KEYES, FOX & WIEDMAN LLP

ELECTRONICALLY SUBMITTED ON December 31, 2012

Jaclyn A. Brilling, Secretary
Public Service Commission
3 Empire State Plaza
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RE: NY PSC Cases 12-E-0485 to 12-E-0490, In the Matter of Net Metering Limitations in Utility Service Territories Pursuant to Public Service Law §66-j and §66-l.

THIS IS A VIRTUAL DUPLICATE OF THE ORIGINAL HARDCOPY SUBMITTED TO THE COMMISSION IN ACCORDANCE WITH ITS ELECTRONIC FILING INSTRUCTIONS

Dear Ms. Brilling:

On behalf of the Interstate Renewable Energy Council, Inc., enclosed for filing in the above referenced docket please find the original of the *Comments of the Interstate Renewable Energy Council, Inc. Responding to the October 25, 2012 Notice Soliciting Comments*.

Thank you for your assistance.

Sincerely,

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Before the State of New York
Public Service Commission

CASE 12-E-0485 – In the Matter of Net Metering Limitations in Consolidated Edison Company of New York, Inc.'s Service Territory Pursuant to Public Service Law §66-j and §66-l.

CASE 12-E-0486 – In the Matter of Net Metering Limitations in New York State Electric and Gas Corporation's Service Territory Pursuant to Public Service Law §66-j and §66-l.

CASE 12-E-0487 – In the Matter of Net Metering Limitations in Niagara Mohawk Power Corporation's Service Territory Pursuant to Public Service Law §66-j and §66-l.

CASE 12-E-0488 – In the Matter of Net Metering Limitations in Orange and Rockland Utilities, Inc.'s Service Territory Pursuant to Public Service Law §66-j and §66-l.

CASE 12-E-0489 – In the Matter of Net Metering Limitations in Rochester Gas and Electric Corporation's Service Territory Pursuant to Public Service Law §66-j and §66-l.

CASE 12-E-0490 – In the Matter of Net Metering Limitations in Central Hudson Gas and Electric Corporation's Service Territory Pursuant to Public Service Law §66-l.

COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC. RESPONDING TO THE OCTOBER 25, 2012 NOTICE SOLICITING COMMENTS

December 31, 2012

I. Introduction

On October 22, 2012, the New York Public Service Commission ("Commission") ordered Central Hudson Gas & Electric Corporation ("Central Hudson") to file tariffs that effectively tripled the net energy metering ("NEM") capacity available in its service territory ("Order").[1] This action was taken pursuant to Public Service Law ("PSL")

[1] Case 12-E-0343, Petition of Hudson Valley Clean Energy, Inc. to Increase Central Hudson Gas & Electric Corporation's Net Metering Limit, Order Raising Net Metering Limit (issued October 22, 2012).

§66-j, which allow the Commission to "increase the percent limits if it determines that additional net energy metering is in the public interest."[2] In its Order, the Commission stated that it would review the minimum NEM program limitations for the other major electric utilities' service territories in order to accommodate the state's distributed generation ("DG") goals, including the NY-Sun Initiative and the Renewable Portfolio Standard ("RPS"), as well as additional expected growth in DG markets.

On October 25, 2012, the Commission issued a Notice Soliciting Comments ("Notice") regarding NEM limits under both PSL §66-j, for systems using solar energy, farm waste, combined heat and power, fuel cells, or hydroelectric generation, and PSL §66-l, for wind energy systems. Separate cases were established for each of the state's major electric utilities: Consolidated Edison, New York State Electric and Gas, Niagara Mohawk Power, Orange and Rockland Utilities, Rochester Gas and Electric, and Central Hudson (only addressing Central Hudson's wind energy NEM limit under PSL §66-l).

The Interstate Renewable Energy Council, Inc. ("IREC") appreciates the opportunity to comment in the matter of increasing NEM limits for New York utilities. IREC has worked for over three decades to expand retail electric customer access to renewable DG resources. To that end, IREC has a goal to facilitate the development of programs and policies that reduce barriers to renewable energy deployment and increase consumer access to renewable technologies. Over the past five years, IREC has worked in nearly 40 states to implement successful regulatory policies and programs that have greatly expanded customer access to solar and other DG technologies. IREC is currently funded by a U.S. Department of Energy cooperative agreement under the SunShot

[2] NY CLS Public Service § 66-j, for non-wind systems. A similar provision is included in PSL § 66-l, for wind systems.

Initiative to provide technical assistance to top solar states in the areas of NEM, community solar, interconnection, energy storage and transmission.

IREC applauds the Commission for increasing the minimum program limit for Central Hudson and supports a move in this direction for the other major utilities of the state. More generally, IREC's model NEM rule has no program limits, and IREC suggests that the Commission could take such a step.[3] Short of that approach, IREC suggests that the Commission treat any programmatic expansion as setting a trigger upon which the Commission will consider further expansion. Unless there is a demonstrable and sufficient reason to limit NEM, now or in the future, IREC believes that NEM should be not be constrained. A participation trigger would allow the Commission to assess the benefits and costs of NEM at that time, and potentially expand the program after such a review.

II. Benefits of Net Metering

Net metering is a low-cost and easily administered means of promoting direct customer investment in renewable energy. Currently New York is one of 43 states plus the District of Columbia that allow customer generators to participate in NEM.[4] One of the major advantages of NEM lies in its simplicity; in many areas, customers can use their existing meter without any modification or additional equipment. Additionally, NEM systems are necessarily distributed, offering many widely recognized benefits of DG to utilities, ratepayers, and the grid. Net metering allows utilities to reduce their fuel

[3] See IREC's Model Net Metering Rule, at http://www.irecusa.org/wp-content/uploads/2009/11/IREC_NM_Model_October_2009-1-51.pdf

[4] See the Database of State Incentives for Renewables and Efficiency ("DSIRE") at http://www.dsireusa.org/documents/summarymaps/net_metering_map.pdf

expenses, avoid line losses and realize capacity benefits, while at the same time providing cleaner generation and reducing reliance on and pollution from fossil fuels that are often imported from out-of-state. These benefits accrue to all ratepayers.

In recent years several studies have weighed the costs and benefits of NEM, including some commissioned by electric utilities. A recent Solar America Board of Codes and Standards (Solar ABCs) report titled, A *Generalized Approach to Assessing the Rate Impacts of Net Energy Metering*, provides an overview of some of these studies and the costs and benefits of NEM that they have found.[5] The report observes that benefits of NEM are wide ranging, and include the value of energy production, generation capacity value, transmission and distribution ("T&D") deferrals, reduced transformer and line losses, environmental benefits to the utility, natural gas price hedge, disaster recovery, blackout prevention and emergency utility dispatch, managing load uncertainty, retail price hedge, and reactive power control. Because the report focused on rate impacts, societal benefits such as reduced pollution or job creation were not considered.

The California Public Utilities Commission (CPUC) has studied the costs and benefits of NEM extensively in that state, which has consistently ranked highest for installed grid-connected solar installations.[6] Despite the fact that the state's three major investor-owned utilities lead the nation in terms of NEM participation, the CPUC found that "[t]he total net cost of NEM is less than one-tenth of one percent of total utility

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[5] Keyes, J. and Wiedman, J., Solar ABCs, *A Generalized Approach to Assessing the Rate Impacts of Net Energy Metering*, available at http://www.solarabcs.org/about/publications/reports/rateimpact/pdfs/rateimpact_full.pdf

[6] CPUC, Introduction to the Net Metering Cost Effectiveness Evaluation, March, 2010, available at http://www.cpuc.ca.gov/NR/rdonlyres/0F42385A-FDBE-4B76-9AB3-E6AD522DB862/0/nem_combined.pdf

revenue."[7] This estimate was for the case of a complete build-out of the California Solar Initiative, which would occur when solar generating capacity totaled roughly 5% of the utilities' peak load.

The CPUC did not measure the overall cost-effectiveness of solar photovoltaics (PV) as an energy resource, but rather isolated and evaluated simply the direct costs and benefits of NEM. To do this, it focused only on the costs and benefits of any exported energy, reasoning that the property owner has the right without NEM to use energy from on-site generation at the time it is generated. Also, it did not count a number of public benefits associated with increased PV generation (e.g. avoided pollution). The report found that NEM represented an important and ongoing benefit to those customers who invest in solar, providing an incentive of $0.88 per watt (on average, and on a net present value basis).[8] This research is currently being updated through a collaborative CPUC proceeding.[9] Preliminary analysis indicates that the rate impacts, while minimal in the prior study, are considerably lower now, due to a flattening of the residential rate structure in California in the past two years.

In a study undertaken closer to New York, Clean Power Research published a detailed report titled *The Value of Distributed Solar Electric Generation to New Jersey and Pennsylvania*, in November 2012.[10] This report quantifies the value of distributed solar electricity in Pennsylvania and New Jersey by considering ten value components

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[7] Id, p. 2.
[8] Id.
[9] CPUC NEM Cost Benefit Study, available at http://www.cpuc.ca.gov/PUC/energy/Solar/nem_cost_benefit_evaluation.htm
[10] Perez, R., Norris, B. and Hoff, T., Clean Power Research, *The Value of Distributed Solar Electric Generation to New Jersey and Pennsylvania*, Prepared for the Mid-Atlantic Solar Energy Industries Association & the Pennsylvania Solar Energy Industries Association, November 2012.

and one cost component. Value components include fuel cost and price hedge savings, avoided O&M costs, security enhancement in terms of grid outages, generation capacity value and economic development value, among others. The study also included the cost incurred to accept variable solar generation onto the grid. The analysis was performed on a "fleet" of PV systems located across both states and six utility service territories. Researchers concluded that the net benefit of PV in these states ranged from $256 per Megawatt-hour ("MWh") to $318 per MWh.[11]

Clean Power Research also published a report in May 2012, which provides a summary of a detailed calculation of distributed solar photovoltaics ("PV") in ConEdison's service territory.[12] This study evaluated a range of benefits for the utility and ratepayers, including loss savings, energy savings, generation capacity savings, fuel price hedge value, transmission and distribution capacity savings, and environmental benefits. The evaluation was based on the calculations of a web-based PV value calculator that was developed to determine the value of solar PV generation resources connected to the electric distribution system, from a utility perspective. The evaluation concluded that that there is a distributed PV value in ConEdison's service territory ranging from 17¢ to 20¢ per kWh depending on system orientation.[13]

While benefits may vary from utility to utility, it is certain that DG carries many recognized and as-yet unrecognized benefits in New York's service territories. As an example of a capacity benefit that could have been realized through greater NEM, New York has recently needed to engage in transmission congestion mitigation efforts such as

[11] Id, p. 3.
[12] Norris, B. and Hoff, T., Clean Power Research, *PV Valuation Tool, Prepared for the New York State Energy and Research Development Authority*, May 2012.
[13] Id, p. 35.

the $2.2 Billion dollar Champlain Hudson Power Express that will import hydropower from Canada.[14] Providing residents with the ability to generate local, clean power helps to reduce the need for New York to turn to out-of-state fuel and generation resources.

In almost every comprehensive study that has been undertaken thus far on the costs and benefits of net metering, researchers have concluded that the rate impacts of NEM are minimal, and there appears to be a net benefit when factors such as environmental benefits, job creation, and impacts on electricity and capacity pricing are considered. Most of the benefits of NEM extend beyond the customer-generator, providing energy cost savings to all ratepayers and to society generally.

III. New York's Net Metering Limits in Perspective

On February 13, 2009, through Cases 08-E-1305 – 08-E-1310, the Commission approved minimum PSL §66-j net metering participation limits of 1% of 2005 peak load for solar energy and various other clean technologies. On October 22, 2012, in a separate ruling in Case 12-E-0343 the Commission approved a minimum limit of 3%of 2005 peak load or 36 megawatts ("MW") for Central Hudson for PSL §66-j technologies. The Commission has additionally established a separate limit of 0.3% for small wind generation for all of the utilities, under PSL §66-l.

By contrast, 21 U.S. states, or nearly half of the 43 that mandate a statewide NEM policy, have removed or elected not to place participation limits on NEM. In fact, many of the states neighboring or nearby New York (i.e. Connecticut, Maine, New Jersey and Pennsylvania) have unlimited NEM programs, spurring development in their clean

[14] http://www.chpexpress.com/

energy economies.[15] Moreover, ten additional states have specified participation limits that are higher than those found in New York.[16] These numbers indicate that New York's current program limits for NEM rank in the bottom fourth of all states that offer NEM.

It is essential that a state's clean energy policies, including NEM, work together to create stable growth and opportunities for investment and competition in the marketplace. Restrictive NEM program limits can stifle growth of clean energy markets, even prior to the limits being reached. Program capacity limits signal to energy developers that their marketing efforts and technical investments may eventually be in vain, not due to a lack of customer interest, but due solely to regulatory restrictions. As a result, several states have set their NEM participation limits so as not to restrict DG development in the state. Utah, for example, has set a program limit of 20% of 2007 peak load for Rocky Mountain Power, its one investor-owned utility. California has set a limit of 5% but calculates that number differently than other states, using the "aggregate customer peak demand" or the sum of all customers' individual non-coincident peak demands rather than the highest point of system coincident peak. This effectively translates to a NEM limit closer to 10% of utility peak load, rather than 5%. The New Jersey Board of Public Utilities opted not to set a hard program limit but rather an evaluation trigger at 2.5% participation, which is fast approaching, at which time the Board will assess the impact of NEM to ensure grid safety and reliability.

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[15] The New Jersey Board of Public Utilities is authorized to set a net metering limit at 2.5%, and can choose to set the limit higher.

[16] These states include CA, DE, HI, IL, MD, NV, RI, UT, VT and WV. See IREC's State-by-State Net Metering Table, available at http://www.irecusa.org/irec-programs/connecting-to-the-grid/net-metering/.

Moreover, limits on participation are often misleading, as average generation for solar and wind systems is typically less than a quarter of the rated capacity of the systems. There is no solar generation at night, or wind generation without wind. To illustrate this point, in 2011 New York experienced a peak load of 33,865 MW and a total usage of 163,330 gigawatt-hours ("GWh").[17] If the Commission imposed a minimum participation limit of 10% of 2011 peak load, for example, that would translate to 3,386.5 MW (though the current limit is based on 2005 peak load). If that limit were fulfilled by PV generation, it would produce 1,159 MWh per MW, or a combined total of 3,925,881 MWh or 3,925 GWh per year. In other words, at a trigger point of 10% of peak demand, net metered PV systems would provide only 2.4% of the total energy sold in New York over the course of a year.

Net metering participation limits are unnecessary and can be counter-productive. Distributed generation facilities do not threaten the grid's reliability, power quality and safety when in compliance with utility interconnection standards.[18] The impact that DG has on a section of utility grid is largely determined by its relative placement on the grid, how much additional DG is on the same line section and other characteristics that are evaluated in the interconnection application process.[19] In essence, NEM program limits

[17] NY ISO *Power Trends 2012, State of the Grid* available at http://www.nyiso.com/public/webdocs/media_room/publications_presentations/Power_Trends/Power_Trends/power_trends_2012_final.pdf

[18] The Commission is currently examining potential modifications to the state's Standard Interconnection Requirements (SIR) through Cases 12-E-0393 through 12-E-0398 and any issues regarding penetration screens or power quality should be addressed in this matter.

[19] The National Renewable Energy Laboratory has recently published a report titled *Updating Small Generator Interconnection Procedures for New Market Conditions,* which addresses methods to safely interconnect higher penetrations of PV. This report is available at http://www.nrel.gov/docs/fy13osti/56790.pdf

have no bearing on the safety, reliability and power quality of the grid, as those issues are addressed through interconnection procedures.

New York has a unique NEM program structure, with separate rules for wind and for other systems, reflecting PSL §66-l and §66-j respectively. IREC is not suggesting specific program limitations for each rule, other than to suggest that they can be set higher and treated as trigger points for further consideration of program expansion.

IV. It is in the public interest to increase or eliminate net metering program participation limitations

IREC supports a significant increase in New York's NEM program limits. According to the October 25 Notice, under program limits set by PSL §66-j, the state's major electric utilities are only required to allow an additional 164 MW of net-metered facilities on the state's grid. However, New York's appetite for solar and other renewable energy technologies will likely surpass that reserve in the very near future. The state has established several near-term goals, which could consume the remaining NEM capacity within the next two to three years.

On April 19, 2012 Governor Cuomo launched the NY SUN Initiative, which aims to create green jobs and dramatically increase the state's solar capacity by facilitating a 300 percent growth in annual installed customer-sited PV over two years.[20] Specifically, this Initiative has a goal to spur the development of 60 megawatts ("MW") of solar PV capacity in 2012 and 120 MW in 2013. This initiative alone is enough to warrant an expansion of the state's NEM program.

[20] Governor's press release, April 19, 2012, available at http://www.governor.ny.gov/press/04192012-sun-initiative

The RPS in New York also directs the state's investor-owned utilities to facilitate a minimum of 0.4092% of the state's electricity sales in 2015 from customer-sited generation. As of April 2010, the Commission established Customer-Sited Tier (CST) program goals for the previously approved CST technologies (photovoltaic; fuel cell, anaerobic gas-to-electric digester technologies, and on- site wind installations) and authorized a new CST program aimed at encouraging additional customer-sited installations in the downstate region. The goal of the program is to install 82 MW of distributed PV generation. The New York State Energy Research and Development Authority ("NYSERDA") administers incentives for this CST program and, in addition to PV incentives, provides incentives for other behind-the-meter programs as well.[21]

Between these two goals, along with declining module and installation costs for PV[22] and increased customer interest in renewable energy, the amount of NEM capacity available to New York residents will not be sufficient in the coming years. The fact that these goals were set by the policy leaders of New York shows that a decision to increase limits on NEM capacity is in the public interest of New York residents. Net metering provides benefits that reach every ratepayer and resident in New York, through the air and water pollution these facilities prevent, the line losses they avoid, the peak-load shaving capabilities they offer and the T&D grid upgrades they defer, among many other benefits.

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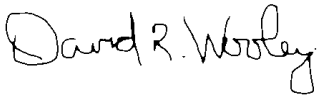
[21] NYSERDA website, available at http://www.nyserda.ny.gov/Program-Planning/Renewable-Portfolio-Standard.aspx

[22] See Photovoltaic Pricing Trends: Historical, Recent and Near Term Projections, National Renewable Energy Laboratory, available at http://www.nrel.gov/docs/fy13osti/56776.pdf. Research has indicated that during 2010–2011, installed prices fell by $0.72/W (11%) for systems of 10 kW or smaller, $0.89/W (14%) for systems of 10–100 kW, and $0.77/W (14%) for systems larger than 100 kW.

V. Conclusion

Net metering is one of the most cost-effective and administratively simple mechanisms in a state's toolbox to encourage growth in clean energy investments and economic development. The ambitious clean energy goals set by Governor Cuomo and the New York Legislature serve to position New York as a clean energy leader in the years to come. However, because the state's clean energy policies work in concert, New York's NEM program limits will need to be expanded significantly to accommodate the planned solar and DG growth the state intends to see in the next five to ten years. To this end, IREC respectfully recommends that the Commission eliminate the minimum NEM limits or provide a significantly higher participation trigger for the state's major utilities.

Respectfully submitted on December 31, 2012.

By: 

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