SENATE
STATE OF MINNESOTA
NINETY-FIRST SESSION

S.F. No. 100

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DATE	D-PG	OFFICIAL STATUS
01/14/2019	76	Introduction and first reading
		Referred to Energy and Utilities Finance and Policy
01/17/2019	92a	Comm report: To pass as amended and re-refer to Finance
01/28/2019	172a	Comm report: To pass as amended
	173	Second reading
	196	Author added Rosen
02/21/2019	495	Special Order
	495	Third reading Passed

A bill for an act

relating to energy; establishing criteria for utility cost recovery of energy storage system pilot projects; requiring investor-owned utilities to include in integrated resource plans an assessment of energy storage systems; requiring a cost-benefit analysis of energy storage systems; appropriating money; requiring a report; amending Minnesota Statutes 2018, sections 216B.16, by adding a subdivision; 216B.2422, subdivision 1, by adding a subdivision.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. Minnesota Statutes 2018, section 216B.16, is amended by adding a subdivision to read:

Subd. 7e. **Energy storage system pilot projects.** (a) A public utility may petition the commission under this section to recover costs associated with the implementation of an energy storage system pilot project. As part of the petition, the public utility must submit a report to the commission containing, at a minimum, the following information regarding the proposed energy storage system pilot project:

(1) the storage technology utilized;

(2) the energy storage capacity and the duration of output at that capacity;

(3) the proposed location;

(4) the purchase and installation costs;

(5) how the project will interact with existing distributed generation resources on the utility's grid; and

(6) the goals the project proposes to achieve, which may include controlling frequency or voltage, mitigating transmission congestion, providing emergency power supplies during

outages, reducing curtailment of existing renewable energy generators, and reducing peak power costs.

(b) A utility may petition the commission to approve a rate schedule that provides for the automatic adjustment of charges to recover prudently incurred investments, expenses, or costs associated with energy storage system pilot projects approved by the commission under this subdivision. A petition filed under this subdivision must include the elements listed in section 216B.1645, subdivision 2a, paragraph (b), clauses (1) to (4), and must describe the benefits of the pilot project.

(c) The commission may approve, or approve as modified, a rate schedule filed under this subdivision. The rate schedule filed by the public utility may include the elements listed in section 216B.1645, subdivision 2a, paragraph (a), clauses (1) to (5).

(d) For each pilot project that the commission has found to be in the public interest, the commission must make its determination on the specific amounts that are eligible for recovery under the approved rate schedule within 90 days of final approval of the specific pilot program or within 90 days of the public utility filing for approval of cost recovery for the specific pilot program, whichever is later.

(e) Nothing in this subdivision prohibits or deters the deployment of energy storage systems.

(f) For the purposes of this subdivision:

(1) "energy storage system" has the meaning given in section 216B.2422, subdivision 1; and

(2) "pilot project" means a project that is owned, operated, and controlled by a public utility to optimize safe and reliable system operations and is deployed at a limited number of locations in order to assess the technical and economic effectiveness of its operations.

EFFECTIVE DATE. This section is effective the day following final enactment.

Sec. 2. Minnesota Statutes 2018, section 216B.2422, subdivision 1, is amended to read:

Subdivision 1. **Definitions.** (a) For purposes of this section, the terms defined in this subdivision have the meanings given them.

(b) "Utility" means an entity with the capability of generating 100,000 kilowatts or more of electric power and serving, either directly or indirectly, the needs of 10,000 retail customers in Minnesota. Utility does not include federal power agencies.

(c) "Renewable energy" means electricity generated through use of any of the following resources:

(1) wind;

(2) solar;

(3) geothermal;

(4) hydro;

(5) trees or other vegetation;

(6) landfill gas; or

(7) predominantly organic components of wastewater effluent, sludge, or related by-products from publicly owned treatment works, but not including incineration of wastewater sludge.

(d) "Resource plan" means a set of resource options that a utility could use to meet the service needs of its customers over a forecast period, including an explanation of the supply and demand circumstances under which, and the extent to which, each resource option would be used to meet those service needs. These resource options include using, refurbishing, and constructing utility plant and equipment, buying power generated by other entities, controlling customer loads, and implementing customer energy conservation.

(e) "Refurbish" means to rebuild or substantially modify an existing electricity generating resource of 30 megawatts or greater.

(f) "Energy storage system" means a commercially available technology that:

(1) uses mechanical, chemical, or thermal processes to:

(i) store energy, including energy generated from renewable resources and energy that would otherwise be wasted, and deliver the stored energy for use at a later time; or

(ii) store thermal energy for direct use for heating or cooling at a later time in a manner that reduces the demand for electricity at the later time;

(2) is composed of stationary equipment;

(3) if being used for electric grid benefits, is operationally visible and capable of being controlled by the distribution or transmission entity managing it, to enable and optimize the safe and reliable operation of the electric system; and

(4) achieves any of the following:

(i) reduces peak or electrical demand;

(ii) defers the need or substitutes for an investment in electric generation, transmission, or distribution assets;

(iii) improves the reliable operation of the electrical transmission or distribution systems, while ensuring transmission or distribution needs are not created; or

(iv) lowers customer costs by storing energy when the cost of generating or purchasing it is low and delivering it to customers when those costs are high.

EFFECTIVE DATE. This section is effective the day following final enactment.

Sec. 3. Minnesota Statutes 2018, section 216B.2422, is amended by adding a subdivision to read:

Subd. 7. **Energy storage systems assessment.** (a) Each public utility required to file a resource plan under subdivision 2 must include in the filing an assessment of energy storage systems that analyzes how the deployment of energy storage systems contributes to:

(1) meeting identified generation and capacity needs; and

(2) evaluating ancillary services.

(b) The assessment must employ appropriate modeling methods to enable the analysis required in paragraph (a).

EFFECTIVE DATE. This section is effective the day following final enactment.

Sec. 4. **REPORT; COST-BENEFIT ANALYSIS OF ENERGY STORAGE SYSTEMS.**

(a) The commissioner of commerce must contract with an independent consultant selected through a request for proposal process to produce a report analyzing the potential costs and benefits of energy storage systems, as defined in Minnesota Statutes, section 216B.2422, subdivision 1, in Minnesota. The study may also include scenarios examining energy storage systems that are not capable of being controlled by a utility. The commissioner must engage a broad group of Minnesota stakeholders, including electric utilities and others, to develop and provide information for the report. The study must:

(1) identify and measure the different potential costs and savings produced by energy storage system deployment, including but not limited to:

(i) generation, transmission, and distribution facilities asset deferral or substitution;

(ii) impacts on ancillary services costs;

(iii) impacts on transmission and distribution congestion;

(iv) impacts on peak power costs;

(v) impacts on emergency power supplies during outages;

(vi) impacts on curtailment of renewable energy generators; and

(vii) reduced greenhouse gas emissions;

(2) analyze and estimate the:

(i) costs and savings to customers that deploy energy storage systems;

(ii) impact on the utility's ability to integrate renewable resources;

(iii) impact on grid reliability and power quality; and

(iv) effect on retail electric rates over the useful life of a given energy storage system compared to providing the same services using other facilities or resources;

(3) consider the findings of analysis conducted by the Midcontinent Independent System Operator on energy storage capacity accreditation and participation in regional energy markets, including updates of the analysis; and

(4) include case studies of existing energy storage applications currently providing the benefits described in clauses (1) and (2).

(b) By December 31, 2019, the commissioner of commerce must submit the study to the chairs and ranking minority members of the senate and house of representatives committees with jurisdiction over energy policy and finance.

EFFECTIVE DATE. This section is effective the day following final enactment.

Sec. 5. **APPROPRIATION.**

$150,000 in fiscal year 2019 is appropriated from the renewable development account in the special revenue fund established in Minnesota Statutes, section 116C.779, subdivision 1, to the commissioner of commerce, to conduct the energy storage systems cost-benefit analysis required under section 4. This is a onetime appropriation that is available until June 30, 2020.