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VIA EMAIL: jaclyn_brilling@dps.state.ny.us

Jaclyn A. Brilling, Secretary
New York State Public Service Commission
3 Empire State Plaza
Albany, NY 12223-1350

Re: Case 03-E-0188
SAPA Nos. 03-E-0188SA18 and 03-E-0188SA19

Dear Ms. Brilling:

Enclosed for filing in the above proceeding are the comments of the Pace Energy and Climate Center.

Please contact me if there are any questions regarding these comments. Thank you for your assistance.

Very truly yours,

PACE ENERGY AND CLIMATE CENTER

By _____
James M. Van Nostrand
Executive Director

Enclosure

BEFORE THE NEW YORK PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard	Case 03-E-1088

Comments of

Pace Energy and Climate Center

Regarding

SAPA Notices 03-E-1088SA18 and 03-E-1088SA19

November 17, 2008

On October 1, 2008, the New York State Public Service Commission ("NYPSC" or "Commission") issued two notices concerning proposed revisions to the state's Renewable Portfolio Standard ("RPS"). SAPA No. 03-E-0188SA18 concerns proposed revisions that would increase the target level of photovoltaics and other on-peak resources in high-cost areas. SAPA No. 03-E-0188SA19 addresses potential revisions to, among other things, the tier allocations and annual targets. The Pace Energy and Climate Center ("Pace") appreciates the opportunity to express our views, and we submit these comments on the proposed revisions.

The Pace Energy and Climate Center

The Pace Energy and Climate Center has a twenty-year track record of addressing environmental interests in the production and use of energy. This work started with our groundbreaking study in 1987 that quantified the environmental impacts of electric generation and continues through our most recent work in implementing an auction for carbon allowances in the Northeast Regional Greenhouse Gas Initiative ("RGGI"). In Spring 2008, we changed our name from the "Pace Energy Project" to the "Pace Energy and Climate Center." The name change reflects that the work undertaken by the organization currently and throughout its twenty year history – to reduce the environmental impact associated with the production and use of energy by promoting clean, efficient and renewable energy alternatives and addressing the barriers to implementation of clean energy technologies – relates directly to the issue of climate change. It is in the context of these climate change issues that we offer our comments on the Commission's proposed revisions to the RPS program.

Introduction and Overview

New York State has been a leader in taking action to address climate change. The State is implementing a number of strategies to address climate change, including the Commission's adoption of an RPS in September 2004 and the Commission's initiative in the Energy Efficiency Portfolio Standard ("EEPS") proceeding[1] to implement the State's "15 by 15" goal of achieving a reduction of fifteen percent below projected levels by 2015. Other initiatives include the commitment to RGGI, which will gradually reduce

[1] NYPSC Case 07-M-0548

CO_2 emissions from power plants in ten participating Northeast and mid-Atlantic states, and the formation of an Office of Climate Change in the Department of Environmental Conservation, which is undertaking various planning activities to identify and plan for – and offer proposals to reduce – the potential impacts of climate change in New York.

Pace urges the Commission to consider the proposed revisions RPS in a broader context that takes into account the dramatic reductions in greenhouse gas ("GHG") emissions that will be necessary to achieve the objective of the United Nations Framework Convention on Climate Change, which is to stabilize GHG in the atmosphere at a level preventing "dangerous anthropogenic interferences with the climate system." Various climate change experts, including most prominently Dr. James Hansen at the Columbia Earth Institute, have translated this objective into limiting the temperature rise to no greater than two degrees (2^{o}) above pre-industrial levels. This goal, in turn, suggests than an eighty percent (80%) reduction in GHG emissions below 1990 levels will be necessary by 2050. These are admittedly ambitious goals, and the challenge of achieving this level of GHG reduction is enormous. Yet the stakes are similarly enormous and critical, and it is essential that energy policy in New York State be developed in the context of achieving what should be a new target: **"80 by 50,"** *i.e.*, an 80% reduction from 1990 levels of GHG emissions[2] by 2050.

The implications that flow from this target to the design of New York's RPS requirements are obvious: There needs to be an "all hands on deck" approach to expanding the use of renewable energy in New York, and thereby displace New York's current dependence on fossil-fuel-fired electric generation. This translates into more aggressive targets for the RPS requirements, which we support in our comments below. It also suggests that new approaches should be considered to facilitate the necessary "scaling up" of renewable energy. These new approaches include the possible utility ownership of renewable generation, as discussed in our comments. They also include the possibility of adding an RPS procurement obligation for additional technologies – such as Combined Heat and Power – that achieve both improved efficiencies and reduced GHG emissions. As discussed further in our comments below, we urge the Commission to

[2] It should be noted that in New York, the level of GHG emissions was roughly the same in 2005 as in 1990, so using 2005 as the baseline rather than 1990 would be immaterial.

expand the technologies included in the RPS requirement to include a procurement obligation for high-efficiency CHP.

Our comments are presented below, in response to the individual SAPA proceedings. We discuss the issue of overall targets (SAPA No. 03-E-0188SA19) first, followed by our comments on possible new targets for high-cost areas (SAPA No. 03-E-0188SA18).

Comments on SAPA No. 03-E-0188SA19 (Tier Allocations and Targets)

Adjusting the RPS Target

New York's current RPS requires that 25 percent of New York's energy be generated through renewable resources by the year 2013. The base forecast of electricity usage in New York against which the existing RPS target is applied is from the 2002 New York State Energy Plan. This resulted in an As-Ordered Main Tier target of 9.9 million MWh for 2013 to achieve the 25 percent goal for renewable resources. The Commission is considering updating the base forecast using a 2007 forecast of electricity usage from the EEPS proceeding. If this new 2007 forecast is used, the target to be achieved by renewable resources would be reduced by 1.6 million MWh, producing a target of 8.3 million MWh in 2013. Another alternative is to update the base forecast using a post-EEPS forecast of electricity usage in New York, which would reduce the 2013 target further to 4.6 million MWh. Apparently in response to this reduction in target MWh load that would be produced by updating the electricity forecast for post-EEPS load, the Commission is also considering an increase in the 25 percent RPS target for 2013 to 30 percent for 2015. This would result in a somewhat modest increase in the Main Tier Target to 10.1 million MWh for 2015 (as compared to the original 2013 target of 9.9 million MWh).

Whatever approach is used, ***the objective should be to produce an absolute increase in the MWh required to be produced by renewable generation***. One way of achieving this objective, irrespective of which electricity forecast is used, is to state the RPS goal in terms of MWh, rather than as a percentage. As noted by the Alliance for Clean Energy New York (ACE NY), stating the goal as 25 percent of retail sales by 2013 is not meaningful and useful for purposes of implementing an RPS requirement if the absolute number of MWhs to be generated by renewable resources declines as electricity

loads decrease through successful achievement of energy efficiency through implementation of the EEPS. The most cost-effective means of achieving an 80 by 50 objective is to capture all cost-effective investments in energy efficiency. Aggressively pursuing energy efficiency should not have the perverted result of ***reducing*** the number of MWhs necessary to achieve compliance with a procurement requirement as a result of that obligation being based on a fixed percentage of a ***declining*** retail load.

If the base electricity forecast is updated in the manner contemplated in the Commission's proposal, ***it must be accompanied by an increase in the RPS percentage to require an absolute increase in the number of MWh generated by renewable resources***. Alternatively, the Commission could abandon the use of a percentage approach for purposes of stating the RPS requirement in favor of an absolute MWh requirement. Another approach would be to adopt a minimum MWh requirement as a backstop to the percentage goal. In other words, the requirement would be stated as the greater of (i) 30 percent or (ii) a corresponding level of MWhs which represents a meaningful increase in the renewable resource procurement requirement. Given that most states use a percentage requirement for purposes of stating their RPS requirements, and the importance that the goal be stated in a manner that is easily understood by the public, Pace favors retaining the use of a percentage for purposes of the RPS requirement. The essential point is that ***whatever percentage used must be designed to achieve a meaningful increase in renewable generation in New York***.

In this regard, the proposed increase from 25 percent by 2013 to 30 percent by 2015 is the ***minimum*** increase that should be considered. This increase produces an incremental increase of only about 269,000 MWh in the Main Tier target for 2015. While this represents an improvement over the existing standard, it would be woefully insufficient to achieve the broader objectives that need to be accomplished through the RPS requirement. The procurement obligation imposed under the RPS is the most visible means whereby New York expresses its commitment to renewable energy resources; according to the February 2008 Report of the Renewable Energy Task Force, "New

York's RPS is the State's largest and most significant policy for supporting increased renewable energy."[3]

First, although such an increase would be consistent with actions taken by other states to revisit – and increase – their RPS obligations, it would be very modest compared to more aggressive actions taken by other states. Eleven states made substantial modifications to their RPS programs in 2007, and these changes have generally been to strengthen pre-existing RPS requirements. In March 2007, Colorado doubled the ultimate RPS target – from 10 percent in 2015 to 20 percent in 2020 – and thereby doubled as well the effective size of the solar set-aside. Connecticut increased its RPS requirement in June 2007 to 23 percent by 2020, with at least 20 percent from Class I resources. In July 2007, Delaware doubled its RPS from 10 percent to 20 percent in 2019, and created a solar PV set-aside that reaches 2.005 percent by 2019. New Mexico also doubled its RPS requirement in March 2007 to 20 percent by 2020, up from 10 percent by 2011. The increase under consideration by the Commission – to 30 percent by 2015 – looks somewhat modest in comparison to the more aggressive actions taken by these states. The February 2008 Report of the Renewable Energy Task Force acknowledged that "New York must keep pace" as other states across the nation enact their own renewable portfolio programs and "energy independence" incentives.[4] It is not clear that the increase from 25 percent to 30 percent would accomplish this objective.

Second, New York's commitment to renewable resources should be examined by reference to the amount of renewable resource development that will be stimulated by compliance with the RPS requirement. While New York's current obligation of 25 percent by 2013 had the appearance of being aggressive when adopted in 2004, in fact it was not; by counting the ***existing*** large-scale hydroelectric projects toward meeting the obligation, New York started at 19.3 percent, and thus the 25 percent goal represented an increment of less than 6 percent of ***new*** renewable resources stimulated by the RPS requirement. (By contrast, the state with the greatest number of MWh of hydro generation – Washington – does not count this existing large hydro toward meeting its

[3] "Clean, Secure Energy and Economic Growth: A Commitment to Renewable Energy and Enhanced Energy Independence," THE FIRST REPORT OF THE RENEWABLE ENERGY TASK FORCE TO LIEUTENANT GOVERNOR DAVID A. PATERSON, February 2008, ("RENEWABLE ENERGY TASK FORCE REPORT"), p. iii.
[4] Id. at 4.

RPS requirement of 15 percent by 2020; its 15 percent requirement, while seemingly more modest is, in fact, much more aggressive in stimulating new renewable resource development.)

In terms of capacity ***growth*** requirements necessary to achieve full compliance with RPS requirements, New York is not even in the top ten states of all the states with RPS requirements. The largest markets, in terms of capacity growth requirements, are projected to be California, Illinois, Minnesota, Texas, New Jersey, and Arizona, each of which would require over 3000 MW of new renewable energy by 2025 to achieve full compliance.[5] New York ranks eleventh, when measured by new renewable capacity (nameplate MW) needed by 2025. As a proportion of expected statewide retail sales in 2025 to be met by ***new*** renewable generation, the standing of New York is ***even lower***: an uninspired – and uninspiring – ***twentieth***.[6] In short, 25 percent as an RPS standard may look good on the surface as an absolute standard, but when it is calculated in a manner that requires only an incremental increase of less than 6 percent in ***new*** renewable generation, the lack of a meaningful commitment to ***new*** renewable generation is quite apparent, particularly when compared to the nineteen other states with more aggressive standards. New York should strive to be a leader as measured by standards that are meaningful: how much ***new*** renewable generation will the RPS requirement stimulate? ***At a minimum***, the 25 percent requirement should be increased to 30 percent by 2015, as proposed by the Commission. Compared to the efforts of other states in recent years to double requirements that were already more aggressive than New York's in terms of stimulating ***new*** renewable generation, however, New York will have to do much better if the state wants to assume a leadership role.

Third, as stated in the introduction above, renewable generation needs to be scaled up considerably if New York hopes to achieve an "80 by 50" target of GHG emissions reduction. Increasing the RPS requirement to 30 percent by 2015 represents a somewhat modest increase compared to the ramping up that will be necessary if New York is to maintain its leadership role in addressing climate change issues.

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[5] Lawrence Berkeley National Laboratory, RENEWABLE PORTFOLIO STANDARDS IN THE UNITED STATES: A STATUS REPORT WITH DATA THROUGH 2007 (April 2008), p. 15.
[6] Id.

Anticipated Voluntary Green Market Purchases

In deriving the energy procurement obligations, the overall target of 25 percent excludes anticipated voluntary green market purchases. Pace supports continuation of the voluntary green market component, which should be strengthened by prompt implementation of a Renewable Energy Credit (REC) tracking system. The February 2008 Report of the Renewable Energy Task Force concluded that "[i]t is very important to track and verify the sale of RECs in order to ensure the credibility of the REC market."[7] That Report recognized that "[w]ithout tracking and verification, issues arise such as 'double counting' the benefits of a REC, or using a single REC for more than one purpose by a single owner."[8] The year 2007 saw the completion of two new regional tracking systems, the Western Renewable Energy Generation Information System (WREGIS) and the Midwest Renewable Energy Tracking System (M-RETS), which use electronic tracking systems to issue, record, track and retire RECs. Yet New York continues to manually track bundled energy and attributes.[9] Pace urges prompt action to implement a REC tracking system in New York, which would provide additional information for the voluntary green market as well as promote REC liquidity and instill greater confidence in green market products.

Comments on SAPA No. 03-E-0188SA18 (On-Peak Resources)

Pace offers comments on four areas in particular with respect to the issues raised by SAPA No. 03-E-0188SA18 (On-Peak Resources).

The 100 MW Solar Photovoltaic Goal

The February 2008 Report of the Renewable Energy Task Force recommended support for the installation of 100 MW of solar photovoltaic systems across New York by 2011.[10] Pace supports this goal, which should be in addition to the existing main tier and customer-sited tier goals.

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[7] RENEWABLE ENERGY TASK FORCE REPORT, p. 4.
[8] Id. at 5.
[9] Lawrence Berkeley National Laboratory, RENEWABLE PORTFOLIO STANDARDS IN THE UNITED STATES: A STATUS REPORT WITH DATA THROUGH 2007 (April 2008), p. 25.
[10] RENEWABLE ENERGY TASK FORCE REPORT, p. 6.

Increasing the Target Level of Photovoltaics in High-Cost Areas

According to the Commission's Notice, it is considering "whether the RPS tier allocations should be modified, or a new tier created, to increase the target level of photovoltaics and other on-peak resources in high-cost areas." The nature of renewable resources in New York State requires an adjustment of the tier allocations in order to maximize renewable energy diversity and encourage equitable responsibility. Currently, the vast majority of renewable energy in New York comes from upstate resources and hydro resources in the western tier. However, the majority of the load comes from the higher-cost load pocket areas in the New York City metropolitan area, and those areas are in need of a reprieve from the high costs. Adjusting the tier allocations would encourage the development of renewable resources such as photovoltaics where the load is higher, and increase the electricity supply to a level that will reduce costs during peak hours.

In particular, Pace supports the suggestion to target particular network locations in need of load relief for photovoltaics and other on-peak renewable resources. Strategically locating these on-peak renewable resources in capacity-constrained areas provides obvious benefits in the form of reduced investment in transmission and distribution (T&D) facilities. The Commission has previously recognized these benefits in approving targeted incentives under Con Edison's Targeted Demand Side Management Program.[11]

Other On-Peak Resources in High-Cost Areas

CHP is increasingly being recognized as providing substantial opportunities to achieve energy efficiency savings. The technologies for capturing waste energy can boost the efficiency from traditional electricity generation from 30-35 percent to well in excess of 70 percent, as well as provide significant benefits through reduction of GHG emissions and savings from avoided investment in transmission and distribution (T&D) facilities.

The Commission should consider revising New York's RPS to include a separate tier with a goal for high-efficiency CHP (defined to have a minimum system efficiency of

[11] Con Edison issued an RFP in April 2006 for Demand Side Management to Provide Transmission and Distribution System Load Relief and Reduce Generation Capacity Requirements in targeted load areas, as identified in Appendix A of the RFP.

70 percent[12]). This would create an RPS-like procurement obligation for utilities, requiring that an increasing percentage of total energy consumption in each utility territory be served by CHP. Connecticut's "Tier III" program, for example, adds a separate CHP obligation to the existing RPS. The Class III tier in Connecticut includes CHP, energy efficiency technologies and waste heat recovery, and has a procurement target of 4 percent beginning in 2010. Eleven other states have included CHP as a renewable resource in their RPS schemes because of its ability to promote energy efficiency and independence. CHP fits especially well within the urban atmosphere of New York City, and easily interconnects with other distributive generation resources such as photovoltaics. The benefits offered by CHP in meeting the state's energy needs – including increased total fuel conversion efficiency, reduced emissions, contributions to disaster resilience, reliability improvements, and avoided T&D investments – are already substantial, and will grow as a substantial price is put on carbon, given the reduction in CO_2 emissions associated with installation of CHP facilities.

The Commission should consider including in the RPS requirements a stated goal for development of high-efficiency CHP in New York. The New Jersey Energy Master Plan, for example, includes an objective to foster the development of 1500 MW of new CHP capacity by 2020, through economic and regulatory incentives.[13] The New York Energy Plan for 2002 failed to include a specific goal for CHP development; the Plan expressed support for "the development and use of distributed generation (DG) and combined heat and power (CHP) technologies at customer sites, with the goal of becoming a national leader in the deployment of clean, distributed generation technology."[14] New York is currently far from being a national leader with respect to the number of MWs of installed CHP and, in fact, is not even a leader within the Northeast region. The Commission should use the RPS procurement obligation to move beyond stating "soft" goals – such as "becoming a national leader" – to defining specific targets for deploying CHP and clean DG and a path for achieving them.

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[12] New Jersey adopted a 70 percent efficiency requirement in its State Energy Plan, and this is a reasonable level of efficiency given the state of the technology.
[13] New Jersey Energy Master Plan, p. 78.
[14] 2002 New York State Energy Plan, Executive Summary, Item 12 on page S-4.

The Role of Utilities in Procurement of Photovoltaic and Other On-Peak Resources in High-Cost Areas

According to the Commission's Notice, it is considering "whether the higher acquisition cost of photovoltaics and other on-peak renewable resources might be better financed directly by the utility as a ratebase addition or in some other manner." Pace supports the Commission's initiative to consider creative methods – such as direct financing by the utility – to address the obvious problem of funding the upfront capital costs of renewable energy facilities. The Renewable Energy Task Force Report included the finding that "[f]inancing renewable energy projects is often difficult."[15] In the case of solar PV in particular, the Report found that the "principal barrier" to widespread adoption of solar PV is its high cost.[16]

Other states have recognized the need for direct utility investment as a means of financing the necessary "scaling up" of renewable energy. Massachusetts, for example, permits its electric utilities to develop and own up to 50 MW of solar generating facilities by 2010 under its "Green Communities Act." It should be emphasized that utility involvement in developing photovoltaic and other on-peak resources in high-cost areas need not take the form of the traditional utility "own and operate" model. That model would raise serious policy issues, given the state of the restructured market in New York. However, these policy issues need not be implicated if the role of the utility is strictly limited to that of providing simply a means of financing the capital costs of investing in these resources. In the case of investment in energy efficiency, for example, the Commission has previously acknowledged the possible benefits of involving utilities directly in financing these investments. In its June 23, 2008 order in the EEPS proceeding,[17] the Commission acknowledged "great potential value in on-bill financing" inasmuch as "[i]t can eliminate a major barrier to participation in efficiency programs for consumers that lack ready access to capital" and "can, in the long run, reduce reliance on ratepayer-funded programs to achieve the State's energy efficiency goals."[18] For the

[15] Renewable Energy Task Force Report at p. iii.
[16] Id. at 7.
[17] Case 07-M-0548, *Order Establishing Energy Efficiency Portfolio Standard and Approving Programs*, Issued June 23, 2008.
[18] Order at p. 50.

same reasons, it is reasonable to consider direct utility involvement in financing renewable energy investments.

In Pace's view, the on-bill financing model for energy efficiency investments provides an excellent template for utility involvement in developing on-peak resources in high-cost areas. This model would have the following components:

- The utility would provide the capital costs of investment in customer-sited on-peak resources in high-cost areas.[19] These resources would include solar photovoltaic and other resources that operate on-peak and, for the reasons described in the preceding section, could include high-efficiency CHP.
- The utility would recover these capital costs over time through payments in the customer's utility bill. Installations would need to be supported by an analysis showing that the KWh savings produced by the resource offset the costs over time (taking into account the associated tax incentives), thereby producing the "revenue stream" that allows the capital costs to be repaid.
- The utility would include the unrecovered portion of the investment as part of its rate base in determining its revenue requirement in general rate proceedings. By including this unamortized investment in rate base, the utility would earn a return on it at a rate reflecting the utility's overall cost of capital, thereby allowing the utility to recover the financing cost associated with the particular investment. (Alternatively, the utility could recover its borrowing costs through interest charges collected from the customer, which would avoid the complexity of tracking the rate base increments in the ratemaking process.)
- The customer's obligation to the utility would "run with the meter." In other words, if there is a change in the customer served at the location where the financed resource is located, the utility could continue to recover the investment from the subsequent customer moving into the premises. That customer would continue to benefit from the output of the resource, and thus should bear the remaining capital costs associated with that resource.[20] Disclosure requirements would be established to ensure that the subsequent customer would be aware of the charge "running with the meter" before becoming liable for paying the charge.

Under this model, the utility would not be the "owner and operator" of the generating resource in the traditional sense. Rather, the utility would be providing the capital necessary for financing the investment, is recovering those capital costs over time,

[19] Utility-owned assets under this model should be deployed first and foremost in load pocket/overstressed grid areas in order to reduce the need for costly infrastructure upgrades.

[20] In order to ensure that the customer continues to benefit from the output of the resource, the contractual arrangements would need to address the customer's obligation to perform ongoing repair and maintenance of the resource.

and is being compensated for use of the capital in the meantime by the ability to include the unrecovered investment in rate base (or to collect interest payments from the customer). This model would address the most significant barrier to the "scaling up" of renewable resources that will be necessary to achieve meaningful development of on-peak resources in high-cost areas: access to the capital necessary to cover the upfront costs on reasonable terms. There will be administrative and legal issues that must be addressed before implementing this model, just as in the case of on-bill financing for energy efficiency investments. The Commission is continuing to work through those issues in the EEPS proceeding. For the same reason that on-bill financing makes sense for energy efficiency investments, the utility should be directly involved in providing the necessary financing for the upfront capital costs of investments in renewable resources.

Pace strongly supports the Commission's investigation of this approach, as it could provide a creative and effective solution to the most challenging issue in renewable energy development. This challenge of financing upfront capital costs has become even greater with the developments in the capital markets over the past several months. The approach described above would allow customers to benefit from the utility's access to capital on reasonable terms, which remains relatively solid. As in the case of on-bill financing of energy efficiency investments, Pace stands ready to provide whatever assistance is necessary to work through the issues associated with implementing this model.

Conclusions

Pace urges the Commission to implement a more aggressive RPS target that will achieve the "scaling up" necessary to achieve meaningful development of renewable resources in New York. Pace supports the creation of a new RPS tier dedicated to the development of renewable resources in New York City, and the Commission's consideration of direct utility involvement in the development of on-peak resources in high-cost areas. Pace also encourages the Commission to consider the other proposals described above, including the development of a procurement requirement for high-efficiency CHP.

Respectfully submitted this 17th day of November, 2008.

PACE ENERGY AND CLIMATE CENTER

By _____
James M. Van Nostrand
Executive Director