment in the commercial and industrial sectors, potentially identifying new mechanisms and accounting protocols that both facilitate voluntary investments in clean energy technologies, and can help accelerate and increase achievement of the Clean Energy Standard and SEP goals. The Working Group shall consider early learnings from utility Self-Direct programs, NY-Prize initiative, REV demonstrations, development of the NYGATS/REC markets, and any other initiatives that can provide useful, "real-world" examples to inform approaches to voluntary market activity. To the extent that the proposal includes recommendations regarding collection and allocation of ratepayer funding, the proposal should analyze the impact of such changes on all customer classes.

(3) Community Choice Aggregation Recommendations Report - In completion of the direction from the Commission to look at Community Choice Aggregation (See Order in Case 14-M-0224) regarding how CCA can accelerate the adoption of energy efficiency, renewable energy and distributed energy resources, a subgroup of the larger working group will develop a report to examine CCA models, the degree to which the model enables voluntary investment, and policy and program considerations that will advance effective CCA activity, which also advance the State's clean energy goals.

(4) Recommendation Regarding Continuation of Working Group Activities - Determination as to whether the Working Group has fulfilled its purpose upon the completion of the initial objectives or recommended additional objectives and tasks for the Working Group to pursue.

Tasks/Deliverables:

Task/Deliverable	Expected Completion Date
Provide final Voluntary Investment and other Market Development Work Scope, including member list and member roles provided to Steering Committee	
• Provide to DPS Staff	6/10/16
• Final Filed in DMM	6/17/16
Initial detailed Voluntary Investment and other Market Development Work Plan	
• Draft submitted to CEAC Steering Committee	7/1/16
• Final filed in DMM	8/1/16
Voluntary Investment Pilot Parameters Report:	
• Draft Submitted to CEAC Steering Committee for Comment	11/23/16
• Final Filed in DMM	12/21/16
Voluntary Investment Research and Recommendations Report:	
• Outline Submitted to CEAC Steering Committee for Comment	Q2 2017
• Draft Submitted to CEAC Steering Committee for Comment	Q3 2017
• Final Filed in DMM	Q3 2017
Community Choice Aggregation Recommendations Report:	
• Outline Submitted to CEAC Steering Committee for Comment	~~Q2 2017~~6/15/17
• Draft Submitted to CEAC Steering Committee for Comment	Q3 2017
• Final Filed in DMM	Q3 2017
Provide a Recommendation to the Steering Committee as to whether the Working Group has completed its purpose and should be folded or provide a revised Working Group Scope with additional objectives, tasks and deliverables.	At any time, but no later than 90 days following the completion of previously assigned deliverables

Members:

Name	Role	Company/Organization	Email
Tom Rienzo	Co-Chair	DPS	Thomas.Rienzo@dps.ny.gov
John Williams	Co-Chair	NYSERDA	John.Williams@nyserda.ny.gov
Mark Lorentzen	Designee	TRC	mlorentzen@trcsolutions.com
William Acker	Alternate Designee	NY-BEST Consortium	acker@ny-best.org
Anne Reynolds	Member	Alliance for Clean Energy NY	areynolds@aceny.org
Jennifer Metzger	Member	Citizens for Local Power	jentmetzger@gmail.com
Jay Merves	Member	City of New York	jmerves@nyceec.com
David Logsdon	Member	Con Edison	logsdond@coned.com
Chris Wentlent	Member	Exelon	Christopher.Wentlent@constellation.com
Radmila Miletich	Member	IPPNY	radmila@ippny.org
Mike Mager	Member	Multiple Intervenors	mmager@couchwhite.com
Brandon Dyer	Member	National Grid	Brandon.Dyer@nationalgrid.com
Carrie Hitt	Member	Nextera Energy Resources	Carrie.Hitt@nexteraenergy.com
Kelli Joseph	Member	NRG Energy	kelli.joseph@nrg.com
Randall Solomon	Member	NYPA	randall.solomon@nypa.gov
Kevin Schmalz	Member	NYSEG/RG&E	rkschmalz@nyseg.com
Carl Hum	Member	Real Estate Board of NY	CHum@rebny.com
Jamil Khan	Member	SolarCity	jkhan@solarcity.com

CCA Subgroup:

Name	Role	Company/Organization	Email
Jen Metzger	Member	Citizens for Local Power	jentmetzger@gmail.com
Brad Tito	Member	NYSERDA	bradford.tito@nyserda.ny.gov
Kelly Connell	Member	DPS	Kelly.Connell@dps.ny.gov
Paul Fenn	Member	Local Power, Inc.	paulfenn@gmail.com
Michael Rauch	Member	Renewable Highlands	mbr.rauch@gmail.com
Leo Wiegman	Member	Croton Energy Group	lwiegman@crotonenergy.com
Radina Valova	Member	Pace Energy and Climate Center	rvalova2@law.pace.edu
Valerie Strauss	Member	Association for Energy Affordability	vstrauss@aea.us.org
Brian Bowe	Member	Constellation	Brian.Bowe@constellation.com
Sam Morgan	Member	Constellation	morgansa@conedsolutions.com
Arjun Makhijani	Member	Institute for Energy and Environmental Research	arjun@ieer.org
Kerri Ann Kirschbaum	Member	ConEd	KIRSCHBAUMK@coned.com
Sara Margaret Geissler	Member	ConEd	GeisslerS@coned.com
Jason Miller	Member	ConEd	MILLERJAS@coned.com
Elena Futoryan	Member	ConEd	FUTORYANE@coned.com
JoAnne D Seibel	Member	Orange and Rockland	seibeljo@oru.com
Kevin Schmalz	Member	AVANGRID	rkschmalz@nyseg.com
Marc Webster	Member	AVANGRID	mpwebster@nyseg.com
Glenn Weinberg	Member	Joule Assets	gweinberg@jouleassets.com

Name	Role	Company/Organization	Email
Louise Gava	Member	MEGA	lgava@megaenergy.org
Dan Welsh	Member	Sustainable Westchester	
Juliana Griffiths	Member	National Grid	Juliana.Griffiths@nationalgrid.com
Maggie Downey	Member	Cape Light Compact	mdowney@capelightcompact.org
Irene Weiser	Member	Tompkins County Council of Governments	irene32340@gmail.com

Clean Energy Advisory Council
Steering Committee Public Meeting/Call Schedule

Date	***Time***	***Location***
Calendar Year 2017:		
Tuesday, January 10th	*10:00 a.m. – 12:00 p.m.*	*Call / Webinar*
Tuesday, February 7th	*1:00 – 3:00 p.m.*	*Meeting - Albany, NY*
Tuesday, March 21st	*10:00 a.m. – 12:00 p.m.*	*Call / Webinar*
Thursday, April 27th	*1:00 – 3:00 p.m.*	*Meeting – Albany, NY*
Thursday, May 25th	*10:00 a.m. – 12:00 p.m.*	*Call / Webinar*
Thursday, June 22nd	*1:00 – 3:00 p.m.*	*Meeting – Albany, NY*

Meeting location may change depending on content. Additional meetings to be scheduled for July through December as necessary.

For those unable to travel to attend the in-person meetings, the meetings will also support participation via teleconference and/or webinar.

In-person meetings occurring in Albany, NY will be held in the 19th Floor Board Room of the Department of Public Service office located at Three Empire State Plaza, Albany, New York. The Department will also provide video to its Buffalo and New York City offices.

In-person meetings occurring in NY, NY will be held in the Board Room of the Department of Public Service NYC office located at 90 Church Street, New York, NY. The Department will also provide video to its Albany and Buffalo offices.

Clean Energy Advisory Council Work Plan

The following is the revised Clean Energy Advisory Council (CEAC or the Council) Work Plan, which sets forth the schedule for Council and Council Working Group deliverables.

Background:

By order issued January 21, 2016 (January CEF Order),[1] the New York Public Service Commission (the Commission) established the Clean Energy Advisory Council. The Commission stated that the Council's "primary objective is to support innovation and collaboration for an effective transition from current program offerings to post-2015 clean energy activities and on-going delivery thereafter." The Commission directed the Council to, on an annual basis, develop a work plan identifying key areas of focus, the priorities among and within each area of focus, as well as corresponding work products and associated timelines. Currently, this Work Plan reflects those areas of focus and work products identified by the Commission in the January CEF Order and the January 22, 2016 Utility Energy Efficiency Order.[2] In addition to Commission directed activities, future iterations of the Council's Work Plan may include areas of examination raised by individual Council members or Working Groups and agreed to by the Council.

[1] Case 14-M-0094 et al, Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Authorizing the Clean Energy Fund Framework (issued January 21, 2016).

[2] Case 15-M-0252, In the Matter of Utility Energy Efficiency Programs, Order Authorizing Utility-Administered Energy Efficiency Portfolio Budgets and Targets for 2016 – 2018 (issued January 22, 2016).

Clean Energy Advisory Council

Schedule:

TASK	RESPONSIBLE	Date	JANUARY					FEBRUARY				MARCH				APRIL				MAY					JUNE				Q3	Q4
			2	9	16	23	30	6	13	20	27	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26		
Steering Committee Meeting Dates				10				7						21					27				25				22		TBD	TBD
CLEAN ENERGY IMPLEMENTATION & COORDINATION WORKING GROUP (CEIC WG)																														
Outline of Utility/NYSERDA Coordination Report Due	CEIC WG	10/27/16																												
Feedback on Utility/NYSERDA Coordination Report Outline	Steering Committee	10/20/16																												
Draft Utility/NYSERDA Coordination Report Due	CEIC WG	12/2/16																												
Feedback on Draft Utility/NYSERDA Coordination Report	Steering Committee	1/10/17		X																										
Final Utility/NYSERDA Coordination Report Filed	*CEIC WG*	*1/30/17*					30																							
METRICS, TRACKING, & PERFORMANCE ASSESSMENT WORKING GROUP (MTPA WG)																														
Outline of EM&V Coordination Plan Due	MTPA WG	6/15/17																								15				
Feedback on EM&V Coordination Plan Outline	Steering Committee	6/22/17																									X			
Draft EM&V Coordination Plan Due	MTPA WG	Q4 2017																												
Feedback on Draft EM&V Coordination Plan	Steering Committee	Q4 2017																												TBD
Final EM&V Coordination Plan Filed	*MTPA WG*	*Q4 2017*																												
Outline of Performance Metrics Phase 1 Recommendations Report Due	MTPA WG	9/9/16																												
Feedback on Performance Metrics Phase 1 Recommendations Report Outline	Steering Committee	9/19/16																												
Draft Performance Metrics Phase 1 Recommendations Report Due	MTPA WG	1/24/17				24																								
Feedback on Draft Performance Metrics Phase 1 Recommendations Report	Steering Committee	2/7/17						X																						
Final Performance Metrics Phase 1 Recommendations Report Filed	*MTPA WG*	*2/28/17*									28																			
Outline of Performance Metrics Phase 2 Report Due	MTPA WG	4/20/17																20												
Feedback on Performance Metrics Phase 2 Report Outline	Steering Committee	4/27/17																	X											
Draft Performance Metrics Phase 2 Report Due	MTPA WG	Q3 2017																												
Feedback on Draft Performance Metrics Phase 2 Report	Steering Committee	Q3 2017																											TBD	
Final Performance Metrics Phase 2 Report Filed	*MTPA WG*	*Q3 2017*																												
Outline of Online Dashboard Recommendations Report Due	MTPA WG	11/17/16																												
Feedback on Online Dashboard Recommendations Report Outline	Steering Committee	11/30/16																												
Draft Online Dashboard Recommendations Report Due	MTPA WG	3/10/17										10																		
Feedback on Draft Online Dashboard Recommendations Report	Steering Committee	3/21/17												X																
Final Online Dashboard Recommendations Report Filed	*MTPA WG*	*4/14/17*															14													
LOW & MODERATE INCOME CLEAN ENERGY INITIATIVES WORKING GROUP (LMI WG)																														
Outline of Alternative Approaches to LMI EE Services Report Due	LMI WG	8/10/16																												
Feedback on Alternative Approaches to LMI EE Services Report Outline	Steering Committee	8/17/16																												
Draft Alternative Approaches to LMI EE Services Report Due	LMI WG	12/23/16																												
Feedback on Draft Alternative Approaches to LMI EE Services Report	Steering Committee	1/10/17		X																										
Final Alternative Approaches to LMI EE Services Report Filed	*LMI WG*	*1/30/17*					30																							

Clean Energy Advisory Council

TASK	RESPONSIBLE	Date	JANUARY 2	9	16	23	30	FEBRUARY 6	13	20	27	MARCH 6	13	20	27	APRIL 3	10	17	24	MAY 1	8	15	22	29	JUNE 5	12	19	26	Q3	Q4
Steering Committee Meeting Dates				***10***				***7***						***21***					***27***				***25***				***22***		TBD	TBD
VOLUNTARY INVESTMENT AND OTHER MARKET DEVELOPMENT WORKING GROUP (VI WG)																													
Outline of Community Choice Aggregation Recommendations Report Due	VI WG	6/15/17																								***15***			
Feedback on Community Choice Aggregation Recommendations Report Outline	Steering Committee	6/22/17																									***X***		
Draft Community Choice Aggregation Recommendations Report Due	VI WG	Q3 2017																											
Feedback on Draft Community Choice Aggregation Recommendations Report	Steering Committee	Q3 2017																										TBD	
Final Voluntary Investment Recommendations Report Filed	*VI WG*	*Q3 2017*																											
Outline of Voluntary Investment Recommendations Report Due	VI WG	TBD Q2 2017																											
Feedback on Voluntary Investment Recommendations Report Outline	Steering Committee	TBD Q2 2017																											
Draft Voluntary Investment Recommendations Report Due	VI WG	Q3 2017																											
Feedback on Draft Voluntary Investment Recommendations Report	Steering Committee	Q3 2017																										TBD	
Final Voluntary Investment Recommendations Report Filed	*VI WG*	*Q3 2017*																											
VOLUNTARY INVESTMENT PROPOSAL FILED	***DPS***	***3/1/17***										**1**																	
ENERGY EFFICIENCY PROCUREMENT & MARKETS WORKING GROUP (EEPM WG)																													
Outline of EE Market Procurement Recommendations Report Due	EEPM WG	10/26/16																											
Feedback on EE Market Procurement Recommendations Report Outline	Steering Committee	11/3/16																											
Draft EE Market Procurement Recommendations Report Due	EEPM WG	4/20/17																***20***											
Feedback on Draft EE Market Procurement Recommendations Report	Steering Committee	4/27/17																	***X***										
Final EE Market Procurement Recommendations Report Filed	*EEPM WG*	*5/19/17*																				***19***							
REV ENERGY EFFICIENCY BEST PRACTICES WORKING GROUP (REV/EE WG)																													
Outline of REV EE Best Practices Guide Due	REV/EE WG	10/27/16																											
Feedback on REV EE Best Practices Guide Outline	Steering Committee	11/3/16																											
Draft REV EE Best Practices Guide Due	REV/EE WG	1/24/17				***24***																							
Feedback on Draft REV EE Best Practices Guide	Steering Committee	2/7/17						***X***																					
Final REV EE Best Practices Guide Filed (For 5/2017 ETIP)	*REV/EE WG*	*2/21/17*								***21***																			

KEY:
Steering Committee Conference Call
In-Person Steering Committee Meeting
Filing in DMM (non-Ordered due dates)
ORDERED FILING
X = Item being discussed at Steering Committee Call/Meeting
Deliverable Due Date

Revision/Addition Process:

At a minimum, the Council's Work Plan will be revised annually. In addition, in instances where a Working Group determines that it will be unable to meet the dates reflected in the Council's Work Plan, the Working Group, through its Steering Committee Designee, may submit a request, including a proposed revised timeline, to the Council's Steering Committee to extend the due date. Once approved by the Steering Committee, the revised timeline will be incorporated into the Work Plan. In addition, the Work Plan will be revised to reflect the timelines associated with new efforts required by the Commission, assigned by the Steering Committee, or proposed by a Working Group and agreed to by the Steering Committee.

The Work Plan and all subsequent revisions will be filed in Matter 16-00561, In the Matter of the Clean Energy Advisory Council.