STATE OF NEW JERSEY
Board of Public Utilities
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NOTICE[1]

New Jersey Board of Public Utilities
Office of Clean Energy

New Jersey Energy Storage Analysis

Request for Comments by March 20, 2019

The staff of the New Jersey Board of Public Utilities ("BPU") invites all interested parties and members of the public to provide comments on a number of issues to assist the BPU in the preparation of an Energy Storage Analysis (ESA).

On May 23, 2018, P.L.2018, c.17 (the "Clean Energy Act" or the "Act") was signed into law, directing the BPU to conduct an energy storage analysis and submit a written report to the Governor and to the Legislator concerning energy storage needs and opportunities in the State. Rutgers University will assist Board staff in drafting an energy storage analysis report. After receiving such report, Board staff will seek to re-engage stakeholders through a formal stakeholder meeting.

Board staff requests written comments on the issues listed below. Please submit comments to Energy.Storage@bpu.nj.gov. **All comments must be received on or before 5:00 p.m. March 20, 2019.** Please take further notice that the discussion points contained in this notice and any future Stakeholder Meetings are prepared by Board staff for discussion purposes only.

1. How might the implementation of renewable electric energy storage systems benefit ratepayers by providing emergency back-up power for essential services, offsetting peak loads, providing frequency regulation and stabilizing the electric distribution system;

STORAGE OF ELECTRICITY IS 'KEY' FOR US TO BE ABLE TO TRANSITION TOWARDS HARVESTING THE ENERGY WHICH IS FREELY, CLEANLY, AND ABUNDANTLY AVAILABLE FROM NATURE ITSELF…….BECAUSE OF THE INHERENT SHORT-TERM UNPREDICTABILITY.

2. How might the implementation of renewable electric energy storage systems promote the use of electric vehicles in New Jersey, and what might be the potential impact on renewable energy production in New Jersey;

PROVIDED WE CONTINUE THE PUSH TOWARDS CLEAN SOURCES OF ELECTRICITY, ELECTRIC VEHICLES PROVIDE ONE VERY GOOD WAY FOR US TO 'CLEAN UP' ONE OF THE MAJOR SOURCES OF POLLUTION ON THE PLANET……TRANSPORTATION!

3. What types of energy storage technologies are currently being implemented in New Jersey and elsewhere;

HYDRO, PUMPED HYDRO, BATTERIES, FUEL-CELLS, COMPRESSED AIR, TIDE, ETC.

4. What might be the benefits and costs to ratepayers, local governments, and electric public utilities associated with the development and implementation of additional energy storage technologies;

STORAGE IS A KEY, AND PERHAPS AN ESSENTIAL ENABLER OF THE TRANSFORMATION TOWARDS CLEANER ENERGY……SO THE QUESTION REALLY IS "WHAT IS THE COST OF ***NOT*** IMPLEMENTING ENERGY STORAGE TECHNOLOGIES"!

5. What might be the optimal amount of energy storage to be added in New Jersey over the next five years in order to provide the maximum benefit to ratepayers;

THERE IS NO REAL ANSWER IF THE QUESTION IS LIMITED TO "NEXT FIVE YEARS"…….BECAUSE EVENTUALLY, IF WE ARE TO GO 100% RENEWABLE, THEN WE NEED THE ABILITY TO PERHAPS GO TWO WEEKS , AS EVENTS SUCH AS STORM SANDY HAVE TAUGHT US.

6. What might be the optimum points of entry into the electric distribution system for distributed energy resources (DER);

EACH AND EVERY BUILDING, EACH AND EVERY HOME, AND EACH AND EVERY POINT AT WHICH WE GENERATE CLEAN ELECTRICITY SUCH AS SOLAR SYSTEMS AND WIND SYSTEMS.

7. What might be the calculated cost to New Jersey's ratepayers of adding the optimal amount of energy storage;

VERY LITTLE, AS COMPARED TO THE COST OF **NOT** SPENDING THAT MONEY **NOW**.

8. What might be the need for integration of DER into the electric distribution system;

IT IS DERs THAT CAN IMMEDIATELY COME TO THE RESCUE AS THE UNPREDICTABLY OF CLEAN RENEWABLE SOURCES OF ENERGY GIVES RISE TO UNSTABILITY OF OUR EXISTING GRID THAT WAS DESIGNED ON THE BASIS OF A DIFFERENT PARADIGM THAT ONLY RELIED UPON TOTALLY PREDICTABLE AND CONTROLLABLE SOURCES OF POWER.

9. How might DER be incorporated into the electric distribution system in the most efficient and cost-effective manner.

THROUGH A PROCESS OF STANDARDIZATION (OF BOTH THE DERs AND COMMUNICATION BETWEEN THEM), LEGISLATION (TO ENFORCE COMPLIANCE), COMPENSATION (TO INCENTIVIZE INVESTMENT), AND INCLUSIVENESS (TO ENSURE MAXIMUM PARTICIPATION)

In addition to the legislatively prescribed questions above, please also respond to the following questions:

10. In the context of the ESA, what might be the definition of Energy Storage?

ANY MEANS OR METHODS BY WHICH ELECTRICAL ENERGY CAN BE CAPTURED WHEN CLEAN ENERGY IS ABUNDANTLY AVAILABLE, AND RELEASED WHEN NEEDED…..WITHOUT CREATING ANY ADDITIONAL POLLUTION OR ENVIRONMENTAL HARM.

11. What discharge time duration could be applied to the State goals of 600 MW of energy storage by 2021 and 2,000 MW of energy storage by 2030? Four hours? Ten hours? Other?

FOUR HOURS BY 2021. MORE WOULD BE BETTER BUT GIVEN THE CURRENT MOOD OF BIG MONEY TO SUPPORT PRIMARILY BATTERY TECHNOLOGY, THAT'S WHAT SEEMS PRACTICAL FOR NOW.

FOR 2030, THE GOAL NEEDS TO BE FAR MORE AGGRESSIVE SINCE THERE ARE ENOUGH AND MORE TECHNOLOGIES THAT CAN DELIVER TRUE 'RESILIENCY'……..WHICH NEEDS STORAGE FOR DAYS, IF NOT WEEKS! THAT'S WHAT THE GOVERNMENT IS THERE FOR…..TO HELP OVERCOME THE OBSTACLES THAT THWART PROGRESS!

12. What storage systems should be counted towards the achievement of the State's goal? Existing systems? Those systems placed into operation after the May 23, 2018 enactment date of the statute?

ONLY THOSE AFTER MAY 23RD…….BECAUSE OUR FINAL OBJECTIVE IS HUGE! WE NEED TO DO ALL WE CAN TO RAPIDLY RAMP UP!

13. How might Federal Energy Regulatory Commission's (FERC) Order 841[2] and the associated PJM compliance filing[3] affect the foregoing?

Aida Camacho-Welch
Secretary of the Board

Dated: March 6, 2019

[2] Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators, Order No. 841, 162 FERC ¶ 61,127 (2018). https://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20180215-3100

[3] See Docket No. ER19-469, PJM's Markets & Operations Proposal (Dec. 3, 2018). Available at: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14725327. See also Docket No. ER19-462, PJM's Accounting Proposal (Dec. 3, 2018). Available at: https://elibrary.ferc.gov/idmws/file_list.asp?document_id=14725244. PJM's Accounting Proposal was accepted by FERC. 166 FERC ¶ 61,087 (2019).