

#### **By Electronic Delivery**

June 13, 2011

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

RE: Case 03-E-1088 – Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard (SAPA No. 03-E-0188SP28).

Dear Secretary Brilling,

Pursuant to the electronic filing guidelines of the Public Service Commission of the State of New York, enclosed for filing are the comments of the Alliance for Clean Energy New York in opposition to the joint petition of Energy Investment Systems, Inc. and the C.V. Starr Research Foundation of the Cooper Union for the Advancement of Science and Art seeking to establish regenerative drive technology as an eligible technology in the Customer-Sited Tier of the Renewable Portfolio Standard. (SAPA No. 03-E-0188SP28).

Sincerely,

Carol E. Murphy, Executive Director

Alliance for Clean Energy New York, Inc.

( and E. Murphy

Encl.

# COMMENTS OF THE ALLIANCE FOR CLEAN ENERGY NEW YORK (ACE NY) <u>IN OPPOSITION</u> TO THE PETITION TO ADD REGENERATIVE DRIVE TECHNOLOGY AS AN ELIGIBLE TECHNOLOGY IN THE CUSTOMER-SITED TIER OF THE RENEWABLE PORTFOLIO STANDARD (SAPA No. 03-E-0188SP28)

#### I. INTRODUCTION

The Alliance for Clean Energy New York (ACE NY) respectfully submits the following comments in the Renewable Portfolio Standard (RPS) program proceeding. ACE NY is a nonprofit organization whose mission is to promote the use of clean, renewable electricity technologies and energy efficiency in New York State in order to increase energy diversity and security, boost economic development, improve public health, and reduce air pollution.

Members of ACE NY include nonprofit environmental, public health and consumer advocacy organizations, educational institutions, and private companies that develop, produce and sell renewable energy and renewable energy technologies, as well as energy efficiency services, in New York State. For more information, please visit <a href="https://www.aceny.org">www.aceny.org</a>.

ACE NY opposes the Joint Petition of Energy Investment Systems, Inc. (EIS) and the C.V. Starr Research Foundation of the Cooper Union for the Advancement of Science and Art (Cooper) seeking approval from the NYS Public Service Commission to establish regenerative elevator drive technology ("regen") as an eligible technology in the RPS. We do so not because of opposition to the technology itself, but because it does not appear to be as ready for market as

is necessary for a program concentrated on deployment, and even if it were, we feel it is more appropriately supported as part of efficiency and demand response programs. We also believe the comments of the petitioners and their supporters reinforce our view. In the introduction to their petition, EIS and Cooper state "It is beyond the purview of this petition to discuss how regen might eventually be incentivized by NYSERDA" (p. 4) and that "The Study Design section describes a joint project of EIS and Cooper Union to quantify ways to calculate prospective incentive needs and estimate implementation costs under various conditions" (p. 4). At the petition's conclusion, the petitioners also state that the Commission's encouragement "would position regen technology to realize full commercialization" (p. 30). With these statements the petitioners are clearly acknowledging that the technology, even if it could be appropriately classified as renewable energy (a finding which we take exception to and discuss below), is not fully developed enough for an incentive program like the RPS.

## II. REGENERATIVE DRIVE TECHNOLOGY SHOULD NOT BE AN ELIGIBLE TECHNOLOGY WITHIN THE CUSTOMER-SITED TIER OF THE RPS

Regenerative drive technology captures energy from the gravitational pull of elevators and transforms it into electricity that can be used within the building. As such, EIS and Cooper appear to be identifying gravity as the "fuel" in a manner similar to how one might characterize wind and sun as the fuels for wind and solar energy, respectively. However, wind and sun are used directly in technologies designed to produce energy. In regenerative drive technology, it is essentially the elevator that is creating the energy, not gravity alone. Elevators are not designed as electric generators but to transport people and goods. ACE NY's interpretation, therefore, is that regenerative drive elevators are not a renewable energy resource.

In their petition, EIS and Cooper claim "Load controls and load controlling equipment used for demand response have been characterized as both efficiency measures and renewable

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resources," (p. 3) however, demand response is *not* a renewable technology under New York's RPS. The petitioners also state, "Once the connection between regen power production and the ISO Day Ahead Market is demonstrated (and documented), we believe that additional ways to accentuate regen for demand response will evolve" (p. 8). Once again, regen is classified as demand response, not as renewable energy, and as a technology in need of more R&D and market development than one ready for an installation incentive (see section III of these comments below).

The petition frequently reads like a request for R&D support, but even when addressing the Commission's stated criteria for determining eligibility for incentives, the petitioners fail to understand the true intent of the RPS program. EIS and Cooper believe that the Commission's criteria of looking at "the extent to which the technology will result in new and incremental renewable resources" refers to "additional applications of the technology" and point to other potential uses of regen, primarily in the transportation sector, which is not part of the RPS (p. 18). In fact, that criterion of the RPS refers to the ability of program incentives to result in actual and measurable new generation from renewable resources in New York.

Regenerative drive elevator technology appears to be an energy efficient elevator design rather than a renewable generation resource, and we respectfully request that the Commission reject the petition on that basis.

## III. SYSTEM BENEFITS CHARGE (SBC) FUNDS SHOULD BE USED FOR RESEARCH AND MARKET DEVELOPMENT IF DEEMED NECESSARY AND APPROPRIATE

While regenerative drive technology in general, as described by the petitioners and their supporters, may be a well-established technology, it appears that more research may be necessary to fully explore opportunities and appropriate processes for widespread adoption in elevator retrofits. The petitioners themselves seem somewhat confused about what they are

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requesting. On page 16, they write: "recognizing regen as a renewable technology eligible for research and development incentives would help stimulate the growth of similar technologies...", however the RPS is *not* a research and development program. In describing the technology, EIS and Cooper claim that "government support would spur research and development to further reduce the gap between electricity consumed and electricity generated" and that there may be environmental benefits as compensation "even if regen generated less power than anticipated" (p. 6-7). Throughout the petition EIS and Cooper continue to acknowledge a lack of information on the technology: "To our knowledge, there is no data on the generation-to-capture ratio.... Advances in research and application will combine with data collected and measured in test facilities and onsite..." (p. 20). It is apparent that the petitioners do not know how much energy can be produced by the installation of these systems. This lack of information makes measurement of costs and benefits impossible and creates a barrier to determining if an incentive is even appropriate, much less at what level, and also undermines the validity of the table EIS and Cooper present in support of a \$10,400,000 incentive program (p. 23).

When arguing for the benefits of the technology in an attempt to show it conforms to the Commission's criteria for eligible technologies, the petitioners resort to guessing: "If our hypothesis that office elevators are in a prolonged generation state in late afternoon through early evening is correct, regen can indeed be a powerful tool to advance the Commission goals" (p. 11). EIS and Cooper say that a year will be needed to develop protocols for correct sizing and evaluation of equipment, that there is only limited data on use and capacity as well as on when elevators consume power and when they generate it, and request that the five years proposed for RPS funding of system installation be part of an applied research program to "identify the actual number of kWh consumed and generated to assess value and cost effectiveness" (p. 23).

We believe the petition clearly reads more as a plea for R&D support than as an adequate demonstration of why the technology should be eligible for the RPS, which is further reinforced by supporters of the petition. In its letter to the Commission, the CIUS Building Performance Lab of the City University of New York says, "Favorable action on this petition would stimulate significant in-city collaborative research...". Automated Energy writes it is "unaware of any project that attempts to harness the latent energy to be found in gravity-based systems" and that while there is unquestionably harvestable energy, the "...questions to be answered is [sic] how much and at what cost? This petition seeks to begin the process of answering those important questions." EIS and Cooper also include a two-page summary of a proposed joint research project that appears to ACE NY to be an essential prerequisite for using ratepayer funds to cover installation costs of systems throughout New York State (p. 25-26). We are not commenting on the research design of the proposed study but merely stating, once again, that this technology should *not* be accepted as an eligible resource within the RPS. The RPS program was not established to further research efforts and we respectfully suggest that SBC funds are more appropriate for that purpose.

## IV. ENERGY EFFICIENCY PORTFOLIO STANDARD FUNDS SHOULD BE USED FOR INSTALLATION IF DEEMEED NECESSARY AND APPROPRIATE

As amply demonstrated above, this petition is more suitable for an R&D program than the RPS's deployment of renewable generation. We also believe that regenerative drive elevators would be more appropriately classified as energy efficiency than as renewable generation.

The petitioners note that elevator technology is already relatively efficient (p. 9), and in various places in the petition the authors refer to available products for increasing elevator efficiency, including the use of available regen technology (see page 21 of the petition as an

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example). As the CIUS Building Performance Lab notes in its comments to the Commission, "Regenerative power production aligns perfectly with elevator efficiency and control of elevators for demand-response, as measures that can be coordinated together in a motor up-grade package."

Elevators are not renewable generators but a means of transporting people and goods.

Capturing "energy" from the operation of the elevators and redirecting it is clearly a means of using energy more efficiently. If further research demonstrates that the technology is worthy of state policy support for deployment, we strongly suggest that energy efficiency programs would be more appropriate than RPS funds.

#### V. CONCLUSION

In summary, ACE NY opposes the inclusion of regenerative drive elevators as an eligible renewable resource in the RPS. We do not believe it is a renewable resource, and the petitioners have not demonstrated that the technology is ready for deployment with ratepayer funds. The petition appears to be better suited for approval under a program that distributes research and development money for innovative energy efficiency efforts.

If the Commission disagrees with our arguments, we would urge it to restrict RPS support of this technology to Geographic Balancing Initiative funds rather than the statewide Customer-Sited Tier funds, since it is clear that New York City's large stock of older high-rise buildings is the most viable market for this technology (as evidenced by the number of elevator estimates on pages 8, 22 and 23 of the petition), and that the petitioners and their supporters see this technology as a companion to demand response, which is critically important in New York City. However, we reiterate our view that this petition should be rejected completely, and the

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petitioners should be encouraged to work with NYSERDA to explore possibilities for further research and development efforts.

Respectfully Submitted,

Czol E. Murphy Carol E. Murphy, Executive Director Alliance for Clean Energy New York, Inc.

Albany, New York June 13, 2011