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		Comm report: To pass as amended and re-refer to Finance

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.1645, 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.1645, is amended by adding a subdivision to read:

Subd. 2b. **Energy storage system pilot projects.** (a) A public utility may petition the commission under subdivision 2a to recover costs incurred to implement an energy storage system pilot project, provided the following conditions are met:

(1) the public utility has submitted a report to the commission containing, at a minimum, the following information regarding the proposed energy storage system pilot project:

(i) the storage technology utilized;

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

(iii) the proposed location;

(iv) the purchasing and installation costs;

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

(vi) the goals the project proposes to achieve, including 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;

(2) the utility has adequately responded to any commission requests for additional information regarding the energy storage system pilot project; and

(3) the commission has determined that the energy storage system pilot project is in the public interest.

(b) The commission may modify a proposed energy storage system pilot project the commission approves for rate recovery.

(c) For the purposes of this subdivision:

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

(2) "pilot project" means a project deployed at a limited number of locations in order to assess the technical and economic effectiveness of its operations.

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 commercially available technology capable of absorbing and storing energy, then delivering the stored energy for use at a later time. For purposes of this section, energy storage systems must be from a stationary source. For purposes of this section:

(1) an energy storage system may be:

(i) either centralized or distributed; or

(ii) owned by a load-serving entity or local publicly owned electric utility, a customer of a load-serving entity or local publicly owned electric utility, a third party, or jointly owned by two or more of the entities under this item or any other entity;

(2) an energy storage system must:

(i) reduce demand for peak electrical generation;

(ii) defer or substitute for an investment in generation, transmission, or distribution assets; or

(iii) improve the reliable operation of the electrical transmission or distribution grid; and

(3) an energy storage system must:

(i) use mechanical, chemical, or thermal processes to store energy that was generated at one time for use at a later time;

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

(iii) use mechanical, chemical, or thermal processes to store energy generated from renewable resources for use at a later time; or

(iv) use mechanical, chemical, or thermal processes to store energy generated from mechanical processes that would otherwise be wasted for delivery at a later time.

(g) "Investor-owned utility" means a utility, as defined in paragraph (b), that is owned by private persons.

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

Subd. 7. **Energy storage systems assessment.** (a) An investor-owned utility must include an assessment of energy storage systems as part of each integrated resource plan or plan modification filed under subdivision 2. The assessment must:

(1) consider energy storage systems as both transmission and distribution-interconnected resources;

(2) analyze energy storage systems both as an alternative for and as an adjunct to generation resources for ancillary services and resource adequacy; and

(3) require that in any prudence determination for a new resource acquisition, the resource options analysis must include a storage alternative.

(b) When approving a resource plan, the commission must determine whether, with respect to the assessment required in paragraph (a):

(1) the utility's forecast requirements are based on substantially accurate data and an adequate forecasting method;

(2) the plan identifies and accounts for any present and projected reductions in energy demand that may result from measures to improve energy efficiency in the industrial, commercial, residential, and energy-producing sectors of the area being served; and

(3) the plan includes appropriate and up-to-date methods for modeling resources, including the modeling and valuing of flexible operations.

Sec. 4. **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. When examining the cost-effectiveness of energy storage systems, the study must analyze:

(1) cost savings to ratepayers from the provision of services, including but not limited to energy price arbitrage, ancillary services, resource adequacy, and transmission and distribution asset deferral or substitution;

(2) direct-cost savings to customers that deploy energy storage systems;

(3) an improved ability to integrate renewable resources;

(4) improved reliability and power quality;

(5) the effect on retail electric rates over the useful life of a given energy storage system compared to the impact on retail electric rates using nonenergy storage system alternative over the useful life of the nonenergy storage system alternative;

(6) reduced greenhouse gas emissions; and

(7) any other value reasonably related to the application of energy storage system technology.

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

Sec. 5. **APPROPRIATION.**

$150,000 in fiscal year 2020 is appropriated from the renewable development account in the special revenue fund established in Minnesota Statutes, section 116C.779, subdivision 1, to conduct the energy storage systems cost-benefit analysis required under section 4.