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Hon. Kathleen H. Burgess, Secretary
Public Service Commission
Three Empire Plaza
Albany, New York 12223-1350

Case 14-E-0151

Case 14-E-0422

Subject: Comments on the Petition of Hudson Valley Clean Energy, Inc. for an Increase to the Net Metering Maximum Limitation at Central Hudson Gas & Electric Corporation and
Petition of Solar Energy Industries Association, Alliance for Clean Energy New York, the Vote Solar Initiative, the National Resources Defense Council and The Alliance for Solar Choice to Clarify the Process for Utilities to Seek Relief from Net Metering Caps

Secretary Burgess:

We are pleased to enclose our comments on cases 14-E-0151 and 14-E-0422.

We are fellows at the Guarini Center on Environmental, Energy and Land Use Law at New York University School of Law. The views we express here are our own and do not represent the views, if any, of the Guarini Center or of New York University.

Sincerely,

Jonathan E. Schrag

Benjamin H. Mandel

BEFORE THE
STATE OF NEW YORK PUBLIC SERVICE COMMISSION

Comments on the Petition of Hudson Valley Clean Energy, Inc. for an Increase to the Net Metering Minimum Limitation at Central Hudson Gas & Electric Corporation	**)**	Case 14-E-0151
Petition of Solar Energy Industries Association, Alliance for Clean Energy New York, the Vote Solar Initiative, the National Resources Defense Council and The Alliance for Solar Choice to Clarify the Process for Utilities to Seek Relief from Net Metering Caps	**)**	Case 14-E-0422

Submitted by Jonathan E. Schrag and Benjamin Mandel, Guarini Center on Environmental, Energy and Land Use Law at New York University School of Law

Summary

We encourage the Commission to authorize the least possible increase to the maximum net metering capacity limitation and to consider opening a proceeding for an alternative to compensating customer-generators at the retail rate as a transition regime until the ultimate market-based policies of the Reformed Energy Vision are implemented.

Background

These combined proceedings ask the Commission to increase the maximum capacity limitation on net metering for investor owned utilities in New York State from 3% to 12%, and to clarify the process for utilities to request capacity limitation increases as the Commission develops its Reformed Energy Vision. The Commission has previously recognized that a "comprehensive assessment of the current approach to net metering is warranted."[1] As a part of its April 2014 NY-Sun Order, the Commission ordered NYSERDA to begin a study of the costs and benefits of net-metering and the optimal way to transition the existing net-metering regime to the market-based

[1] Case 03-E-0188, Order Authorizing Funding and Implementation of the Solar Photovoltaic MW Block Program, issued and effective April 24, 2014 at 22.

platform envisioned as a part of the Reformed Energy Vision.[2] However, the most recent CUNY NY Net Metering Analysis and Capacity Tracker now forecasts that National Grid and Central Hudson Gas & Electric may reach their capacity limit in the next 6 to 12 months, suggesting a need to evaluate the capacity limit in the very near future.[3]

Under Public Service Law §66-j, net metering is available to customer-generators installing a range of distributed generation resources. Public Service Law §66-j(4)(a) and (b) specifies that customer-generators will be compensated at the same retail rate as non-generator customers. As the wholesale energy price across New York State averages about 6 cents per KWh and the average retail price averages about 18 cents per KWh, the effective subsidy for net generators – the additional payment from all other ratepayers made to customer-generators over and above the value of the energy produced -- is about 12 cents per KWh.[4] As the actual amount of subsidy depends on the time-varying wholesale price and the time-varying output of the net metered resource, 10 cents per KWh is a conservative subsidy approximation.

In order to limit the financial impact of these payments on utilities and ratepayers, system-wide caps limit net-metered system capacity within any utility service territory. Specifically, the statutory limit for net metering is 1% of the individual utility's 2005 peak demand. Public Service Law §66-j(3)(b) gives the Commission the authority to use its discretion to increase the percentage cap on net metering if it determines that such an increase is in the public interest, and the Commission has increased that cap to 3% of the 2005 peak demand.[5]

Discussion

We offer the following considerations:

First, there are good reasons to provide a subsidy to customer-generators, chiefly the social benefits of carbon-free renewable energy, the elimination other pollutants such as SO_2, the potential

[2] Ibid. at 23.
[3] CUNY *NY Net Metering Analysis & Capacity Tracker* http://www.cuny.edu/about/resources/sustainability/nyssolar/NYSNetMeteringAnalysis/NEM_Analysis_updated_8_5_14.pdf
[4] New York State Energy Research and Development Authority, *2013 New York Energy Fast Facts*.
[5] Public Service Law (PSL) §§66-j and 66-l. Available at http://public.leginfo.state.ny.us

locational benefits of additional generation at constrained points on the distribution network, and reduced payments in the wholesale capacity market. Although these benefits may justify a subsidy, the current size of the subsidy – roughly 10 cents per KWh -- does not accurately reflect any quantification of these benefits and so most likely distorts the market in one direction or another.

Second, net-metering subsidies do not treat all renewable resources equitably. New York State procures utility-scale renewable resources through its Renewable Portfolio Standard. The cost of those procurements have ranged between an all-time low of $14.75 per MWh to an all-time high of $34.95 per MWh.[6] Net-metered customer-generators currently receive a subsidy about three times as high as utility-scale renewable energy developers. Moreover, net metering rates for natural gas cogeneration, which emits CO_2, are the same as those for solar PV, which does not.

Third, the current rate of the net metering subsidy payment of about $100 per MWh may not be the most productive way to achieve state policy objectives. Net metering seeks to encourage deployment of renewable resources, whose chief benefit is low-carbon electricity generation. According to the U.S. EPA, in New York State one MWh from zero-emision generation resources displaces about 1,500lbs of CO_2; or 1.33 MWh from zero emission resources achieves a 1 ton reduction in CO_2[7]. Accordingly, a net metering subsidy of $100 per MWh equates to a payment of $133 per ton of CO_2. In contrast, the U.S. Government's social cost of carbon is $40 per ton.[8] If one were to use this federal benchmark to compensate customer generators for their zero-carbon energy , the net metering subsidy would be about $30 per MWh, not $100.[9]

Fourth, the optimal maximum net metering capacity limitation should be based on an analysis of the potential system benefits and costs from distributed generation. System-wide benefits from the capacity market and the distribution network may only become realized at a certain capacity size and may, in turn, diminish at a certain maximum size. We understand that the New York State

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[6] New York State Energy Research and Development Authority, *New York State Renewable Portfolio Standard Annual Performance Report Through December 31, 2013*, at 13.
[7] See U.S. EPA eGrid Annual Non Baseload Emission Rates at http://cfpub.epa.gov/egridweb/ghg.cfm
[8] See U.S. EPA *Social Cost of Carbon Fact Sheet* at http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf
[9] For additional analysis of the relative productivity of New York State energy subsidies in reducing carbon dioxide emissions see: Case 14-M-0094 Proceeding of the Commission to Consider a Clean Energy Fund, *Comments of Paul Francis on the Clean Energy Fund: A New Framework for New York State Renewable Energy Subsidies*. Also available at http://guarinicenter.org/a-new-framework-for-new-york-state-renewable-energy-subsidies/

Energy Research and Development Authority is currently conducting a study of the system benefits as a part of the NY-Sun proceeding. NYU School of Law is also undertaking an economic analysis of how to best set the capacity limitation of net metering based on system wide benefits.[10] We note that many of these non-carbon system benefits are location and time dependent, factors which existing net metering rates do not consider.

Fifth, an increase in the maximum net-metering limitation may have significant impact on ratepayers. There is currently a mismatch between the way net metering limits are set and the way that net-metering subsidies are paid. The net metering statute sets limits based on a measure of capacity. However, customer-generators accumulate subsidies according to the number of kilowatt-hours generated. As a result, the capacity utilization rate of different types of resources affects the ratepayer impact of the net-metered fleet. For example, micro-combined heat and power with an 80% capacity utilization rate will have potentially four times as great a ratepayer impact as solar resources with a 20% capacity utilization, all else being equal. If the current statewide maximum of about 880,000 kW were comprised entirely of solar energy, the resource with lowest utilization rate, it would equate to about 1,535,550,000 kWh (880,000 x 8700 hrs/year x 20% capacity utilization). At an average subsidy rate of about $.10 per kWh, the total potential subsidy of equals about $150 million dollars. With an average capacity utilization closer to micro-CHP, the potential ratepayer impact of net-metering resources would be four times greater, or about $600 million. If the Commission were to increase the net metering limit to 12% and that amount were to be supplied with high utilization rate bio-digesters or micro-CHP, the potential maximum ratepayer impact would be about $2.4 billion.

Recommendations

The Commission may wish to consider developing a tariff-based approach to value distributed generation as other jurisdictions have done. For example, Minnesota initiated a "Value of Solar" (VOS) investigation.[11] A May 2013 Minnesota statute permitted the state's investor-owned utilities to apply for PUC approval to replace the existing net-metering rate with a VOS tariff.[12] The statute assigned Minnesota's Department of Commerce the task of developing and submitting a methodology for utilities to calculate a VOS tariff. The methodology was required to account for, at a

[10] Contact Dr. Burcin Unel of the NYU School of Law's Institute for Policy Integrity at burcin.unel@nyu.edu
[11] *Minnesota Value of Solar: Methodology*, Minnesota Department of Commerce, Division of Energy Resources (2014) at 1
[12] MN Laws 2013, Chapter 85 HF 729, Article 9, Section 10.

minimum, "the value of energy and its delivery, generation capacity, transmission capacity, transmission and distribution line losses, and environmental value."[13] The Department of Commerce convened public workshops to inform the development of the VOS methodology between September 2013 and December 2013 before submitting its final methodology to the PUC in January 2014.[14] The PUC approved the VOS methodology in March 2014.[15]

NYSERDA's ongoing study to develop a more integrated assessment of the true value of distributed generation may offer a launching pad for New York to develop a similar tariff-based value of distributed generation that would replace the imprecise net metering retail rate and inform the ultimate market-based REV platform. We encourage the PSC to take only conservative actions on net-metering policies before the publication of the NYSERDA study, which will identify the true social costs and benefits that these resources confer. At that point, the PSC will have more information with which to decide the appropriate level of subsidy for customer-generators in New York State.

In conclusion, low-carbon distributed generation resources provide significant benefits to the electricity system. They deserve to receive compensation for the full range of benefits they provide. However, the current net-metering policy is a blunt instrument that does not appropriately value each of those benefits. As a result, we are concerned that this subsidy of clean energy could become distortionary if the rate at which it is compensated is misaligned with its true social marginal benefits in either direction. A market-based platform, as under consideration within the REV proceeding, should incorporate and value each component of the overall benefit, some of which may depend on dynamic locational or time attributes. Given the costs that net metering currently imposes on ratepayers, the Commission may wish to develop a transitional-value-of-distributed-generation tariff until the REV market-based approach is approved.

[13] Minn. Stat. Ann. § 216B.164, subd. 10(f) (West).
[14] *Supra* note 11
[15] Minnesota Public Utility Commission Docket Number E-999/M-14-65 *Order Approving Distributed Solar Value Methodology* at https://www.edockets.state.mn.us/EFiling/edockets/