

**House File 2682 - Introduced**

HOUSE FILE 2682  
BY COMMITTEE ON COMMERCE

(SUCCESSOR TO HF 2283)

**A BILL FOR**

1 An Act relating to grid-enhancing technologies and  
2 reconductoring, including study and reporting requirements.  
3 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

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1 Section 1. NEW SECTION. **478.34 Grid-enhancing technologies**  
2 **and reconductoring.**

3 1. For purposes of this section:

4 a. "Capacity" means the maximum amount of electricity that  
5 can flow through a transmission line while observing industry  
6 safety standards.

7 b. "Congestion" means a condition in which a lack of  
8 transmission line capacity prevents the delivery of the  
9 lowest-cost electricity dispatched to meet the load demand at a  
10 specific location.

11 c. "Dynamic line rating system" means hardware or software  
12 used to calculate the thermal limit of existing electric  
13 transmission lines at a specific point in time by incorporating  
14 information on real-time and forecasted weather conditions.

15 d. "Grid-enhancing technology" means hardware and software  
16 that increases the capacity of electrical lines and improves  
17 the congestion, efficiency, reliability, and safety of the grid.  
18 "Grid-enhancing technology" includes but is not limited to a  
19 dynamic line rating system, an advanced power flow control  
20 system, or topology optimization.

21 e. "Power flow control system" means hardware and software  
22 used to reroute electricity from overloaded electric transmission  
23 lines to underutilized electric transmission lines.

24 f. "Reconducted with an advanced conductor" means replacing  
25 the existing electric conductor with a conductor that has a  
26 direct current electrical resistance not less than ten percent  
27 lower than existing conductors of a similar diameter on the  
28 system and may include rebuilding support structures or other  
29 associated facilities.

30 g. "Thermal limit" means the temperature an electric  
31 transmission line reaches when heat from the electric current  
32 flow within the electric transmission line causes excessive  
33 sagging of the electric transmission line.

34 h. "Topology optimization" means a software technology  
35 that uses mathematical models to identify reconfigurations in

1 the transmission grid in order to reroute electricity from  
2 overloaded electric transmission lines to underutilized electric  
3 transmission lines.

4 2. a. On or before January 1, 2027, and every three years  
5 thereafter, each public utility or transmission company that  
6 owns or operates an electric transmission line in Iowa shall  
7 prepare and submit a study of the feasibility of projects  
8 using grid-enhancing technologies and identifying which of  
9 its transmission lines can be reconducted with an advanced  
10 conductor to achieve one or more of the purposes listed in  
11 paragraph "c".

12 b. The study shall provide information on feasibility, cost,  
13 rating, implementation time, and any other information deemed  
14 relevant by the utilities commission and be submitted to the  
15 commission in a public filing.

16 c. The study required under paragraph "a" shall be designed  
17 to identify projects that can use grid-enhancing technologies or  
18 reconductoring with an advanced conductor to achieve one or more  
19 of the following purposes:

- 20 (1) Increase transmission capacity.
- 21 (2) Reduce transmission system congestion.
- 22 (3) Reduce curtailment of or increase capacity to connect  
23 renewable and zero-carbon resources.
- 24 (4) Increase reliability.
- 25 (5) Reduce potential siting conflicts or land impacts from  
26 the development of new electric transmission lines.
- 27 (6) Increase flexibility to reduce risks surrounding  
28 technology and permitting uncertainties in statewide electrical  
29 system planning and improve optionality for load-serving  
30 entities.
- 31 (7) Reduce line losses.
- 32 (8) Increase the ability to quickly energize new customers or  
33 serve increased customer load.

34 3. This section does not apply to a municipal utility, a  
35 cooperative electric association, or a company or organization

1 that owns a transmission line that serves a single customer or  
2 interconnects a single electric generating facility.

3 4. To meet the requirements of this section, reporting  
4 parties may rely on available information and analysis developed  
5 by a regional transmission organization or any subgroup of a  
6 regional transmission organization and may develop and include  
7 additional information as necessary.

8 EXPLANATION

9 The inclusion of this explanation does not constitute agreement with  
10 the explanation's substance by the members of the general assembly.

11 This bill relates to grid-enhancing technologies and  
12 reconductoring. The bill defines terms related to  
13 electric transmission capacity, congestion, and grid-enhancing  
14 technologies.

15 The bill requires each public utility or transmission  
16 company that owns or operates electric transmission lines in  
17 Iowa to prepare and submit by January 1, 2027, and every  
18 three years thereafter, a public study to the Iowa utilities  
19 commission (commission) examining the feasibility of projects  
20 using grid-enhancing technologies and identifying reconductoring  
21 opportunities. The bill requires the study to provide  
22 information on feasibility, costs, implementation time, and other  
23 information deemed relevant by the commission.

24 The study must be designed to identify projects that can  
25 achieve one or more specified purposes, including increasing  
26 transmission capacity, reducing congestion, reducing curtailment  
27 of renewable and zero-carbon resources, improving reliability,  
28 reducing siting conflicts, increasing flexibility to reduce  
29 risks surrounding technology, reducing line losses, increasing  
30 flexibility in transmission planning, and improving the ability  
31 to serve new customers or increased customer load.

32 The bill does not apply to a municipal utility, a cooperative  
33 electric association, or a company or organization that owns a  
34 transmission line that serves a single customer or interconnects  
35 a single electric generating facility.

1 The bill allows public utilities and electric transmission  
2 line companies to rely on existing analyses and information  
3 developed by a regional transmission organization or its  
4 subgroups to satisfy the study requirements and to include that  
5 information as necessary.

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