

**199—27.5(476) Engineering standards.**

**27.5(1)** *Requirement for good engineering practice.* The electric plant of the electric cooperative or municipal electric 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.

**27.5(2)** *Standards incorporated by reference.* Applicable provisions in the publications listed below as standards of accepted good practice unless otherwise ordered by the commission. The standards listed below are recommended for use by municipal electric utilities.

- a. Iowa Electrical Safety Code, as defined in 199—Chapter 25.
- b. National Electrical Code, ANSI/NFPA 70-2023, published September 14, 2022.
- c. American National Standard Requirements for Instrument Transformers, ANSI/IEEE C57.13-2016, as approved August 21, 2017; and C57.13.3-2016, as published June 29, 2016.
- d. American National Standard for Electric Power Systems and Equipment Voltage Ratings (60 Hertz), ANSI C84.1-2020, published September 3, 2020.
- e. Recommended Practice for System Grounding of Industrial and Commercial Power Systems, IEEE 3003.1-2019, published August 9, 2019.
- f. Recommended Practice for Monitoring Electric Power Quality, IEEE 1159-2019, published August 13, 2019.
- g. Standard for Harmonic Control in Electric Power Systems, IEEE 519-2022, published August 5, 2022.
- h. At railroad crossings, 199—Chapter 42, “Engineering Standards for Electric and Communications Lines.”
- i. Iowa Stray Voltage Guide, located at [www.iowastrayvoltageguide.com](http://www.iowastrayvoltageguide.com), published July 2014.
- j. American National Standard for Electric Meters—Code for Electricity Metering, ANSI C12.1-2022, published August 31, 2022.
- k. IEEE Guide for Electric Power Distribution Reliability Indices, IEEE 1366-2022, published November 22, 2022.

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