

NORTHWEST NATURAL GAS COMPANY

WN U-6

Second Revision of Sheet M.1

Cancels First Revision Sheet M.1

SCHEDULE M
METER TESTING PROCEDURES

The purpose of this schedule is to describe the testing requirements for new meters received from a supplier, and for meters that are removed from service and intended for reuse, as more completely described in the Company's Meter Testing Standards and Procedures, available in the Company's offices.

The Company uses a combination of the following equipment for proving meters:

- | | | |
|-----|--|-----|
| (a) | Model 6 Dresser Transfer Provers | (C) |
| (b) | Bell Provers | (T) |
| (c) | Sonic NINE Lift Sonic Nozzle Provers | (T) |
| (d) | Meriam manometers or pressure gauges for differential pressure testing | (N) |

Meter test equipment, meter test equipment calibration, and meter test methods conform with American National Standards Institute (ANSI) standards B109.1, B109.2, and B109.3.

Minimum acceptable accuracy for all new and rebuilt meters is 100% +/- 1% at specified flow rates. New meters are tested by the manufacturer, or upon receipt, by the Company. An exception is allowed with the receipt of a batch shipment of new diaphragm meters with ratings up to 1,000 cubic feet per hour. The shipment may be sample tested in accordance with American National Standards Institute/American Society for Quality Control standard Z1.4 (2013), and the entire batch accepted or rejected on the basis of the sample test results.

Third Party Laboratory Testing. At the option of the Company, meter testing may be performed by either Honeywell or Energy Economics, Inc. Both companies use testing equipment similar to the Company's equipment. Third parties are only utilized when the volume of meter testing at the required intervals exceeds the Company's internal meter testing capacity.

Meter Sampling Program. The Company's meter sampling program, which meets the requirements of Part IV (In-Service Performance) of the 2000 edition of ANSI B109.1 and B109.2, allows the Company to keep particular meters in service for intervals beyond those specified in WAC 480-90-348, provided the meters tested satisfy the program's performance requirements. Eligible meters are diaphragm meters with a rated capacity of up to and including 1,000 cubic feet per hour.

Each meter in the meter sampling program is initially assigned to a meter family, or lot, according to manufacturer, size, type, and set year, or year of manufacture. At the option of the Company, meters in any lot may be further subdivided according to location, age, or other factors which may be disclosed by test data to have an effect on the performance of the meters. Subsequently, meter lots may be modified or combined as justified by the performance records.

(continue to Sheet M.2)

Issued March 15, 2024
NWN WUTC Advice No. 24-03

Effective with service on
and after April 29, 2024

[BY AUTH. OR ORDER OF WASH. UTILITIES & TRANSPORTATION COMM. DOCKET NO.UG-240178](#)

SCHEDULE M
METER TESTING PROCEDURES
(continued)

Each meter lot in the meter sampling program is subject to a statistical performance evaluation using a random sample of the lot. The evaluations are conducted annually in accordance with ANSI B109.1 and B109.2. A meter lot is considered to be acceptable if the lot sample indicates (a) a minimum proportion of 80% of the lot measures between 98.0% and 102.0% accurate (an "accuracy" requirement), and (b) a minimum proportion of 90% of the lot measures no more than 102.0% accurate (a "not fast" requirement). Based on the annual performance evaluation, each meter lot determined to be acceptable is allowed to remain in service, subject to sample testing and review in succeeding years.

(T)
(T)

Meters in lots determined to require change-out are changed by December 31 of the year following determination of the need for change-out (i.e. by December of the second year following the year of sampling). However, if in any given year the number of meters required for change-out exceeds three (3) percent of the total number of meters in the Meter Sampling Program, the Company may, at its option, extend the change-out schedule so that the meter lot is changed within a maximum of four (4) years from determination that change-out is required (i.e., by December of the fourth year following the year of sampling).

(C)
(C)
(D)(T)

Issued November 25, 2019
NWN WUTC Advice No. 19-08

Effective with service on
and after January 1, 2020

Issued by: **NORTHWEST NATURAL GAS COMPANY**

d.b.a. NW Natural
BY AUTH. OR ORDER OF WASH. UTILITIES & TRANSPORTATION COMM. DOCKET NO. UG-190983.