

**HB 773/SB 715 Energy Storage Study
PPRAC Working Group Kick-Off
July 18, 2017**

Attendees

Power Plant Research Program (PPRP), Exeter, Pete Dunbar, Baltimore Gas and Electric (BGE), Potomac Electric Power Company (Pepco), Exelon, Direct Energy, Public Service Commission (PSC), Office of People’s Counsel (OPC), Maryland Energy Administration (MEA), Kent Conservation and Preservation Alliance (KCPA), Energy Storage Association (ESA), University of Maryland Energy Innovation Institute (UMEII), Office of Delegate Korman, Maryland Clean Energy Center (MCEC).

Goals of Working Group

Below is a summation of the goals, by party, that the Working Group participants would like to see achieved through the study.

BGE	<ul style="list-style-type: none"> • Would like to see the PC 44 process and efforts under HB 1414 leveraged • Incorporate energy storage technology to provide reliability and efficiency • Believe the utilities are best for planning but also welcome third-party input • BGE has worked with certain customers and MEA’s game changer grants on energy storage projects and have assisted with RTO issues. • BGE has explored utilizing storage to address system upgrade requirements as energy storage would be more efficient and cost-effective than traditional methods.
OPC	<ul style="list-style-type: none"> • Coordination of PC 44, in particular the interconnection work group efforts. • Would like to see energy storage used as distribution solutions for utilities. • Would like to better understand how the PSC and ratepayers can be involved in the process of implementing energy storage for distribution solutions. • Ensure a fair and expeditious process and fair allocation of costs when it comes to the implementation of energy storage.
ESA	<ul style="list-style-type: none"> • Would like to have synergy between PC 44 and this study. • Would like to see cost-benefits of storage effectively captured. • Would like to leverage its experience from in other states on this project and evaluate how the Study may impact future policy.
PSC	<ul style="list-style-type: none"> • Help PPRP answer the regulatory charge identified in the legislation. • The need for reforms or lack thereof. • Whether to define “energy storage” needs to be defined within the Interconnection Work Group under PC 44. • Determine ownership of energy storage and corresponding cost recovery.
KCPA	<ul style="list-style-type: none"> • Wants to make sure the public is made aware of the cost and benefits. • To determine how land use will be factored in to the installation of energy storage. • How does distributed generation benefit the future or is this another additional costs?
Pepco	<ul style="list-style-type: none"> • Echo BGE’s coordination efforts. • Would like to establish streamlined protocols for energy storage.

	<ul style="list-style-type: none"> • Would like to give customers lots of options for installing energy storage. • Pepco is currently working on a distributed energy resources project at Chesapeake College that includes 1.7 MW PV, 1 MW, ¾ MWh battery, flex load control, new controls to feeders. • Would like to utilize energy storage to defer capacity upgrades and to peak shave, as well as put in areas with high concentration of solar.
Exelon	<ul style="list-style-type: none"> • Participating from a generator’s viewpoint, specifically Constellation • Would like to contribute its experience in other states and the difficulties it has experienced working within PJM. • Wants to promote energy storage in Maryland.
MCEC	<ul style="list-style-type: none"> • Wants to focus on how energy storage can encourage economic development and job creation. • Would like to know more about costs, resiliency and management of energy storage. • Would like to model the policies after other states. • Would like to utilize public funding to assist with energy storage financing.
Direct Energy	<ul style="list-style-type: none"> • DE acquired an energy storage brand. • Would like to provide private capital to assist energy storage in the market place.
UMEII	<ul style="list-style-type: none"> • The Institute is working on developing new technology and next generation batteries.
MEA	<ul style="list-style-type: none"> • Address whether or not utilities can own energy storage. Does not believe that current law allows it. • Is working with the Comptroller to offer energy storage tax credits.

Draft Outline

Below is a summation of comments made regarding the proposed strawman outline for the Study.

Section 3

MCEC- Is the report the appropriate place to define societal benefits, such as having access to a hospital during an outage?

Response: Section 3.5 Societal Benefits is reserved for a discussion of societal benefits for which there is no market value (e.g. reduced cost of grid operations, increased reliability, reduced health effects, etc.) In some respects, evaluating energy efficiency programs raises similar challenges with regard to societal benefits and we can draw from our experience with EE, as well as look at other energy storage studies and policies.

MEA- Outline goes through types and applications of energy storage; however, will the cost-benefit section be done in a similar fashion? If not, how will the variance in costs and benefits by technology be dealt with in the report?

Response: To discuss costs and benefits of energy storage, the report will likely pick illustrative cases, as we’ve seen in our literature review. The report will not be used to determine the optimal

amount of storage for the State because HB 773 does not call for any modeling to develop a hard number.

KCPA- Does the report how rapidly the technology should be deployed? Is there going to be a discussion regarding long term technology and price changes overtime, as well as a comparison to other technologies and their related costs?

Response: Yes, the Study will look at this. DOE has the cost/technology projections.

MCEC- Does the cost to operate the grid decrease with the use of battery storage?

Response: ESA can share data it has on this issue with the group.

Section 4

UMEII- Would like to see BGE's smart grid efforts discussed in the report. There is potential to utilize smart grid as home storage is rolled out that will allow the utilities to draw on power from these devices during peak periods.

Response: Comment was noted. PPRP/Exeter will follow up with UMEII and BGE.

Section 5

PSC – The Study should be focused on energy storage efforts in other states that are deregulated.

Response: Agreed that this is something important to focus upon.

KCPA- Since Maryland is part of an RTO, is there is a methodology that can be used to allow for Maryland to benefit from the implementation of battery storage without it benefiting PJM?

Response- Comment was noted. This is a topic we plan to address in the Report.

General Comment-

Pete Dunbar- From a cybersecurity standpoint, does large scale utility energy storage deployment make the utility more secure ore more vulnerable?

Response- Comment was noted. Thus far in our literature review, we have not seen cybersecurity come up, nor is it in the legislation. We can check with stakeholders whether storage raises unique cybersecurity issues.

Next Steps

Field trip to Warrior Run.

EPRI and PC 44 webinar August 15th at 1 PM.

1-on-1 meetings and conference calls with stakeholders.

The second Energy Storage Study Working Group meeting will be held in late August/early September.