



## **Energy Storage Working Group Meeting**

Thursday, March 13, 2014

Conservation Services Group – Iselin, NJ

1:00 pm to 3:00 pm

### **Meeting Notes**

#### **I. Welcome and Introductions**

(Janja Lypse – Market Manager Team)

Ms. Janja Lypse provided background and discussed the format of the meeting.

#### **II. Context – Energy Storage in the NJCEP - Net Metering & Interconnection Standards**

(Scott Hunter and John Teague – BPU Office of Clean Energy)

Mr. Hunter discussed the schedule for the upcoming meetings: The next Net Metering and Interconnection stakeholder meeting is scheduled for March 25, 2014 in Trenton. There is also a technical working group conference call on March 19<sup>th</sup> at 3pm. The technical working group is reviewing issues with net metering and interconnection of technologies not authorized by statute or regulation such as CHP, fuel cells, and energy storage.

Mr. Hunter also discussed the purpose of the Energy Storage Solicitation and provided further background. Mr. Hunter clarified that these working group meetings/discussions will only focus on enhancing the value of electricity from renewable energy systems, and should therefore be retitled to a “Renewable Energy Electricity Storage Working Group”. Not all energy storage is on the table, as there is a defined mission and use of funding that must be focused on. The source of the funding (Societal Benefits Charge) is one of the drivers of the limitations on the focus of this solicitation. This solicitation is focused solely on electricity supplied from New Jersey Class 1 Renewable Energy Storage. It is recognized that Energy Storage is a very broad market with a lot of applications, but not all of those applications are relevant to this solicitation. It is not being disputed that the Energy Storage Market is very large. Other Energy Storage related technologies should be discussed in other forums, as in the Energy Resiliency Bank efforts that are currently underway and do not have the same limitations.

For further information, please visit the following link at the Department of Community Affairs (DCA) website: <http://www.state.nj.us/dca/news/news/2014/20140203.html>.

The comments to the following Action Plan

(<http://www.nj.gov/dca/divisions/sandyrecovery/pdf/NJ%20Action%20Plan%20Substantial%20Amendment%202%2002%20final.pdf>) were due March 5, 2014, and the revised Action Plan should be completed around June/July timeframe.

Mr. Mike Ambrosio commented that this Renewable Electricity Energy Storage Solicitation should be open to a variety of projects/technologies; broadly based and flexible to receive a diverse set of applications.

### III. Update on NJCEP Energy Storage Program Plans

(Charlie Garrison – Market Manager Team)

Mr. Charlie Garrison discussed the online energy storage incentive program survey designed to gauge FY15 programmatic interest and stated that 16 comments were submitted by various parties as of 3/13/14. Ms. Lypse highlighted high level overall comments which were around the following areas: 1) 1 to 4 hour limit on discharge time; 2) recharging sources; 3) Islanding capability; and 4) Expected storage system life and warranty requirements. There were several other comments that were provided and all will be assessed and considered.

### IV. Discussion of public comments on the Energy Storage Straw Proposal

(Stakeholders who submitted comments and Janja Lypse, Facilitator)

The following individuals presented their comments:

Sarah Steindel \*

Jon Eich, AICP \*

Todd Olinsky-Paul

Neal Zislin \*

Andy Schwartz \*

Amar Pradhan \*

Dunbar P. Birnie III \*

Allen Freifeld

Mary Barber/Michael Panfil \*/Elizabeth Stein

Tom Leyden \* (Chris Cook instead of Tom)

Peter Mendonez, Jr. \*

Govi Rao \*

Paul Heitmann \*

Katherine Hamilton \*

Raymond Kenard

Jacqueline Espinoza

\* Presented in person or on the phone

New Jersey Division of Rate Counsel

*Independent*

Clean Energy States Alliance

Renu Energy

Solar City

10Six Energy

Rutgers University

Viridity Energy

Environmental Defense Fund

Solar Grid Storage

A. F. Mensah Engineering

Noveda Technologies

Partnerships One, LLC

Energy Storage Association

Climate Change Mitigation Technologies LLC

*Independent*

The straw proposal and public comments are available at: <http://www.njcleanenergy.com/main/njcep-policy-updates-request-comments/policy-updates-and-request-comments>

### Major Discussion Points that came up during the Comments Discussion Session

- Mr. Scott Hunter wanted to encourage commenters to expand on the concern about the kinds of program reporting and metrics the applicants and awarded projects should supply as part of their participation in order for the Board to evaluate the program and to make midterm corrections or enhance and improve the program.
- Mr. Mike Ambrosio asked what is technically/economically feasible for discharge time. The commenter said to look at how long people were out of power during Super storm Sandy and how long people would need to function, meaning gas stations and grocery stores.
- Need to clarify the Discharge vs consumption time. It would not be cost effective to have batteries that last 72 hours. The expectation would be only to provide critical services. In the revised Straw Proposal, the Market Manager will add a requirement for bidders to clearly identify a host facility's critical needs that may be served by the proposed Renewable Energy Electricity Storage system.
- Storage time, as proposed in the Straw as the storage system must be capable of providing the host facility's full electric demand for a minimum of one hour and a maximum of four hours, may have to be expressed in number of hours of facility's renewable load or facility's percentage of critical load (essential services). The revised Straw Proposal should reflect this change of language, as well as not include any minimum or maximum hour requirements.
- Energy storage used for load shifting purposes for large or small users should be evaluated equally. The Evaluation Committee should treat various sized storage systems comparably regardless of host site load.
- Energy storage and renewables need to be behind the meter and on the same side of the meter; with the requirement for the installation of a bidirectional meter for purposes of accurately accounting/monitoring SRECs (or RECs).
- Research California metering solutions to address issue of fossil generated fuels not allowed to be net metered and to ensure that none of the fossil generated fuel end up being a net metered credit. Here is the link at which this is further discussed: <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M078/K591/78591800.PDF>.
  - Note (was not discussed in the meeting but is relevant to the ESWG discussions): In this CPUC document, the following is stated: ...." This ruling seeks comment on a proposal to give storage devices meeting the Guidebook requirements the same benefits available to renewable generating facilities under NEM tariffs until, at a minimum, December 31, 2015. Specifically, such storage devices would be exempt from standby charges, interconnection application and review fees and would not be required to pay for any distribution system upgrades triggered by the storage devices...."
- Energy storage arbitrage is not really happening because of the discharge styles and no structure is set up, so it is not economical (implying that stakeholder concerns over stored electricity exports are unfounded)
- PJM requires sub meter on regulating asset for frequency regulation market. This information can be found at the following PJM link: <http://www.pjm.com/>
- Current proposed 1-4 hours timeframe perhaps does not need a maximum set, just a minimum. The discharge period will be revised in the revised Straw Proposal, as indicated above.
- FERC Order 755-Frequency regulations from battery allows for revenue; economics of battery <https://www.ferc.gov/whats-new/comm-meet/2011/102011/E-28.pdf>

- NYSERDA-50% of battery cost vs. 30% proposed for the NJ ES Solicitation. Unfortunately, NYSERDA has a much larger budget for this program, therefore a 50% cost coverage of the system can be offered by NYSERDA.
- Evaluation process should be more broadly based – debate over whether emphasis on developing a market for energy storage not reliant upon incentives or public and critical facilities criteria should be dropped from evaluation or more precisely defined.
- Need for monitoring and reporting are critical and should be embedded into this solicitation in order to expand this to a broader base.
- Consider resiliency metrics: societal costs, lost profit, critical vs full load, etc. These metrics may apply only when energy storage is used as an emergency backup battery. And even then, these metrics may be difficult to be measured/reported.
- It was discussed that Rutgers' CEEEP has developed a Resiliency Model, including CHP evaluation and cost/benefit model, and will now also include the Energy Storage component. The CHP section is posted on the following Link:  
<http://www.njcleanenergy.com/files/file/CHP%20FC%20Working%20Group/CHPCostBenefitAnalysis.pdf>
- Energy Storage system may have an impact on the environment and Human health – EDF recommended that the impact be assessed. Some of the impacts may include: air pollution, greenhouse gasses, water pollution, and other waste.
- There is concern over the potential to provide incentive awards to a project and then learn those projects may not be interconnected with EDC. The review process needs to ensure interconnection ability prior to award. This topic will continue to be discussed at the Technical and the net metering and Interconnection meetings organized by the BPU.
- Mr. Scott Hunter noted that some of the questions discussed at the meeting may have to go through legislation or rulemaking (processes which enable energy arbitrage, valuation of stored electricity exports, net metering, etc.) and may be beyond the scope of this incentive development working group to solve but remain critical to understand.