

(Testing Equipment and Standards), Section 15 (Testing of Metering Equipment), and Section 17 (Test Procedures and Accuracy Requirements).

An informal conference was held at the Commission's offices on March 8, 2000. On April 17, 2000, the Utilities filed an amended application that reflects changes to the pilot plan discussed at the informal conference.

The proposed sample meter plan is based on American National Standard Code "ANSI C121.1- 1995 and ASQCZ1.9-1993." The major components of the sample plan and the Commission's finding on each component are described below:

a. All new metering devices shall be 100 percent tested either by the manufacturer or by the Utility. The Commission finds that new meters tested by the manufacturer should be sample tested by the utility prior to being placed in service to assure that the meter accuracy was not affected during shipment.

b. Meter lot composition or group will be based on manufacturer and model, assuming like design and construction, with individual lot population not to exceed 15,000 meters. The Commission finds that to be reasonable.

c. The Utility must replace or test all meters in a failed test group within 18 months. If, after testing 10 percent of the meters in a failed lot, the lot performance falls within acceptable ANSI Z1.9 parameters, the Utility has the option to cease replacement/testing and apply the ANSI tightened inspection criteria for the next sampling period. Any future lot failure requires 100 percent replacement or testing within the subsequent 18-month period. The Commission finds that if a sample fails, but subsequent testing of another 10 percent provides acceptable results, then this suggests that the meters in that group are not homogeneous. A key element of any

sample-testing program is the formation of a homogenous group. Thus, if a test group of meters fails, the whole group must be tested.

d. In the event a utility experiences a failure of multiple groups or when the number of meters in the affected groups exceeds 3.5 percent of the total meter population, the sample meter plan provides that in lieu of removing all meters the utility may propose an alternative removal plan. The basis for this proposal is possible operational hardship if a substantial number of meters must be replaced. The Commission finds that the Utilities should test all the meters in multiple failure groups within 18 months. If this requirement should pose an operational hardship on a utility, then the utility should file a request for deviation. The Utilities do not justify or explain why testing all the meters in such a case could pose an operational hardship.

The Utilities are requesting deviation from KAR 5:041, Section 15(3), which states, "Metering equipment, including instrument transformers and demand meters, shall be tested for accuracy prior to being placed in service, periodically in accordance with the schedule below, upon complaint, when suspected of being in error, or when removed from service for any cause." The Utilities' proposal will eliminate the requirement to test a meter after it is being removed from service. The Utilities state, "A meter routinely removed from service for reasons other than sample testing or damage should perform no differently than the sample group." The majority of the expense to test the meter is the cost to remove the meter from the field. Since the meter is planned for removal, the saving for not testing it is minimal. The Commission finds that testing meters removed from service will provide an explanation in complaint cases where a

customer bill has increased when a new meter was installed because the Utility will have a test record to indicate that the old meter was slow.

The Utilities are requesting to extend the time intervals for testing certain metering equipment, including instrument transformer meters and demand meters, because these meters have historically realized high levels of accuracy. The Commission finds that the requested deviation is reasonable.

Based on the evidence of record, the Commission finds that the proposed sample meter plan will be reasonable only if revised to reflect the changes listed below.

1. Removal of the following items from the sample meter plan:

a. Page 8 of Appendix A: "If, after testing 10 percent of the meters in a failed lot, the lot performance falls within acceptable ANSI Z1.9 parameters, the utility has the option to cease replacement/testing and apply the ANSI tightened inspection criteria for the next sampling period."

b. Pages 8, 9 of Appendix A: "Removal of multiple failed meter lots could pose operational hardship. Utilities will propose an alternate removal plan upon the failure of multiple groups or when the number of meters in the affected groups exceeds 3.5 percent of the total meter population."

c. Page 3 of Appendix A: "Meters identified within this test plan may be removed from service and retired without test. Meters identified within this test plan may be returned to service without being tested."

2. New meters tested by the manufacturer should be sample tested by the utility prior to being placed in service.

3. The Utilities must obtain a watt-hour reference standard from each meter manufacturer that supplied them with meters and perform the required testing of those meters and send it to the Commission's Meter Standards Laboratory for testing annually.

4. The Utilities must provide certified test results of all new meters received to the Commission's Meter Testing Laboratory annually.

5. National Institute of Standards and Technology comparison test results should also be provided from all of the manufacturers that are performing 100 percent testing as well as traceability charts.

IT IS THEREFORE ORDERED that the Utilities shall have 20 days from the date of this Order to file a revised amended sample meter test plan reflecting the modifications discussed in the findings above. If a revised plan is not filed within that time, the proposed amended plan is denied.

Done at Frankfort, Kentucky, this 4th day of August, 2000.

By the Commission

ATTEST:



Executive Director, Acting