Report to the Governor and Legislative Leaders on the Feasibility and Advisability of Implementing a Program Similar to Renewable Energy Access and Community Help in the Service Territories of Municipal Distribution Utilities and Rural Electric Cooperatives in New York

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I. EXECUTIVE SUMMARY

The 2023-24 Enacted State Budget ("Budget Enactment") expanded the mission of the New York Power Authority ("NYPA" or "Authority") by authorizing it to develop new renewable energy generating projects to support New York State's nation-leading climate goals established in 2019 in the Climate Leadership and Community Protection Act ("CLCPA") and other State priorities. *See* Public Authorities Law ("PAL") § 1005(27-a).

One such priority is collaborating with the New York State Public Service Commission ("PSC") to establish the Renewable Energy Access and Community Help ("REACH") program. REACH will enable low-income and moderate-income end-use electricity consumers in disadvantaged communities[1] to receive bill credits funded from a portion of net revenues from the sale of renewable energy products created by renewable energy systems constructed by or for NYPA, as well as other funding sources. *See* PAL § 1005(27-b).

The Budget Enactment did not authorize REACH for the State's municipal electric distribution utilities ("Munis") or rural electric cooperatives ("Coops") (collectively, the "Systems"). Instead, recognizing the size, unique history and service model, and regulatory status of these utility entities, the law directs NYPA to study and issue a report that addresses:

> the feasibility and advisability of implementing a program similar to REACH for the purpose of providing bill credits to low-income or moderate-income end-use electricity consumers located in disadvantaged communities in the service territories of municipal distribution utilities and rural electric cooperatives located in New York state.[2]

This provision also authorizes NYPA to:

> confer with any municipal distribution utility or its representatives, and any rural electric cooperative or its representatives, and may request from any municipal distribution utility, rural electric cooperative, department, division, office, commission or other agency of the state or state public authority, and the same are authorized to provide, such assistance, services and data as may be required by the authority to complete the report.[3]

As described in detail in this report, based on NYPA's outreach with the Systems, it is NYPA's view that it is not feasible or advisable at this time to extend a REACH-like program to the Systems for the following reasons:

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[1] Article 75 of the ECL defines "disadvantaged community" as "communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households, as identified pursuant to [ECL] section 75-0111."
[2] PAL §1005(27-b)(f).
[3] *Id*.

1. Most of the Systems do not have available land or electric system infrastructure to host new renewable energy systems, especially large scale renewable resources that can generate net revenue levels that can be used to support a REACH-type program.[4]

2. The Systems do not collect, and cannot easily obtain, the income levels of their ratepayers to determine low-income customers who could be eligible to receive REACH-like bill credits.

3. Most of the Systems do not have the billing and settlement systems or the personnel to implement and administer a bill credit program like REACH, and the cost of software upgrades and additional staff could exceed the benefits of the program.

4. The Systems have indicated that for these reasons they do not support a REACH-like program for their service territories at this time.

II. BACKGROUND

A. REACH Program

The Budget Enactment amended the Power Authority Act to give NYPA authority to, among other things, plan, design, develop, finance, construct, own, operate, maintain and improve, either alone, or jointly with other entities through the use of public-private agreements, renewable energy generating projects to (1) support the State's renewable energy goals established in the CLCPA, (2) provide or maintain an adequate and reliable supply of electric power and energy in the State, and (3) support the REACH Program.[5]

Regarding REACH, the new law directs NYPA, in collaboration with the PSC, to establish the REACH program to enable low-income or moderate-income end-use electricity consumers in disadvantaged communities serviced by the State's investor-owned utilities ("IOUs") to receive credits on their monthly electric bills to mitigate the cost of electricity.[6] The bill credits will be funded from a portion of the net revenues NYPA derives from sale of renewable energy products from renewable generation projects that it develops or contracts to be developed (such as solar photovoltaics and battery energy storage), as well as other authorized sources.

On January 31, 2024, NYPA filed a petition with the PSC to commence a proceeding to establish REACH, focusing initially on low-income consumers.[7] In summary, NYPA's Petition requests that the PSC commence a proceeding and issue an order requiring the IOUs[8] to:

[4] Two Systems expressed interest in finding locations to host smaller distributed energy resources projects under five megawatts ("MW") in the future.
[5] PAL § 1005(27-a).
[6] PAL § 1005 (27-b)(a)(iv) defines the phrase "low-income or moderate-income end-use consumer" as "end-use customers of electric corporations and combination gas and electric corporations regulated by the public service commission whose income is found to be below the State median income based on household size."
[7] Petition of the Power Authority of the State of New York to Establish the Renewable Energy Access and Community Help Program, PSC Case No. 24-E-0084 (January 31, 2024). The enactment also authorized NYPA to establish REACH with LIPA, which the Authority will address at a future time.
[8] The IOUs are Consolidated Edison Company of New York, Inc., Niagara Mohawk Power Corporation, Long

(1) enter into *pro forma* program agreements with NYPA to support REACH;
(2) receive funds from NYPA in an appropriate account to be used to pay bill credits to eligible beneficiaries;
(3) enroll REACH beneficiaries and provide a process for opting out of the Program;
(4) issue bill credits to REACH beneficiaries in a manner consistent with the PSC's order in this proceeding and related proceedings;
(5) account for and report payments made to REACH beneficiaries;
(6) file annual reports with the PSC and NYPA summarizing their compliance with the REACH order and program requirements, including the total number of REACH beneficiaries enrolled, the total value of bill credits provided to REACH beneficiaries, and other pertinent data;
(7) amend their tariffs to recover their REACH administrative costs;
(8) refund a percentage of the credits generated from REACH Value of Distributed Energy Resources or "VDER" projects to NYPA to allow the Authority to recover its costs; and
(9) adopt tariff modifications, procedures, or accounts necessary to implement REACH.

On February 28, 2024, the PSC published a Notice of Proposed Rulemaking in the New York State Register pursuant the requirements of the State Administrative Procedure Act with public comments due on April 29, 2024.[9] NYPA asked the PSC to issue an order establishing REACH this year with IOU implementation filings during the fourth quarter to allow for REACH to be established prior to calendar year 2025 when the Strategic Plan for NYPA renewable energy generation projects will be finalized.

B. Overview of New York's Muni and Coop Utilities

New York State is home to 47 municipal electric utilities and four rural electric cooperatives. The 51 Systems collectively serve an estimated 185,000 customers[10] in 31 of New York's 62 counties and are located in the areas of the State as shown the map in the Appendix to this Report.

Most of the Muni Systems commenced operations over 100 years ago. The four Coops were formed in the early 1940s, using federal loans authorized by the Rural Electrification Act of 1936. The Coops were formed out of a need to support rural communities and provide electricity to rural areas to sustain agriculture. The Systems own and operate their own electric systems.

Island Lighting Company, New York State Electric & Gas Corporation, Rochester Gas and Electric Corporation, Central Hudson Gas and Electric Corporation, and Orange and Rockland Utilities, Inc.

[9] XLVI N.Y. Reg. 23 (February 28, 2024).

[10] Customers as defined in this instance refers to the total of residential, commercial, industrial, street lighting, and several other minor customer segments. Residential customers represent about 85% of all customers.

C. NYPA Hydropower Supply

All of the Munis and Coops have a firm hydropower allocation from NYPA. NYPA currently supplies the Munis and Coops with 764.8 MW of hydropower from the Niagara Power Project by virtue of the federal Niagara Redevelopment Act ("NRA"). Enacted on August 21, 1957, the NRA provided for the building and licensing of NYPA's Niagara Power Project. It set forth the segmentation of cost-based power, known as preference power, including allocations of hydropower to in-state "public bodies" that can distribute electric service such as municipal electric utilities and rural electric cooperatives.[11]

The NYPA hydropower allocations for the Systems range in size from less than 1,000 kilowatts to over 100,000 kilowatts for larger Systems. The Systems fall into one of two large groups known as "full requirements" customers, and "partial requirements" customers. The former receive all of their power requirements from NYPA, whereas the latter receive a portion of their power from NYPA. The following Table summarizes the power supply arrangements for the Systems.

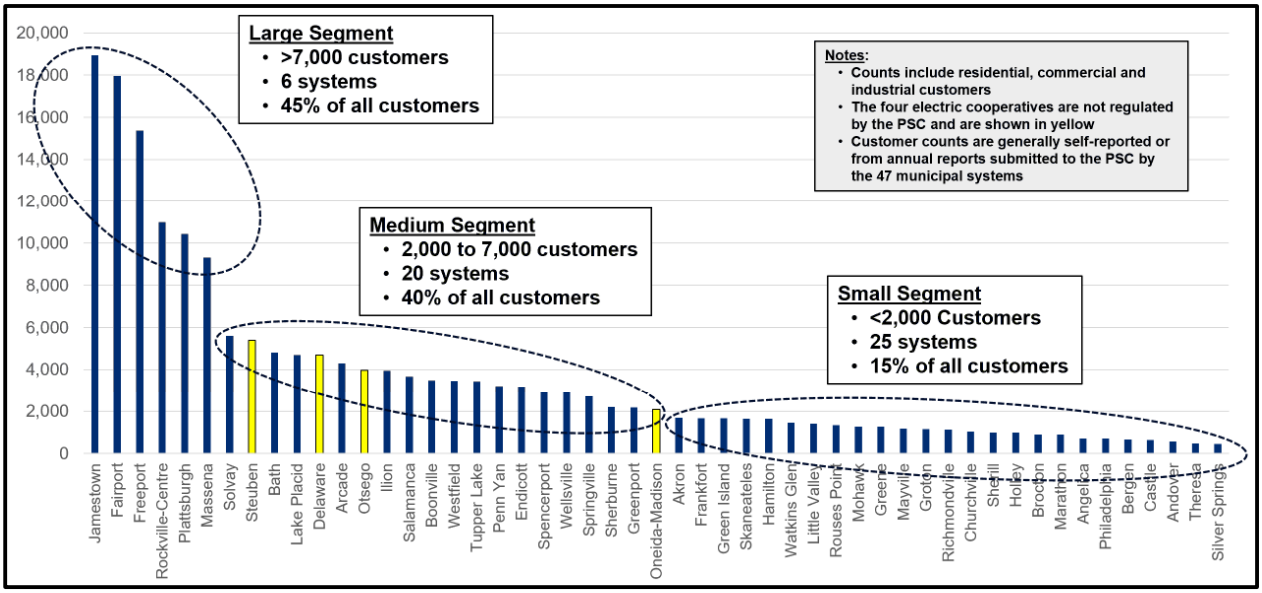
Type	Number[12]	Explanation
Full Requirements	14	The low-cost NYPA hydropower allocation is first used to meet a System's capacity and energy requirements. If or when this allocation is insufficient to meet a System's needs, NYPA purchases incremental market energy and capacity in the NYISO markets on behalf of the System customer to meet all the customer's needs.
Partial Requirements	37	The low-cost NYPA hydropower allocation is first used to meet a System's capacity and energy requirements. When this allocation is insufficient to meet a System's needs, the New York Municipal Power Agency[13] purchases market energy and capacity in the New York energy markets to meet each System's needs.
Full or Partial Requirements with Municipal-Owned Generation Capacity	4	There is one full requirements municipal System customer and three partial requirements municipal System customers that own and operate their own natural gas or oil-fired generating capacity. These units help each System meet its capacity and/or energy requirements. In addition, all four of these Systems also require periodic market-based energy purchases to meet all of their needs. These supplemental purchases are made by either NYPA or the New York Municipal Power Agency, depending on whether the utility is a Partial Requirements or Full Requirements customer of NYPA.

[11] The NRA mandated that the Power Authority "give preference and priority to public bodies and nonprofit cooperatives within economic transmission distance" of the Niagara Power Project when allocating at least 50 percent of Niagara generated power. 16 U.S.C. § 836(b)(1). The Power Authority Act also references these entities. *See*, *e.g.*, PAL § 1005(5).

[12] Four of the 47 municipal systems – Fairport, Greenport, Jamestown, and Rockville Centre –also own and operate generating capacity.

[13] The New York Municipal Power Agency ("NYMPA") is a joint action agency of 35 New York State municipal members. NYMPA was formed in 1996 and commenced supplying power to its members in May 1998. It serves as the agent for purchasing any power above the NYPA hydropower allocation on the behalf of its 35 member Systems. *See* https://www.nympa.org.

The graph below shows the 51 systems ranked by total customer count. Only six systems serve more than 7,000 customers and 25 systems serve less than 2,000 customers. If the Systems' customers were aggregated, they would serve significantly fewer electric customers than the smallest investor-owned utility in New York, Orange and Rockland Utilities, Inc.[14] Accordingly, scale is important when considering the feasibility of extending programs that are viable for large IOUs to the much smaller Munis and Coops.



D. Benefits of NYPA Hydropower

The hydropower allocations sold to the Systems are priced at NYPA's preference power rate, which was about 1.3 cents per kilowatt hour (kWh) in 2022. By comparison, average all-in market wholesale prices in 2022 were about 5.7 cents per kWh in Western New York, about 7.3 cents per kWh in Central New York, and about 12.5 cents per kWh on Long Island. Accordingly, Munis and Coops enjoy some of the lowest priced power in New York State.[15]

E. NYPA's Outreach to the Systems and Information Gathering

The Power Authority conducted extensive outreach with the Systems through their leadership and representatives, including the Municipal Electric Utility Association of New York

[14] Orange and Rockland Utilities, Inc. is a wholly owned subsidiary of Consolidated Edison, Inc. It serves about 309,000 electric customers.

[15] Western New York corresponds to New York Independent System Operator ("NYISO") Zone A, Central New York corresponds to NYISO Zones B through E, and Long Island to NYISO Zone K. The average wholesale cost per kWh for most Munis and Coop customers is greater than 1.3 cents, because most Munis and Coops require power beyond their NYPA hydropower allocation, and must therefore acquire more costly power at market prices.

State ("MEUA") [16] and the New York Association of Public Power ("NYAPP").[17] NYPA also conducted one-on-one interviews with six Munis and Coops of different sizes to gather their individual perspectives on implementing a REACH-like program. Finally, NYPA sent a survey to all of the Systems requesting detailed information on their geographical, infrastructure, and billing and settlement systems for providing electric service to their customers to assess the full scope of their capabilities and challenges. NYPA received 32 responses from Munis and Coops representing small, medium and large systems. As a power supplier to the Systems for nearly seven decades, NYPA also has detailed knowledge of the Systems' electrical infrastructure and service capabilities.

III. ANALYSIS

A. Potential of the Systems to Host New Renewable Generation Resources to Support Funding for a REACH-Type Program

1. Land Availability

Based on the information the Systems provided to NYPA, it appears that the Systems would have difficulty finding a location that could easily host large scale renewable energy projects, such as a solar farm larger than five MW, that would be sufficiently large to generate revenue levels to support the cost of bill credits for their low income ratepayers. In some cases, the Systems' service areas are only a few square miles. As such, the availability of vacant land for a significant solar array is quite limited among many of the Systems. Large scale resources could potentially be located remote from the Munis and Coops to generate revenue to support a program, but implementation would be hampered by billing system and staffing challenges detailed below.

Munis and Coops could potentially have land available to site smaller renewable energy systems within their service territories, such as distributed energy resources of up to five MW, but such systems would not be of a scale to generate significant revenues to fund bill credits. Two of the Systems indicated potential interest in serving as a host for a community owned distributed energy resource, such as a solar farm with a capacity of five MW or less. The rest of the Systems indicated that they do not have the capability or interest in hosting new renewable generation. Market penetration of customer-owned solar photovoltaic (PV) arrays is relatively low among upstate Munis and Coops.[18] This may be because net metering pays customers the

[16] MEUA was formed in 1930. The object of the association is to foster and advance the efficient operation of publicly owned and operated electric systems including the production, distribution, conservation and prudent use of electric power and energy for public service.

[17] NYAPP was created in 2005 as a non-profit, non-partisan organization to advance the interests of its members and their customers and provides services that ensure adequate and reliable electric service at a reasonable price.

[18] NYPA's interviews and survey responses indicated that the Systems have few customer-owned solar photovoltaic arrays on their grids. One medium-sized System stated that only about seven installations totaling about 200 kilowatts were interconnected in its service territory, resulting in a market penetration of only about 0.2%. In the survey responses, many Systems reported that no customer-owned generation was interconnected with their systems.

utility's avoided costs of procuring power, which in many of the Systems is the relatively low cost of NYPA hydropower. Customer interest in solar PV may also be affected by the fact the Munis and Coops already receive all or part of their power from NYPA renewable generation and at a very low rate. In summary, survey responses from the Systems indicated that they do not have plans to develop solar PV distributed energy resources (*i.e.*, up to five MW) within their service territories. For renewable energy systems above five MW, the Systems responded that they are not capable of hosting large scale renewable generation.

Four of the municipal systems do own and operate thermal generating units. Most of those units are older internal combustion engines that were installed from the 1940s to the 1990s. There are also several relatively modern combustion turbines that were installed in the early 2000s. Under the right circumstances, adding to or converting these existing generating sites to support renewable energy production and storage may be attractive if developers could make use of existing interconnection points.

2. Infrastructure

Both Munis and Coops would further face power system infrastructure challenges and additional costs associated with interconnecting new renewable generators to their systems. Some of the smaller municipal systems still have 2.4 kilovolt ("kV") "delta" feeders and/or 4.16 kV "wye" feeders.[19] Few Systems have any distribution or sub-transmission facilities over the 10 kV to 15 kV voltage range. The Systems receive bulk power transmission service from a major utility at voltages ranging from 34.5 kV to 115 kV delivered to a distribution substation.[20] These Muni or Coop owned substations then reduce the high-side delivery voltage to the primary distribution voltage(s) used in the Muni or Coop system. Many of the smaller Systems appear to have a delivery point right at their own substations to reduce power to the local area voltages (*e.g.*, 2.4 kV, 4.16 kV, 12.47 kV, etc.).

The smaller municipal utilities do not offer the scale or surplus feeder or substation capacity necessary to support a significant solar installation. Installing one would almost certainly require new substation capacity and a significant upgrade of portions of the distribution system to a higher voltage level including larger poles, new conductor and pole-mounted transformers, larger cross arms, and possibly wider right-of-way.[21] Connecting new renewable energy systems to Muni and Coop systems would therefore entail costly power system upgrades.

[19] The terms "delta" and "wye" refer to the voltages associated with different transformer configurations in a three-phase distribution system.

[20] A review of the FERC Form No. 1 forms of New York State Electric and Gas Corporation, National Grid (doing business previously as Niagara Mohawk Power Corporation), and Rochester Gas and Electric Corporation generally indicated that they deliver power to a NYPA customer-owned substation at sub-transmission voltages such as 34.5 kV or 46 kV.

[21] For a system considering an upgrade to a higher voltage level on certain feeders, however, possibilities to integrate a larger renewable or storage resource might emerge in the future.

B. Capability of Munis and Coops to Implement Bill Credits and Other Aspects Needed for a REACH-Like Program

NYPA's interviews and outreach survey responses both indicated that it would be costly and challenging for Munis and Coops to implement a system of REACH-type billing credits. In discussions with NYAPP, MEUA, and the Systems themselves, officials indicated that none of them have systems that can identify which of their ratepayers are low income or who would be eligible to receive bill credits. Their systems can avert an imminent service shutoff for customers that are unable to pay their electric bills. In these instances, customers may be eligible to receive HEAP funds to sustain electric service. While many of the Munis and Coops have indicated that they have lists of current HEAP recipients, none of them indicated that the HEAP program could be used to implement a bill credit program similar to REACH.

Another potential source of information to identify low income customers could be lists of New York State residents who receive assistance from the New York State Office of Temporary and Disability Assistance ("OTDA"). OTDA maintains an up-to-date database of New York State residents who are eligible for assistance under various State or Federal programs. When a resident qualifies for one Federal assistance program, they typically qualify for others. Most of the Munis and Coops indicated that they would have to retain outside information technology and cybersecurity support to modify their billing systems and access the OTDA database of low-income households within their borders that have ratepayers who would be eligible for REACH-like bill credits. One of the smaller systems estimated that the cost of cybersecurity training and certification alone could be over $20,000. This figure did not include the cost of retaining its billing system provider to add or enable functionality to support bill credits.

Beyond the inability to identify eligible low income customers, Systems indicated that they would face significant challenges to implement a REACH-like bill credit program in a manner consistent with the much larger IOUs. These relate to capabilities to (1) identify low income customers and enroll them in the program, (2) account for funds received from NYPA, (3) pay credits on the electric bills of their low income ratepayers on a monthly basis, and (4) report annually to NYPA and other involved agencies on the amounts paid in bill credits to low income ratepayers. Although the largest Systems have some software capabilities, most do not have the computer and software systems necessary to conduct these functions, and would have to expend significant funds and efforts to obtain them. Some Systems reported that modifications to their customer billing systems could take years and that their start-up costs would range from $50,000 to over $100,000.

Systems also related that they lack in-house staff who can modify their billing systems, except for minor changes to billing rate determinants. In the outreach survey, most of the respondents indicated they would have to either update current staff or hire to help to support a new program. The Systems vary in the size of their staffs. While a few larger Systems have 25-40 employees, the small to medium Systems tend to have a small staff of only 3 to 8 employees.

A typical electric department cohort is a manager or superintendent, several line workers, a staking technician, and one or two customer service/billing representatives. All of the Munis and Coops would face significantly higher staff costs to implement a program like REACH.

Finally, implementation costs of a REACH-like program would be spread over a much smaller body of electric ratepayers compared to the larger IOUs who are the subject of the REACH statute. The smaller systems would face difficulty implementing a new initiative with a significant initial cost element because the cost would be borne by a small number of customers. For example, the cost of changing a billing system for Con Edison's electric business could be spread over 3.6 million customers, while the cost of changing a smaller Muni billing system would be spread over only 400-500 customers.

IV. Observations and Conclusions

Based on the information that NYPA has developed, primarily from extensive outreach to the municipal electric utilities and rural electric cooperatives and their representatives, NYPA makes the following observations and conclusions:

1. Although two Systems expressed interest in finding locations for smaller distributed energy resources (five MW or under), implementation of large-scale resources (over five MW) to generate net revenue for a REACH-like program for Munis and Coops would be significantly hampered due to the lack of suitable locations. Large scale resources could potentially be located remote from the Munis and Coops to generate revenue to support a program, but implementation would be hampered by billing system and staffing challenges detailed below.

2. Munis and Coops also face electric system limitations on developing renewable energy projects to support a REACH-like program. The lack of utility infrastructure in Munis and Coops capable of interconnecting new renewable resources within their service territories inhibits implementation of a REACH-like program.

3. The Systems indicated that implementation would be impractical due to the limitations of their billing and settlement systems. They stated that they would have to make extensive changes to their billing software systems, or obtain new systems, which would be excessively costly compared to any modest benefit that a REACH-like program might provide. Although some of the larger Systems have more developed billing systems than their smaller counterparts, all of the System's indicated that they face the following challenges:

    a. lack of data on low-income ratepayers in their community or significant obstacles and costs to identifying them;

b. significant costs to provide bill credits to low-income ratepayers through their existing enrollment, billing and accounting systems and from having to pay for upgraded software or making manual billing adjustments; and
c. lack of staff and increased personnel costs to administer a REACH-like bill credit program.

4. The costs the Systems would incur to implement a REACH-like bill credit program and pass on to their ratepayers may exceed the funds that the Authority could make available from renewable generation projects to pay bill credits to low-income ratepayers, making such a program economically infeasible. Unlike the investor-owned utilities that can spread the costs of implementing REACH across a population of hundreds of thousands or millions of ratepayers, the Systems operate at a much smaller scale and would have to recover their billing system and staff costs from ratepayers that often number only in the hundreds.

5. The Munis and Coops themselves uniformly advised NYPA that they are unable to support and/or do not support implementation of a REACH-like bill credit program for their electric systems.

6. The Systems purchase all or a significant portion of their power from NYPA at cost-based preference power rates in accordance with the federal NRA. While rates differ among the Systems, System ratepayers currently pay considerably lower rates for their energy than IOU customers. Considering this fact and that resources available for REACH will be limited, especially at the outset of the REACH, it appears appropriate to concentrate available resources at least initially on providing bill credits to the low income ratepayers who pay higher electricity rates to the IOUs.

Given the foregoing, it is NYPA's view that it is not feasible or advisable to provide for a REACH-like program for municipal electric utilities and rural electric cooperatives at this time. NYPA is just beginning to plan for development of new renewable resources to support the purposes of its expanded authority, including the REACH program for low-income ratepayers of the IOUs. Once the REACH program is developed and NYPA gains experience implementing new renewable generation and REACH, this experience may reveal additional ways to provide benefits to low-income ratepayers in disadvantaged communities served by the State's municipal and cooperative electric systems. In addition, NYPA intends to continue to explore options to make new renewable energy generation available to the Systems.

APPENDIX

Municipal and Cooperative Customer Map

With County Labels