

R8-13 IN-SERVICE METER TESTING

(a) Meter Testing Required – Each in-service watt hour billing meter shall be included in either a periodic or sampling testing plan as prescribed by ANSI C12.1 – Code for Electricity Metering. Average meter registration accuracy that is less than 98% or more than 102% will be counted as a failure.

(b) Statistical Sampling Plan – The statistical sampling plan provides for the division of meters into homogenous groups such as manufacturer and manufacturer type and may be further subdivided based on other factors such as age or vintage of meter. The selection process is random where each meter within each group has an equal chance of being selected. Selected meters in each group are tested for energy registration accuracy. The statistical sampling plan used shall conform to the accepted principles of statistical sampling as found in ANSI Z1.4 – Sampling Procedures and Tables for Inspection by Attributes, ANSI Z1.9 – Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming, or other statistically valid programs that have been evaluated by qualified independent mathematical statisticians.

(c) Periodic Interval Plan – Every meter included in a periodic interval plan shall be tested for energy registration accuracy at a minimum of once every sixteen years. The utility may elect to test more frequently based on factors such as complexity of the metering system, class of customer, or size of service.

(d) Corrective Action – If testing pursuant to subsection (a) or (b) shows that a meter or group of meters does not meet the performance criteria, then an established program of corrective action shall be followed. Corrective action shall consist of one or more of the following methods listed in ANSI C12.1 section 5.0.3.4.4: a) an accelerated test program, b) splitting a group into two or more subgroups, c) a time-specific retirement program, or d) a sample-driven retirement program. The accelerated test program should provide for testing at rates that vary in accordance with the calculated percentage of meters in the group outside the acceptable limits of accuracy but not less than 20% of the group tested per year. Meters so tested and placed into service shall be sampled as a separate group from the remainder of the original group not tested. When the sample results of the remainder of the original group indicate that the group has come up to acceptable limits the two components of the group may be consolidated for sampling.

(e) Utility to Retain Test Results – Accuracy test results shall be stored by the utility for the life of the meter and at least three years after the retirement of the meter.

(f) Utility Reporting – No later than April 1 of each year, a utility shall report to the Commission on its in-service meter program. For tests performed pursuant to subsection (b), the report shall indicate the number of meters in each homogeneous group in service at the beginning of each year, the number of meters making up the sample for each such group, the test results for each group, and any corrective action taken. In addition, the report shall describe the results from meters tested under a periodic interval plan pursuant to subsection (c), including the number of meters in each homogeneous group in service at the beginning of each year, the number of meters tested, the test results, and any corrective action taken. The report shall also identify any classes of meters for which the utility tests on a more frequent basis than prescribed in ANSI C12.1, and the basis for the more frequent testing. The report shall also outline the current year's testing plan.

(g) Inspections – When metering installations are tested or inspected, instrument transformers and wiring associated with the installation shall be visually inspected for correctness of connections and evidence of damage. Nameplate or stenciled ratios shall be verified against ratios used by the utility for billing. These inspections are not required if performing them cannot be done safely.

(NCUC Docket No. M-100, Sub 5, 7/15/65; NCUC Docket No. E-100, Sub 4, 6/8/66; NCUC Docket No. M-100, Sub 140, 12/03/13; NCUC Docket No. E-100, Sub 153, 11/27/2019.)