



Ohio Administrative Code

Rule 4901:1-10-04 Equipment for voltage measurements and system voltage and frequency requirements.

Effective: November 1, 2021

(A) Portable indicating instruments (e.g., electro-mechanical indicating, electronic indicating, and electronic indicating and recording) used to test or record service voltage at the customer's premises in response to a customer inquiry or complaint shall be checked for accuracy against a recognized standard. For transmission facilities within the commission's jurisdiction, the voltage measuring equipment accuracy and testing requirements shall comply with the requirements of the transmission system operator. Accuracy checks shall be conducted as recommended by the manufacturer or once per calendar year if no period is specified. The most recent accuracy test record shall be kept with each such instrument, or at a central location for the electric utility and/or transmission owner.

(B) Electric utilities and transmission owners shall comply with the following requirements regarding standard voltage:

(1) Each electric utility and transmission owner supplying electrical energy for general use shall adopt nominal service voltages to be supplied to its customers and shall make every reasonable effort, by the use of proper equipment and operation, to maintain the service voltages to its customers within the limits as defined within this rule.

(2) Each electric utility shall file with the commission, as part of its tariffs, the nominal service voltage available to customers, including the number of phases and service configurations and the voltage variations for each available service configuration. The nominal service voltage shall be based on the 2016 edition of the "American National Standards Institute" standard C84.1, electric power systems and equipment voltage ratings, or as subsequently amended.

(3) The limits specified within this rule do not apply to voltage excursions.

(4) Each electric utility and transmission owner shall develop procedures to reasonably ensure that the delivered service voltages are within the ranges as specified in paragraph (B)(2) of this rule.



The procedures shall include a description of the electric utility's and transmission owner's practices to assure that service voltages are within acceptable limits and may include the inspections of substation voltage regulation equipment, line voltage regulation equipment (i.e., voltage regulators and capacitors), available substation voltage monitoring equipment and other field investigations and system voltage studies.

(C) Whenever an electric utility and/or transmission owner knows that voltage levels exist outside of the voltage ranges as specified in paragraph (B)(2) of this rule, the electric utility shall, in a nondiscriminatory manner, promptly take steps to investigate and initiate corrective action, if it is within the electric utility's and/or transmission owner's control to restore the voltage levels to within acceptable limits. The electric utility and/or transmission owner shall document the specifics of the investigation, its findings, and any corrective action that was necessary.

(D) The voltage requirements outlined in this rule may be amended or modified by contractual agreement between the electric utility and/or transmission owner and its customer(s), provided the service rendered does not impact other customers on the system.

(E) The electric utility is not responsible for installing regulating apparatus for special equipment requiring voltage regulation other than those prescribed by these rules or as defined in the electric utility's tariffs.

Each electric utility supplying alternating current shall adopt a standard frequency of sixty hertz, which standard frequency shall be stated in the electric utility's tariff.