

**Spire Missouri
GR-2021-0108**

Response to Office of Public Counsel Data Request 2145

The rebuttal testimony of James Rieske p. 11 lines 7-10 states:

Ultrasonic meters are twenty times more accurate than traditional diaphragm meters. An ultrasonic meter is delivered with accuracy to +/- 0.1% versus the accuracy of +/- 2.0% in diaphragm meter technology. Spire has performed numerous accuracy tests on ultrasonic meters during the technology evaluations.

- Please provide the aggregate results of the accuracy tests during the technology evaluations referenced in the quote above.
- Please provide any and all other empirical work that the Company may have relied on to substantiate Mr. Reiske’s statement.

DR Requested by Geoff Marke (Geoff.marke@opc.mo.gov).

Response:

Every ultrasonic meter that has been deployed has a pre installation accuracy test. This accuracy testing more than validates the accuracy claims made in my Rebuttal Testimony. Below is a summary of the accuracy testing results for 5400 meters purchased in Missouri West. I have also attached an excel file with the individual records and the summary provided below. This testing data demonstrates that 82.7% of the 5400 ultrasonic meters tested with .05% of exact accuracy. 99.7% of the 5400 meters tested within .1% of exact accuracy. The remaining 14 or 0.03% of the 5400 meters tested within .15% accuracy. What is further revealed in this testing is that the ultrasonic meter maintains its accuracy regardless of the flow through the meter. This is shown by the consistency of the check test (20% capacity) to the open check (80% accuracy) across this meter population. Having reviewed the results of hundreds of thousands of accuracy tests for diaphragm meters for Spire, this is a remarkable improvement in the consistency and accuracy of residential metering.

Pre-installation Accuracy Test of Ultrasonic Meters – June 2021

Deviation

Accuracy	Count of Meters	Accuracy	
99.85	14	Exact	12.4%
99.9	920	Within .05%	82.7%
99.95	1	Within .1%	99.7%
99.95	3763	Within .15%	100.0%
100	672		
100.05	30		

Total

5400

Signed by: James Rieske