

HOUSE BILL 773

C5, C8

7lr0543
CF SB 715

By: **Delegates Korman, Clippinger, Barkley, Buckel, Carr, Cassilly, Chang, Fennell, Fraser-Hidalgo, Frick, Jalisi, Jameson, Kelly, Kramer, Lafferty, Lam, Lierman, Mautz, McComas, Miele, Morhaim, Patterson, Pena-Melnyk, Platt, Reznik, Valderrama, Waldstreicher, M. Washington, West, and K. Young**

Introduced and read first time: February 3, 2017

Assigned to: Economic Matters

Committee Report: Favorable with amendments

House action: Adopted

Read second time: March 12, 2017

CHAPTER _____

1 AN ACT concerning

2 **Clean Energy – Energy Storage Technology Study**

3 FOR the purpose of requiring the ~~Maryland Clean Energy Center~~ Power Plant Research
4 Program to conduct a study of regulatory reforms and market incentives that may
5 be necessary to increase the use of energy storage devices in the State; requiring the
6 ~~Center~~ Program to consult with certain entities and interests in conducting the
7 study; providing certain required considerations and criteria to be used in conducting
8 the study; requiring the ~~Center~~ Program to consider certain benefits for certain
9 purposes; requiring the ~~Center~~ Program to submit an interim report and a final
10 report on the study to certain standing committees on or before certain dates; and
11 generally relating to the ~~Maryland Clean Energy Center~~ Power Plant Research
12 Program and the study of energy storage systems.

13 SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,

14 That:

15 (a) (1) The ~~Maryland Clean Energy Center~~ Power Plant Research Program
16 shall conduct a study to determine what regulatory reforms and market incentives are
17 necessary to increase the use of energy storage devices in the State in a manner that is fair
18 and open to all stakeholders.

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.

Underlining indicates amendments to bill.

~~Strike out~~ indicates matter stricken from the bill by amendment or deleted from the law by amendment.



1 (2) In conducting the study required under this section, the ~~Center~~
2 Program shall consult with:

- 3 (i) the Public Service Commission;
- 4 (ii) the Office of People’s Counsel;
- 5 (iii) the Maryland Energy Administration;
- 6 (iv) environmental organizations;
- 7 (v) electric companies;
- 8 (vi) third-party providers of energy storage devices;
- 9 (vii) associations of third-party providers;
- 10 (viii) the University of Maryland Energy Research Center;
- 11 (ix) the Maryland Clean Energy Center;
- 12 (x) developers and owners of electricity generation; and
- 13 ~~(xi)~~ (xi) other interested parties.

14 (b) In conducting the study and in collaboration with the consulted parties, the
15 ~~Center~~ Program shall:

16 (1) consider the types and viability of different energy storage technologies
17 and cases for their use, including projects deployed in the State and other states, and the
18 potential applicability of these technologies to different service territories of the State;

19 (2) consider existing operational data and results of testing and trial pilot
20 projects from existing energy storage facilities;

21 (3) consider available information from PJM Interconnection, LLC, derived
22 from PJM’s testing and evaluation procedures;

23 (4) consider the integration of energy storage technologies with other
24 programs, including demand-side management or other means of achieving the purposes
25 identified in the “Ten-Year Plan of Maryland Electric Utilities” prepared by the
26 Commission and the Regional Transmission Expansion Plan process of PJM, that will
27 result in the most economically efficient use of generation resources for society and
28 cost-effective, energy-efficient grid integration and management;

1 (5) review energy storage regulatory policies, ownership models, cost
2 recovery mechanisms, procurement targets, and market incentives in other states and use
3 any data or results that are available from those states, as appropriate;

4 (6) review existing State regulatory policies and definitions and determine
5 appropriate revisions to facilitate the expansion of energy storage in the State including
6 considering issues of:

7 (i) whether costs for energy storage can be subject to rate recovery
8 and the standard for rate recovery;

9 (ii) removal of any policy-related barriers that restrict the ability to
10 capture all of the societal benefits of energy storage;

11 (iii) encouraging the expansion of energy storage in the State through
12 a variety of cost recovery mechanisms, including cost recovery through electric distribution
13 rates; and

14 (iv) encouraging the efficient and timely approval of interconnection
15 of energy storage systems owned by an electric company, a customer, or a third party that
16 are:

17 1. connected to customer facilities; or

18 2. directly connected to transmission and distribution
19 facilities;

20 (7) consider how to ensure that any energy storage policies that are
21 established are technologically viable and cost-effective, including standards for the
22 capacity, efficiency, useful life, and charging characteristics of the systems;

23 (8) examine whether and how pumped hydropower should be included in
24 any regulatory policies or market incentives;

25 (9) consider policies to incentivize deployment of energy storage systems
26 that are connected to customers' facilities and of systems that are directly connected to
27 transmission and distribution facilities;

28 (10) identify appropriate metrics and standards for energy storage systems
29 such as energy capacity, charge and discharge rates, round trip efficiency, durability, and
30 other appropriate metrics and standards;

31 (11) consider any policies, procurement targets, or other market incentives
32 that would allow for diverse ownership models including ownership of an energy storage
33 system by an electric company, an electric supplier, or another party;

34 (12) consider the following purposes for energy storage:

1 (i) integrating intermittent generation from eligible renewable
2 energy resources into the safe and reliable operation of the transmission and distribution
3 grid;

4 (ii) allowing intermittent generation from eligible renewable energy
5 resources to operate at or near full capacity;

6 (iii) reducing the need for fossil-fuel-powered peaking generation
7 facilities by using stored electricity to meet peak demand;

8 (iv) reducing transmission and distribution line losses, including
9 increased losses during periods of congestion on the grid;

10 (v) reducing the demand for electricity during peak periods and
11 achieving permanent load-shifting;

12 (vi) providing back-up power and grid resiliency;

13 (vii) avoiding or delaying investments in the transmission and
14 distribution system upgrades;

15 (viii) using energy storage systems to provide the ancillary services
16 otherwise provided by fossil-fueled generating facilities;

17 (ix) as a grid modernization tool that enhances reliability, resiliency,
18 and power quality for electricity consumers; and

19 (x) integrating distributed energy resources more efficiently at
20 customer sites and on the transmission and distribution systems;

21 (13) consider necessary steps to maintain a safe work environment where
22 energy storage systems are deployed and the associated expenses to customers, electric
23 companies, or other parties;

24 (14) consider necessary steps for electric companies to efficiently support
25 storage being connected to the transmission and distribution grid, including those related
26 to customer service, regional transmission operator coordination, interconnection, other
27 relevant issues, and the costs associated with those requirements; and

28 ~~(15) consider any other relevant aspect relating to green banks and clean~~
29 ~~bank financing initiatives that the Center or the Maryland Energy Administration~~
30 ~~determines appropriate; and~~

31 ~~(16)~~ consider whether barriers to the deployment of energy storage systems
32 in the State exist in PJM markets and programs and what changes are needed to eliminate
33 those barriers.

1 (c) When examining the cost-effectiveness issue of energy storage or market
2 incentives under subsection (b)(7) of this section, the ~~Center~~ Program shall consider
3 benefits including:

4 (1) cost savings to ratepayers from the provision of services such as energy
5 price arbitrage, ancillary services, capacity, transmission, and distribution asset deferral
6 or offsets;

7 (2) direct cost savings to customers that deploy energy storage systems and
8 to others;

9 (3) an improved ability to integrate renewable resources;

10 (4) improved reliability and power quality;

11 (5) the effect on retail electric rates over the life of a given energy storage
12 system compared to the impact on retail electric rates of using a nonenergy storage system
13 alternative over the life of the nonenergy storage system alternative including system-wide
14 impacts, such as long-term costs of avoided peak-capacity, transmission, and distribution
15 replacement deferral, and market price reductions or efficiency improvements;

16 (6) the economic, noneconomic, and environmental benefits of avoided use
17 of fossil fuels through the deployment of energy storage systems;

18 (7) the benefits of the ability to site storage systems compared with
19 generation, transmission, or distribution assets; and

20 (8) the ability of storage systems to be deployed quickly and expanded
21 easily.

22 (d) (1) On or before December 1, 2017, the ~~Maryland Clean Energy Center~~
23 Power Plant Research Program shall present an interim report to the Senate Finance
24 Committee, the Senate Budget and Taxation Committee, the House Economic Matters
25 Committee, and the House Appropriations Committee, in accordance with § 2-1246 of the
26 State Government Article, of the findings of the study required under this section and any
27 recommended policy actions.

28 (2) On or before December 1, 2018, the ~~Maryland Clean Energy Center~~
29 Power Plant Research Program shall present a final report to the Senate Finance
30 Committee, the Senate Budget and Taxation Committee, the House Economic Matters
31 Committee, and the House Appropriations Committee, in accordance with § 2-1246 of the
32 State Government Article, of the findings of the study required under this section and any
33 recommended policy actions.

34 SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect July
35 1, 2017.