

HOUSE BILL 773

C5, C8

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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

A BILL ENTITLED

1 AN ACT concerning

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

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

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

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

17 (2) In conducting the study required under this section, the Center shall
18 consult with:

19 (i) the Public Service Commission;

20 (ii) the Office of People’s Counsel;

21 (iii) the Maryland Energy Administration;

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.



- 1 (iv) environmental organizations;
- 2 (v) electric companies;
- 3 (vi) third-party providers of energy storage devices;
- 4 (vii) associations of third-party providers;
- 5 (viii) the University of Maryland Energy Research Center;
- 6 (ix) developers and owners of electricity generation; and
- 7 (x) other interested parties.

8 (b) In conducting the study and in collaboration with the consulted parties, the
9 Center shall:

- 10 (1) consider the types and viability of different energy storage technologies
11 and cases for their use, including projects deployed in the State and other states, and the
12 potential applicability of these technologies to different service territories of the State;
- 13 (2) consider existing operational data and results of testing and trial pilot
14 projects from existing energy storage facilities;
- 15 (3) consider available information from PJM Interconnection, LLC, derived
16 from PJM's testing and evaluation procedures;
- 17 (4) consider the integration of energy storage technologies with other
18 programs, including demand-side management or other means of achieving the purposes
19 identified in the "Ten-Year Plan of Maryland Electric Utilities" prepared by the
20 Commission and the Regional Transmission Expansion Plan process of PJM, that will
21 result in the most economically efficient use of generation resources for society and
22 cost-effective, energy-efficient grid integration and management;
- 23 (5) review energy storage regulatory policies, ownership models, cost
24 recovery mechanisms, procurement targets, and market incentives in other states and use
25 any data or results that are available from those states, as appropriate;
- 26 (6) review existing State regulatory policies and definitions and determine
27 appropriate revisions to facilitate the expansion of energy storage in the State including
28 considering issues of:
 - 29 (i) whether costs for energy storage can be subject to rate recovery
30 and the standard for rate recovery;
 - 31 (ii) removal of any policy-related barriers that restrict the ability to

1 capture all of the societal benefits of energy storage;

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

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

8 1. connected to customer facilities; or

9 2. directly connected to transmission and distribution
10 facilities;

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

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

16 (9) consider policies to incentivize deployment of energy storage systems
17 that are connected to customers' facilities and of systems that are directly connected to
18 transmission and distribution facilities;

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

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

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

26 (i) integrating intermittent generation from eligible renewable
27 energy resources into the safe and reliable operation of the transmission and distribution
28 grid;

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

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

33 (iv) reducing transmission and distribution line losses, including

1 increased losses during periods of congestion on the grid;

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

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

5 (vii) avoiding or delaying investments in the transmission and
6 distribution system upgrades;

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

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

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

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

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

20 (15) consider any other relevant aspect relating to green banks and clean
21 bank financing initiatives that the Center or the Maryland Energy Administration
22 determines appropriate; and

23 (16) consider whether barriers to the deployment of energy storage systems
24 in the State exist in PJM markets and programs and what changes are needed to eliminate
25 those barriers.

26 (c) When examining the cost-effectiveness issue of energy storage or market
27 incentives under subsection (b)(7) of this section, the Center shall consider benefits
28 including:

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

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

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

2 (4) improved reliability and power quality;

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

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

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

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

14 (d) (1) On or before December 1, 2017, the Maryland Clean Energy Center
15 shall present an interim report to the Senate Finance Committee, the Senate Budget and
16 Taxation Committee, the House Economic Matters Committee, and the House
17 Appropriations Committee, in accordance with § 2-1246 of the State Government Article,
18 the findings of the study required under this section and any recommended policy actions.

19 (2) On or before December 1, 2018, the Maryland Clean Energy Center
20 shall present a final report to the Senate Finance Committee, the Senate Budget and
21 Taxation Committee, the House Economic Matters Committee, and the House
22 Appropriations Committee, in accordance with § 2-1246 of the State Government Article,
23 the findings of the study required under this section and any recommended policy actions.

24 SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect July
25 1, 2017.