

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

DATE: March 25, 2015

AT (OFFICE): NHPUC

NHPUC 26 MAR 15 AM 9:02

FROM: Robert J. Wyatt *RJW*  
Assistant Director, Safety Division

SUBJECT: Northern Utilities, Inc.  
DG 14-222 Motion for Waiver of Puc 505.07  
Staff Recommendation

TO: Debra A. Howland, Executive Director, NHPUC

cc: Randall Knepper, Director, Safety Division  
Stephen Frink, Assistant Director, Gas and Water Division  
Michael Sheehan, Legal Division

On September 4, 2014, Northern Utilities, Inc. (Northern or the Company) filed a petition requesting the waiver of Puc 505.07(a), which requires that the Company “maintain the equipment and facilities necessary for accurately testing all types and sizes of meters employed for the measurement of gas at its customers, unless arrangements approved by the commission, pursuant to Puc 201.05, have been made to have such testing done elsewhere.” The request for waiver is similar to one Northern made in DG 10-245, which the commission conditionally approved for a three year term in a secretarial letter dated October 18, 2010.

On September 11, 2014, Staff issued data requests to Northern related to the petition, as well as to the current meter testing methodology employed. On October 1, 2014, Staff met with Northern in a technical session to discuss the petition, the meter test results over the past two years, and the data responses from discovery issued in this docket. Northern conducted additional analysis of its cost-per-meter-tested data in order to provide information that more closely tied to the Company’s agreement with its third party vendor. Northern recently provided Staff with a more accurate cost per meter test summary. Staff followed with a request for supporting documentation for the summary analysis.

Staff has completed its review of Northern’s request and supporting documents for a waiver of Puc 505.07.

### Background

Northern owns and operates three gas divisions in New England: Northern Utilities (Maine Division); Northern Utilities (New Hampshire Division); and Fitchburg Gas and Electric (Massachusetts). The Company has received commission approved waivers of Puc 505.07

since 2009. The Company has contracted with out-of-state third party vendors for its entire meter testing and servicing requirements. The Company's analysis shows that over the past five years the average cost to Northern's combined gas divisions for outsourcing the meter testing and servicing function has been \$62,682<sup>1</sup> per year. During the most recent three year period, Northern has seen a reduction in these combined annual costs to approximately \$30,000 per year, allocated on a proportional basis between the three gas divisions. The Company attributes much of these savings to its current vendor, Utilities & Industries based in Reynoldsville, PA, which was the awarded vendor for years 2011, 2012, and 2013. The Company has continued to use this vendor in 2014 and 2015.

In its study (page 6) Northern estimates it would cost \$387,735 to renovate the old Fitchburg meter repair shop to be able to perform all of its gas meter testing and repair services. If it were to expand its Portsmouth, NH operations center to meet its meter servicing requirements, the Company estimates it would cost \$946,054. The Company estimates an additional expense for equipment requirements of \$242,870, and estimates its annual personnel cost requirements for 1.56 FTEs, combined with utility and tool costs, to be \$127,740. Northern's three gas operations tested an average of approximately 3,000 meters annually over the past five years. The Company's NH Division tested slightly less than 1,000 meters annually over the same five year period.

Northern does have a process in place to meet the requirements of Puc 505.05, customer witnessed meter tests. The Company's third party vendor provides testing services from a mobile van that is equipped with a prover that can be used for testing meters. These tests can be arranged and scheduled so that customers can witness the procedures at Northern's Portsmouth facility.

### **Staff Analysis**

Staff reviewed Northern's petition, supporting documents, data responses, annual E-7 meter test reports, notes from the technical session, telephone calls with Company representatives responsible for the meter testing function, and prior history and related dockets.

Results of preliminary analysis led Staff to conclude that the actual meter testing costs provided by Northern were somewhat misleading and not representative of true meter testing costs. The problem became apparent to Staff when it compared specific meter class actual average testing costs to line item costs that are listed on the purchase order agreement with its third party vendor. Using cost and number of meters tested data included in the Company's filing, Staff calculated the 2013 average "cost per meter tested" value for all NH Division meter test classifications to be \$10.53 per meter. This aggregate average cost was actually less than the least expensive meter test cost as quoted on the purchase order agreement. In response to this observation by Staff, the Company agreed to take a closer look at its outsourced third party vendor invoices and accounting records related to the meter testing program by reconciling the expenditure data to the line item costs identified in the purchase order agreement.

---

<sup>1</sup> DG 14-222, September 3, 2014, filing by Northern, Executive summary, Current Processes section.

Based on what Staff has learned during this review, there were some peripheral costs and credits included on the invoices that were either incorrectly applied to, or omitted from the Company's cost analysis, contributing to inaccuracies in what had been included in the original filing. The vendor invoices included various cost categories to test and adjust, test and condemn, shipping costs, credits from scrapping condemned meters and other minor costs and credits that were not consistently represented in the Company's initial analysis. These inconsistencies contributed to the inaccurate results.

Northern representatives acknowledged the discrepancies and discussed possible remedies with Staff. The parties agreed that rather than embarking on a time intensive research and retrieval of five years of accounting records for each of the three gas divisions, the Company would provide Staff with adjusted cost figures specific to its NH Division meter testing program for 2012 and 2013. Staff expected the adjusted cost figures would be consistent with the invoiced costs and with the costs identified in the purchase order agreement. On February 27, 2015, the Company provided Staff with an updated summary of the aggregate annual average meter testing program costs. The resulting average "cost per meter tested" provided a more intuitive reflection of the cost per meter tested pricing for outsourcing this meter testing and refurbishing program. Staff then compared these costs to the Company's cost estimate of operating its own meter test shop at one of its gas operations facilities.

**Table 1.**

<b>Annual Third Party Costs for Meter Testing Program Northern Utilities - NH Division</b>			
	2012	2013	Average
Annual Outsourcing Costs	\$26,296	\$18,593	\$22,445
Number of Meters Tested	930	797	864
Cost per Meter	\$28.28	\$23.33	\$25.98

As can be seen in Table 1 above, over the past two years the cost of outsourced meter testing and servicing program for the NH Division has averaged \$22,445 per year. During this two year period the Company's vendor tested an average of 864 meters per year at a cost of approximately \$26 per meter. On March 16, 2015, the Company provided Staff with additional supporting data which Staff used to create tables for 2012 and 2013 that show meter testing program costs for meter group classifications as identified in Puc 505.03(e), Table 505-1. These two tables are provided in Attachment B of this document. In the future, Staff would like to see the Company using similar meter grouping classifications in its program evaluations.

Northern projected annual operating costs of \$127,740<sup>2</sup> if it were to bring the meter testing and servicing program for all of its gas divisions back in-house. In Table 2 Staff shows Northern's average "cost per meter tested" under three different scenarios for all three gas

<sup>2</sup> See cost summary table in DG 14-222, Northern September 4, 2014 initial filing, page 6.

divisions combined. Excluding facility and equipment costs, this hypothetical example shows that the approximate average cost per meter tested would be \$42.58 based on a volume of 3,000 meters, \$31.94 based on a volume of 4,000 meters, and \$25.55 based on a volume of 5,000 meters tested per year. As reflected in Table 1 above, the two-year average cost per meter tested by Northern's third party vendor was approximately \$26 per meter. Table 2 shows Northern's three gas divisions may be able to achieve similar costs in-house only if its annual meter tests approach 5,000 meters per year. In 2013, Northern reported that its three gas divisions sent 3,837 meters to its third party vendor for testing. Because of the discrepancies in the historical cost data as pointed out earlier in this memorandum, Staff simply demonstrates in this Table 2 example, assuming annual operating costs remain mostly fixed, the approximate average cost per meter tested when either three, four or five thousand meters are tested annually at an in-house facility.

**Table 2.**

<b>Unitil Operated Meter Test Facility - Estimated Cost per Meter (Used by all Unitil Gas Divisions)</b>			
	2014	2014	2014
Annual Operating Costs	\$127,740	\$127,740	\$127,740
Number of Meters Tested	3,000	4,000	5,000
Cost per Meter	\$42.58	\$31.94	\$25.55

Using Northern's NH Division's actual two year average cost per meter tested results from Table 1 as a proxy for Northern's three gas divisions combined, Staff concludes that the Company likely will continue to save operating costs across its three gas operations by outsourcing its meter testing requirements. Although Staff did not attempt to validate Northern's assertions for cost assumptions used in performing meter tests in-house, the analysis of the Company's recently updated costs for 2012 and 2013 suggest it may become cost effective for the Company to bring this operation back in-house at some point in the future. Most importantly, the Company needs to review its accounting processes related to the outsourced meter testing program cost data and make necessary improvements so that it can perform meaningful cost-benefit analyses. Looking ahead, the Company will need to more accurately reflect its in-house cost projections and its actual costs by meter group classifications. Staff learned from this review that there are numerous components to the price quotes and the invoices that need to be consistent, defined, and reconciled in order to compare its in-house vs. outsourced options.

**Staff Recommendation**

Based on Staff's review of the Company's request, its follow-up discovery and analysis, Staff recommends the Commission approve Northern's request for a waiver of Puc 505.07 with the following conditions:

1. The waiver should be for a period of four years, beginning on October 28, 2013, coinciding with the expiration of the previous waiver, approved in DG 10-245.

Staff notes the four year period is based on a retroactive time frame that considers the Company's current request for the three year waiver was filed with the Commission ten months after the expiration of the prior waiver, with additional time needed for Staff to complete its review. Although the circumstances that led to late filing were not addressed in the filing, the Company did contact Staff when it discovered this administrative oversight and followed up with its new request for waiver in this filing.

2. Subsequent waiver requests of Puc 505.07, if necessary, should be filed by the Company at least 60 days prior to the expiration date of an effective waiver.
3. This waiver should not be assignable or otherwise transferrable to another entity as a result of a change of control, or ownership of Northern Utilities.
4. In the event Northern anticipates or experiences any significant change in its third party's testing capabilities or practices, including costs, it should immediately notify the commission by letter, with reference to this docket number.
5. The commission should reserve the right to reassess, revise, or otherwise revisit the waiver in the event of changes in statute or regulatory requirement, or other relevant developments related to meters and meter testing.
6. Throughout the term of this waiver, the Company should be required to file, on an annual basis, a detailed meter testing program cost analysis, including a reconciliation of its NH Division's annual outsourced gas meter testing program costs to identified costs in its third party vendor's purchase order agreement(s), and a cost benefit analysis that compares Northern's three gas divisions' combined annual costs to outsource its meter testing program to updated cost estimates to bring the meter testing and servicing operation back in-house. All reporting should provide detailed cost per meter test and repair information for each meter group classification and will allow both the Company and Staff to evaluate the effectiveness of the outsourcing option over in-house options. The initial 2014 report filing should be due to the Commission on July 1, 2015, with subsequent annual filings due on March 31 of each year throughout the term of the waiver.

Any questions regarding this Staff Recommendation should be directed to Robert Wyatt, Assistant Director – Safety Division (Staff)

Attachment A

**From:** Dube, Chris  
**To:** Wyatt, Robert  
**Subject:** RE: Meter test cost per meter detailed information  
**Date:** Friday, February 27, 2015 9:39:28 AM

---

Bob,

We broke out the costs for testing the NH gas meters in 2012 and 2013. We queried the data to identify the number of each size meter that were sent for testing. We then implemented a cost to test and adjust or test and condemn according to the price quoted by the vendor. We also factored in shipping costs and any credits we get for scrapping condemned meters. This increased our

annual Total Test Costs because our original analysis included only what the vendor actually charged us for testing and our new cost estimate includes what it would cost to test every meter. With everything factored in, the costs for 2012 and 2013 testing of NH gas meters are as such:

2012		
Total Test Cost		\$26,296.34
Total Meters Tested		930
Cost per Meter		\$ 28.28

2013		
Total Test Cost		\$18,593.34
Total Meters Tested		797
Cost per Meter		\$ 23.33

The difference in the average cost per meter from year-to-year is due to the variances in the number of each size that are tested and variances in shipping costs.

Thank you for your patience and if you have any questions or want to discuss the approach, please feel free to call me,  
 Chris  
 Christopher Dube  
 Manager, Technical Services  
 325 West Road  
 Portsmouth, NH 03801

---

**From:** Wyatt, Robert  
**Sent:** Tuesday, February 24, 2015 3:27 PM  
**To:** Dube, Chris  
**Subject:** Meter test cost per meter detailed information

Hi Chris,  
 Do you have anything new for me to review since our last conversation? I was thinking something would have been sent to me last week.  
 Bob  
 Robert J. Wyatt  
 Assistant Director of Safety & Security, Safety Division  
 New Hampshire Public Utilities Commission

Attachment B

Northern Utilities, Inc. NH Division - Meter Testing Cost Analysis for 2012							
Vendor Invoice Descriptions	Service Unit Cost	Units	Service Costs	Shipping Costs	Total Costs	Bundled Unit Cost	Meter Classification Descriptions
Class A, B, C Repairs	\$11.81	754	\$8,904.74	\$4,454.42	\$13,359.16	\$17.72	Diaphragm 0-500 CFH
Class J Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 0-500 CFH Scrapped
Class B Repairs	\$62.46	100	\$6,246.00	\$571.66	\$6,817.66	\$68.18	Diaphragm 800-1000 CFH
Class J Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 800-1000 CFH, Scrapped
Class B Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 1400 CFH
Class J Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 1400 CFH, Scrapped
Class B Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 2300 CFH
Class B Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 2300 CFH, Scrapped
Class B Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 5000 CFH
Class B Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 5000 CFH, Scrapped
Class B Repairs	\$74.86	76	\$5,689.36	\$430.16	\$6,119.52	\$80.52	Rotary 3M-7M Series
Class J Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Rotary 3M-7M Series Scrapped
Class B Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Rotary 11M Series
Class J Repairs	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	Rotary 11M Series Scrapped
<b>Total 2013</b>	<b>\$22.41</b>	<b>930</b>	<b>\$20,840.10</b>	<b>\$5,456.24</b>	<b>\$26,296.34</b>	<b>\$28.28</b>	

R.Wyatt

Northern Utilities, Inc. NH Division - Meter Testing Cost Analysis for 2013							
Vendor Invoice Descriptions	Service Unit Cost	Units	Service Costs	Shipping Costs	Total Costs	Bundled Unit Cost	Meter Classification Descriptions
Class A, B, C Repairs	\$11.81	502	\$5,928.62	\$2,264.94	\$8,193.56	\$16.32	Diaphragm 0-500 CFH
Class J Repairs	\$9.81	187	\$1,834.47	\$794.75	\$2,629.22	\$14.06	Diaphragm 0-500 CFH Scrapped
Class B Repairs	\$62.46	58	\$3,622.68	\$246.50	\$3,869.18	\$66.71	Diaphragm 800-1000 CFH
Class J Repairs	\$57.46	2	\$114.92	\$8.50	\$123.42	\$61.71	Diaphragm 800-1000 CFH, Scrapped
Class B Repairs		0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 1400 CFH
Class J Repairs		0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 1400 CFH, Scrapped
Class B Repairs		0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 2300 CFH
Class B Repairs		0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 2300 CFH, Scrapped
Class B Repairs		0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 5000 CFH
Class B Repairs		0	\$0.00	\$0.00	\$0.00	\$0.00	Diaphragm 5000 CFH, Scrapped
Class B Repairs	\$74.86	38	\$2,844.68	\$161.50	\$3,006.18	\$79.11	Rotary 3M-7M Series
Class J Repairs	\$69.86	6	\$419.16	\$25.50	\$444.66	\$74.11	Rotary 3M-7M Series Scrapped
Class B Repairs	\$77.53	4	\$310.12	\$17.00	\$327.12	\$81.78	Rotary 11M Series
Class J Repairs	\$72.53	0	\$0.00	\$0.00	\$0.00	\$0.00	Rotary 11M Series Scrapped
<b>Total 2013</b>	<b>\$18.91</b>	<b>797</b>	<b>\$15,074.65</b>	<b>\$3,518.69</b>	<b>\$18,593.34</b>	<b>\$23.33</b>	

R.Wyatt

**SERVICE LIST - EMAIL ADDRESSES - DOCKET RELATED**

---

---

**Pursuant to N.H. Admin Rule Puc 203.11 (a) (1): Serve an electronic copy on each person identified on the service list.**

Executive.Director@puc.nh.gov

alexander.speidel@puc.nh.gov

amanda.noonan@puc.nh.gov

epler@unitil.com

mark.naylor@puc.nh.gov

ocalitigation@oca.nh.gov

randy.knepper@puc.nh.gov

steve.frink@puc.nh.gov

Docket #: 14-222-1

Printed: March 26, 2015

**FILING INSTRUCTIONS:**

**a) Pursuant to N.H. Admin Rule Puc 203.02 (a), with the exception of Discovery, file 7 copies, as well as an electronic copy, of all documents including cover letter with:**

DEBRA A HOWLAND  
EXECUTIVE DIRECTOR  
NHPUC  
21 S. FRUIT ST, SUITE 10  
CONCORD NH 03301-2429

**b) Serve an electronic copy with each person identified on the Commission's service list and with the Office of Consumer Advocate.**

**c) Serve a written copy on each person on the service list not able to receive electronic mail.**