

199—20.5(476) Engineering practice.

20.5(1) Requirement for good engineering practice. The electric plant of the utility shall be constructed, installed, maintained, and operated in accordance with accepted good engineering practice in the electric industry to ensure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.

20.5(2) Standards incorporated by reference. The utility shall use the applicable provisions in the publications listed below as standards of accepted good practice unless otherwise ordered by the commission.

- a. Iowa Electrical Safety Code, as defined in 199—Chapter 25.
- b. National Electrical Code, ANSI/NFPA 70-2023, as published September 14, 2022.
- c. American National Standard Requirements for Instrument Transformers, ANSI/IEEE C57.13.1-2016, as approved August 21, 2017; and C57.13.3-2016, as approved August 21, 2017.
- d. American National Standard for Electric Power Systems and Equipment Voltage Ratings (60 Hertz), ANSI C84.1-2020, as published September 3, 2020.
- e. Recommended Practice for Grounding of Industrial and Commercial Power Systems, IEEE 3003.1-2019, as published August 9, 2019.
- f. IEEE Standard 1159-2019, IEEE Recommended Practice for Monitoring Electric Power Quality or any successor standard, as published August 13, 2019.
- g. IEEE Standard 519-2022, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems, as published August 5, 2022.
- h. At railroad crossings, as described in rule 199—42.6(476).

20.5(3) Adequacy of supply and reliability of service. The generating capacity of the utility's plant, supplemented by the electric power regularly available from other sources, must be sufficiently large to meet all normal demands for service and provide a reasonable reserve for emergencies.

In appraising adequacy of supply the commission will segregate electric utilities into two classes viz., those having high capacity transmission interconnections with other electrical utilities and those that lack such interconnection and are therefore completely dependent upon the firm generating capacity of the utility's own generating facilities.

a. In the case of utilities having interconnecting ties with other utilities, the commission will, upon appraising adequacy of supply, take appropriate notice of the utility's recent past record, as of the date of appraisal, of any widespread service interruptions and any capacity shortages along with the consideration of the supply regularly available from other sources, the normal demands, and the required reserve for emergencies.

b. In the case of noninterconnected utilities, the commission will give attention to the maximum total coincident customer demand that could be satisfied without the use of the single element of plant equipment, the disability of which would produce the greatest reduction in total net plant productive capacity and also give attention to the normal demands for service and to the reasonable reserve for emergencies.

This rule is intended to implement Iowa Code sections 476.8 and 478.18.

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