..... moves to amend H.F. No. 1165 as follows:

Delete everything after the enacting clause and insert:

"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 implementing 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 determine the specific amounts that are eligible for recovery under the approved rate schedule within 90 days of the date the specific pilot program receives final approval or within 90 days of the date the public utility files 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. **[216B.1697] ENERGY STORAGE SYSTEM; APPLICATION.**

Subdivision 1. **Definition.** For the purposes of this section, "energy storage system" means a commercially available technology that uses mechanical, chemical, or thermal processes to:

(1) store energy and deliver the stored energy for use at a later time; or

(2) 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.

Subd. 2. **Application requirement.** No later than January 1, 2021, each public utility and generation and transmission cooperative electric association providing retail electric service in this state must submit an application to the commission for review and approval to install one or more energy storage systems.

Subd. 3. **Application contents.** (a) Each application submitted under this section shall contain the following information:

(1) technical specifications of the energy storage system, including, but not limited to:

(i) the maximum amount of electric output that the energy storage system can provide;

(ii) the length of time the energy storage system can sustain its maximum output;

(iii) the location of the project, and a description of the analysis conducted to determine the location;

(iv) what needs of the public utility's electric system the proposed energy storage system will address;

(v) a description of the types of services the energy storage system is expected to provide; and

(vi) a description of the technology required to construct, operate, and maintain the energy storage system, including any data or communication system necessary to operate the energy storage system;

(2) the estimated cost of the project, including:

(i) capital costs;

(ii) the estimated cost per unit of energy delivered by the energy storage system; and

(iii) an evaluation of the cost-effectiveness of the energy storage system;

(3) the estimated benefits of the energy storage system to the public utility's electric system, including, but not limited to:

(i) deferred investments in generation, transmission, or distribution capacity;

(ii) reduced need for electricity during times of peak demand;

(iii) improved reliability of the public utility's transmission or distribution system; and

(iv) improved integration of the public utility's renewable energy resources;

(4) how the addition of an energy storage system complements proposed actions of the public utility described in its most recent integrated resource plan submitted under section 216B.2422, to meet expected demand with the least cost combination of resources; and

(5) any additional information required by the commission.

(b) A public utility must include in its application an evaluation of the potential to store energy in the public utility's electric system, and must identify geographic areas in the public

utility's service area where the deployment of energy storage systems has the greatest potential to achieve the economic benefits identified in paragraph (a), clause (3).

Subd. 4. **Commission review.** The commission shall review each proposal submitted under this section, and may approve, reject, or modify the proposal. The commission shall approve a proposal it determines is in the public interest and reasonably balances the value derived from the deployment of an energy storage system for ratepayers and the public utility's operations with the costs of procuring, constructing, operating, and maintaining the energy storage system.

Subd. 5. **Cost recovery.** A public utility may recover from ratepayers all costs prudently incurred by the public utility in deploying an energy storage system approved by the commission under this section, net of any revenues generated by the operation of the energy storage system.

Subd. 6. **Commission authority; orders.** The commission may issue orders necessary to implement and administer this section.

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

Sec. 3. 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 uses mechanical, chemical, or thermal processes to:

(1) store energy and deliver the stored energy for use at a later time; or

(2) 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.

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

Sec. 4. Minnesota Statutes 2018, section 216B.2422, is amended by adding a subdivision to read:

Subd. 4a. **Preference for energy storage systems.** (a) The commission is prohibited from:

(1) approving a new or refurbished energy facility in an integrated resource plan or a certificate of need under section 216B.243; or

(2) allowing rate recovery under section 216B.16 for a new or refurbished energy facility, unless the utility has demonstrated that the deployment of one or more energy storage systems on the utility's grid is not in the public interest.

(b) When making the public interest determination under this subdivision, the commission must consider:

(1) whether the energy storage systems can replace part or all of the energy provided by the proposed facility;

(2) whether the energy storage systems are economically competitive compared to the proposed facility;

(3) whether the deployment of energy storage systems helps the utility achieve the greenhouse gas reduction goals under section 216H.02;

(4) impacts on local and regional grid reliability; and

(5) any other utility, ratepayer, and societal impacts resulting from the deployment of energy storage systems.

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

Sec. 5. 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. 6. **[216B.2427] ELECTRIC UTILITIES; ANCILLARY SERVICES COST REPORT.**

Subdivision 1. **Definitions.** (a) For the purposes of this section, the following terms have the meanings given.

(b) "Ancillary services" means services that help maintain the reliability of the electrical grid by maintaining the proper flow and direction of electricity, addressing temporary imbalances of supply and demand, and helping the electrical grid to recover after a power failure. "Ancillary services" include but are not limited to spinning reserves, nonspinning reserves, voltage regulation, load following, and black start capability.

(c) "Black start capability" means the provision of the initial energy needed to start up and begin operation of an electricity generator.

(d) "Load following" means the matching, within five minutes or less, of electricity supply to demand as demand fluctuates.

(e) "Nonspinning reserves" means electric generation capacity that is not connected to the electric grid, but is capable of:

(1) being connected, ramped to capacity, and synchronized to the electric grid within ten minutes; and

(2) maintaining a specified output level for at least two hours.

(f) "Spinning reserves" means reserve electric generation capacity that is connected and synchronized to the electric grid and can meet electric demand within ten minutes.

(g) "Voltage regulation" means the maintenance of voltage levels on the electric grid.

Subd. 2. **Report.** By October 1, 2019, and each April 1 thereafter, each electric utility must report to the commission, on a form developed by the commission, the total cost to purchase or self-provide ancillary services throughout the previous calendar year. For each type of ancillary service, the utility must report:

(1) the entity providing the ancillary service;

(2) the amount, duration, and frequency of the ancillary service provided; and

(3) the cost of purchasing or providing the ancillary service.

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

Sec. 7. Minnesota Statutes 2018, section 216B.243, subdivision 3, is amended to read:

Subd. 3. **Showing required for construction.** (a) No proposed large energy facility shall be certified for construction unless the applicant can show that demand for electricity cannot be met more cost effectively through energy conservation, energy storage, and load-management measures and unless the applicant has otherwise justified its need. In assessing need, the commission shall evaluate:

(1) the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based;

(2) the effect of existing or possible energy conservation programs under sections 216C.05 to 216C.30 and this section or other federal or state legislation on long-term energy demand;

(3) the relationship of the proposed facility to overall state energy needs, as described in the most recent state energy policy and conservation report prepared under section 216C.18, or, in the case of a high-voltage transmission line, the relationship of the proposed

line to regional energy needs, as presented in the transmission plan submitted under section 216B.2425;

(4) promotional activities that may have given rise to the demand for this facility;

(5) benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region;

(6) possible alternatives for satisfying the energy demand or transmission needs including but not limited to potential for increased efficiency and upgrading of existing energy generation and transmission facilities, energy storage systems, load-management programs, and distributed generation;

(7) the policies, rules, and regulations of other state and federal agencies and local governments;

(8) any feasible combination of energy conservation improvements, required under section 216B.241, or energy storage systems that can (i) replace part or all of the energy to be provided by the proposed facility, and (ii) compete with it economically;

(9) with respect to a high-voltage transmission line, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota;

(10) whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691 and 216B.2425, subdivision 7, and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities or upgrades identified under section 216B.2425, subdivision 7;

(11) whether the applicant has made the demonstrations required under subdivision 3a; and

(12) if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk.

(b) "Energy storage system" means a commercially available technology that uses mechanical, chemical, or thermal processes to:

(1) store energy and deliver the stored energy for use at a later time; or

(2) 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.

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

Sec. 8. **ENERGY STORAGE IN CRITICAL HEALTHCARE FACILITIES; DEMONSTRATION PROJECTS.**

(a) The commissioner of commerce shall develop a program to award grants for demonstration projects that assess the technical and economic effectiveness of deploying energy storage systems to restore electrical energy to critical health care facilities following electrical outages due to storms or other catastrophic events.

(b) Grants must be awarded under this section to critical health care facilities located in the retail electric service area of the public utility subject to section 116C.779, subdivision 1.

(c) For the purposes of this section, "energy storage system" means a commercially available technology that uses mechanical, chemical, or thermal processes to:

(1) store energy and deliver the stored energy for use at a later time; or

(2) 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.

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

Sec. 9. **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 the 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. 10. **APPROPRIATIONS.**

(a) Notwithstanding section 116C.779, subdivision 1, paragraph (j), $1,000,000 in fiscal year 2020 is appropriated from the renewable development fund established in Minnesota Statutes, section 116C.779, subdivision 1, to the commissioner of commerce for the grant program established in section 9.

(b) Notwithstanding section 116C.779, subdivision 1, paragraph (j), $150,000 in fiscal year 2019 is appropriated from the renewable development 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 6. This is a onetime appropriation that is available until June 30, 2020."

Amend the title accordingly