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STATE OF NEW HAMPSHIRE

BEFORE THE

PUBLIC UTILITIES COMMISSION

DG 11-069

Northern Utilities, Inc.

Direct Testimony

of

Robert J. Wyatt
Utility Analyst IV

March 26, 2012

Q. Please state your name, occupation and business address.

A. My name is Robert J. Wyatt. I am employed by the New Hampshire Public Utilities Commission (Commission) as a Utility Analyst in the Gas & Water Division. My business address is 21 South Fruit Street, Suite 10, Concord, New Hampshire 03301.

Q. Please describe your educational background and professional experience.

A. I am a graduate of Southern New Hampshire University (SNHU), Manchester, New Hampshire, where I earned a Bachelor of Science degree in Technical Management. I also graduated from the New Hampshire Technical Institute, Concord, New Hampshire, where I earned an Associate in Engineering degree with a major in Electronic Engineering Technology. In 1991 I was accepted into the MBA degree program at SNHU, where I successfully completed a course in information sources and research methods. At that time I made the decision to withdraw from the MBA degree program and focus more on the challenges of my professional career. I have completed several professional development workshops over the years including those related to gas procurement, cost of service, cost allocation and rate design.

I am an analyst with over 25 years of experience in areas related to natural gas supply planning, energy supply planning, contracting and accounting, and utility regulation. I joined the Commission in March 2002 as a Utility Analyst III in the Gas & Water Division with responsibilities related to the gas and steam utility system costs, operations and various regulatory matters. In 2009 I was promoted to my current position of Utility Analyst IV. Prior to coming to the Commission, from August 2000 to March 2002 I worked as an Energy and Raw Materials Analyst for Hitchiner Manufacturing Co., an investment casting foundry with facilities in Milford and Littleton, New Hampshire. I was responsible for raw materials, natural gas and propane contracting for the company's New Hampshire operations, which at the time was one of the largest end-use consumers of natural gas and electricity in the state. At Hitchiner I was a member of the company's energy conservation committee and also responsible for energy use tracking, cost analysis, invoice reconciliation, forecasting, budgeting and reporting to senior management of the company. From 1985 through 2000 I worked for EnergyNorth, Inc., the New Hampshire based parent company of EnergyNorth Natural Gas, Inc. where I began my professional career as a supervisor in the meter reading and customer accounting department. In 1987 I accepted a promotion into a position as Gas Dispatch Supervisor, and then in 1988 I was promoted to Gas Supply Analyst, both of which were in the gas supply department of EnergyNorth. As gas dispatch supervisor I was responsible for pipeline balancing, the peakshaving plant supply resource function, gas supply inventory management and supply invoice reconciliations. In the gas supply analyst position I was responsible for the development and maintenance of next day, short term, long term and design day gas supply forecast models. I was also responsible for interruptible customer pricing and sales, supply contract administration, short term spot natural gas purchasing, annual seven day storage requirement calculations. In the gas supply analyst position I also assisted in all aspects of integrated resource planning, demand-side management programs and managed the unbundled transportation customer daily supply/demand balancing, monthly billing, supplier monitoring and related data base administration..

Q. Have you testified as a Staff witness before this Commission in previous dockets?

A. Yes I have, in cost of gas, cost of (steam) energy and other gas and steam related proceedings. I also filed cost of service/rate design testimony as a commission staff witness in DG 10-017, the most recent EnergyNorth base rate case.

Q. What is the purpose of your testimony in this proceeding?

A. My testimony will summarize the settlement agreement as it relates to the final adjustments and schedules for: 1) cash working capital requirements; 2) the accounting and marginal cost of service studies; 3) class revenue requirements, rate design and bill impacts.

Q. Do you support the settlement agreement as it relates to the three areas you summarize in your testimony?

A. Yes I do, for the reasons I spell out in my testimony.

I. CASH WORKING CAPITAL

Q. Was the methodology used in the Company's lead-lag study to determine cash working capital requirements consistent with what has been used in other recent base rate filings?

A. Yes. The Company's consultant, Mr. Paul M. Normand performed a lead-lag study that supports the cash working capital calculations in this docket. The methodology used by Mr. Normand is consistent with what has been used in previous gas utility base rate filings with the Commission, including another lead-lag study in docket DG 10-017, the EnergyNorth base rate filing.

Q. Please summarize the results of Mr. Normand's lead-lag study and CWC calculations.

A. On June 29, 2011 Mr. Normand filed a lead-lag study and cash working capital (CWC) calculations supporting a delivery-related CWC requirement of $108,006. The December 15, 2011 revised lead-lag study supported a CWC requirement of $184,070.

As a check to Mr. Normand's calculations I performed separate calculations for both delivery- and supply-related CWC requirements with similar results.

Q. Please summarize the settlement agreement as it relates to the calculations of CWC used in rate base.

A. The settlement agreement included a slightly lower CWC requirement of $183,098 when compared to the December 15, 2011 figure. The change is attributed to the lead-lag days being applied to slightly different expense figures that are reflected in Exhibit 1 of the settlement agreement. See Attachment RJW-1, Section I for a comparison of the originally filed CWC and as revised.

Q. Do you agree with the proposed supply-related cash working capital percentage of 2.5334% in the settlement agreement?

A. Yes. The supply-related CWC requirement in the settlement agreement is the same figure as what was filed on June 29, 2011. Mr. Normand's calculations start by determining a net lag, a value when rounded to two decimals equals 9.25 days. He calculates the annual supply-related cash working capital percentage by dividing the net lag days by 365 days. In my separate calculation I found that by allowing the supply-related net lag to round to four decimal places the net lag value equals 9.2469 days. Using the net lag day result carried to four decimal places, divided by 365 days, my calculation results in the identical supply-related cash working capital percentage of 2.5334%. See Attachment RJW-1, Section II.

II. ACCOUNTING AND MARGINAL COST OF SERVICE STUDIES

Q. Please provide a brief overview of Mr. Normand's accounting and marginal cost of service studies.

A. In Schedules PMN-1G-2 through PMN-1G-6 Mr. Normand presents the accounting cost of service study components of rate base, revenue and operating expense in a few different layouts, including summary schedules. These schedules are attached to the settlement agreement as Exhibit 3, Attachments 1 through 5, and provide details for bundled or unbundled costs to serve specific to functions, or to individual customer classes. In Schedule PMN-1G-5 he provides unbundled costs to serve by function, efficiently separating delivery service costs from supply costs. Unbundled costs provide a well-organized means to determine revenue requirements used in delivery service rate design. By using a similar cost matrix format in each schedule Mr. Normand was able to efficiently provide this collection of presentation formats related to the cost to serve each service function or each class.

Q. Please summarize the revenue requirements used in Mr. Normand's accounting cost of service study.

A. Mr. Normand's accounting cost of service study in schedule PMN-1G-5 (Exhibit 3, Attachment 4 of the settlement agreement), on page 22 of 38, line 10, reflects a total pro forma test year revenue requirement is $62,986,395. The pro forma test year revenue requirements are summarized in the settlement agreement by adding the total revenue deficiency/requirement to total test year revenue (See Exhibit 1, Schedule RevReq-1-2, column 3, lines 3 + 6). Referring back to schedule PMN 1G-5, page 22 of 38, Mr.

Normand unbundles this total pro forma test year revenue requirement to show revenue requirements for the delivery service function at $19,918,638 and for gas supply service function at $43,067,757. The delivery service revenue requirement is carried forward to Table 14 of his marginal cost of service analysis in schedule PMN 2G-2 and to the rate design calculations in schedule PMN 1G-8 (see Exhibit 4, page 2 of 8, column S, line 38). The revenue requirements for each indirect base gas cost component, as noted on pages 7-8 of the settlement agreement, are reflected in Exhibit 3, Attachment 1 of the settlement agreement, which is the final revised Schedule PMN-1G-2. On page 6 of 7 of this schedule, line 12, the indirect gas revenue requirements reflect LPG and LNG production facilities at $307,762, gas dispatch and acquisition at $314,750 and other administrative and miscellaneous items set at $96,850.

Q. Please provide a brief overview of Mr. Normand's marginal cost study (MCS).

A. Exhibit 4, Attachment 1 of the settlement agreement is the final revised marginal cost study. Mr. Normand performs a marginal cost of service study to estimate the cost of providing one additional unit of service to one additional customer. In the case of delivery service, these long-run marginal costs to serve are comprised of capacity-related and customer-related costs. To the extent the sum of these marginal cost-based annual revenue requirements differ from the pro forma test year total delivery-related revenue requirement, the marginal cost-based revenue requirements are adjusted to equal the pro forma delivery-related revenue requirement of $19,918,638. Mr. Normand's pre-filed testimony provides detailed descriptions of both the accounting and marginal cost of service studies used in this delivery rate case. He provides additional information related to the marginal cost of service methodology in schedule PMN-2G-1.

Q. Were there any substantive adjustments to Mr. Normand's MCS prior to reaching settlement?

Yes. During the review and discovery process in this case Staff and the OCA pointed to areas of the analysis that needed further explanation, and in some instances, corrections to data, corrections to formulas in the spreadsheet model, or other adjustments when necessary. Some of the recommended changes were attributed to historical data inconsistencies tied to accounting system changes during transfers of Northern's ownership from Bay State Gas Company to NiSource and then to Unitil. An example of this issue can be seen in Mr. Normand's Schedule PMN-2G-2, Table 7, line 25, where it was determined that using 2009-2010 plant expense data would be more representative of forward-looking expenses than any other series of the historical 20-year data set for determining A&G loading factors. These two most recent years using the Unitil accounting system appear to more closely resemble data from the years 1996-2002. In between those two periods, from 2003-2008, the data was booked in the NiSource accounting system and are not a good match to how the data was booked before and after.

Q. Were there any other substantive adjustments made to the MCS in this case prior to reaching settlement?

Yes. During one of the last technical sessions Staff recommended that the Company make an adjustment to Table 8, page 11 of 11, line 12, to remove a line item for rental water heaters and conversion burners from distribution investment. The PUC audit highlighted other areas where additions or corrections were required that impacted numbers used in the cost studies. Updates to expense items such as depreciation, taxes, etc., and a change in the proposed rate of return, contributed to a new revenue requirement input for the cost studies and cash working capital calculations (see Schedule PMN-2G-2, Table 9, line 20 and Table 11, line 28).

Q. How do the marginal cost results from the MCS compare with the revenue requirements in the settlement?

A. Based on the revised MCS and corresponding class billing determinants, Mr. Normand estimates that marginal-cost based charges would produce 1.32% more revenue than the Company's total delivery-related revenue requirement.[1] As a comparison, in the initially filed MCS in this case the marginal-cost based rates would have produced 10.63% more revenue than the total delivery-related revenue requirement. In order to constrain revenue recovery to the Company's revenue requirement, Mr. Normand decreased the marginal class revenues uniformly by the 1.32%.

III. CLASS REVENUE REQUIREMENTS, RATE DESIGN AND BILL IMPACTS

Q. Do you believe the Company provided sufficient documentation supporting the adjustments to the class revenue requirements and rate design used in the settlement agreement?

A. Yes. I believe Mr. Normand's cost of service studies, as adjusted and corrected, provide sufficient support for changing rate class revenue requirements and redesigning rates. Staff carefully examined and analyzed the cost of service studies filed by the Company in support of its rate case petition. Analysis of these studies has informed Staff's development, in cooperation with the OCA and the Company, and decision to support this Settlement Agreement. Staff has found the class revenue requirements to be cost-

1 Re. Attachment PMN-2G-2, dated 1/20/12, Table 14, page 1 of 2, line 4, column 10.

based, tied to the Company's recently updated cost of service studies, and, along with the resulting rate design, consistent with historical Commission expectations.

Q. What is the delivery-related revenue increase that resulted from the settlement agreement?

A. As demonstrated in section 5.3 of the settlement agreement, the increase in delivery-related revenue requirement is $2,837,773[2], or 16.61% above normalized test year revenue. This compares to the Company's overall revenue deficiency of $2,742,525, as noted in section 2.1 of the settlement agreement, which includes a credit adjustment to production revenues of $95,246. The settlement agreement will also allow the Company to recover $113,806 through a settlement adjustment not subject to reconciliation as well as $818,819 related to 2011 non-revenue producing capital expenditures (see Schedule RevReq-1, lines 8 and 9). Overall, the delivery-related rate increase effective May 1, 2012 will be $3,675,150, an amount that is 21.5% above normalized test year revenue.

Q. Were there any considerations to limit the rate impact on individual rate classes in the settlement?

A. Yes. The settlement uses the Company's methodology which begins with class revenue requirements informed from the cost studies. Then the revenue impact for each rate class is essentially capped at 115% of the overall revenue increase. An additional constraint was that the lowest revenue increase target for any rate class would be 10%.

Q. Please describe the Company's customer class rate structures in Mr. Normand's revised Exhibit 4, Schedule 1G-8, dated 3/23/12, that provides support for rate design described in the settlement agreement.

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2 This total revenue requirement number is reflected in Exhibit 4 the rate design schedule PMN 1G-8, dated 3/23/12, on page 2, line 38, column T.

A. The Company's residential customers receiving delivery service under rates R-5 and R-10 (heating, low-income heating) are composed of a monthly customer charge and a declining block delivery rate structure in the winter period. During the summer period the delivery rate structure for the R-5 and R-10 customers will be composed of a monthly customer charge with a change in its volumetric billing to what is essentially a new flat delivery rate, where the volumetric rates for both the head block and the tail block are the same. Residential customers receiving delivery service under rates R-6 and R-11 (non-heating, low income non-heating) will now be composed of a monthly customer charge with a change in its volumetric billing to a flat delivery rate where both the head block and the tail block will be the same in both the winter and summer periods. The rate structure for small commercial and industrial (C&I) customers receiving delivery service under rate G-40 and G-50 will remain the same as before, composed of a monthly customer charge and a declining block delivery rate structure in both the winter and summer periods. The block rate differential will be smaller than what it was before. As for medium-and high-use C&I customers, the rate structures will remain similar to what they were before.

Q. Please describe what impact the Company's rate design, as reflected in the proposed settlement agreement, will have on cost recovery.

A. The Company's proposed rate design will recover more of the overall class revenue requirements through customer charges and is most noticeable in the residential and small commercial customer classes. This can be seen in Exhibit 5 of the settlement agreement, Schedule PMN-1G-9 pages 1 through 10, where these customers will experience higher overall per unit costs during lower use months.

As for the medium-to-large commercial and industrial customer classes, the higher customer charge is much less noticeable for the higher load factor customers because of the higher monthly loads throughout the year. For medium-to-large commercial and industrial customers with lower demand in the summer period, the higher customer charge will be more noticeable in those lower-use months.

Q. In your opinion are the customer charges proposed in the settlement agreement supported by Mr. Normand's cost of service studies?

A. Yes. The cost studies show monthly customer costs for the residential and small C&I classes support larger monthly customer charges than what are being proposed in the settlement, but would require too much of an increase to try to equalize these fixed costs with customer charges for customers receiving delivery service in these rate classes. The proposed customer charges for the customers in the medium to large C&I classes are generally more closely aligned with the cost study results.

Q. Please summarize how the revenues resulting from the rate design that supported fixed and volumetric rate components in the test year will change as a result of the settlement agreement.

A. **I. TEST YEAR REVENUE SUMMARY:**

Normalized test year results show customer charge revenue was $4,442,670, or 26% of total delivery revenue of $17,080,865. Volumetric delivery revenue attributed to the first rate block was $8,467,974, or 50% of total delivery revenue. Delivery revenue attributed to the second block was $4,170,220, or 24% of total test year delivery rate revenue.

II. PROPOSED INITIAL RATE DESIGN REVENUE SUMMARY:

Using the proposed rate design from the settlement agreement, prior to implementation of the May 1, 2012 step increase, customer charge revenue will be $6,433,190, or 32.3% of the total proposed delivery revenue of $19,918,638. Volumetric delivery revenue attributed to the first rate block will be $8,662,097, or 43.5% of the total proposed delivery revenue. Delivery revenue attributed to the second block will be $4,823,072, or 24.2% of the total proposed delivery revenue. Exhibit 4, the rate design schedule dated 3/23/12 and Exhibit 5, the bill impact schedule, provide the information necessary to compare test year to the proposed rates.

III. PROPOSED MAY 1, 2012 ADJUSTED REVENUE SUMMARY:

The proposed settlement adjustment of $113,806 plus the step adjustment of $818,819 result in an additional $932,625 annual delivery-related revenue requirement beginning on May 1, 2012. This adjustment results in a 4.68% increase to the proposed delivery-related revenue requirement ($932,625/$19,918,638 = 4.68%). Each of the rate components from the proposed rate design will be increased by a factor of 4.68% in order to achieve the additional revenue requirement. When the 4.68% adjustment factor from the settlement agreement is applied to the proposed rate design, customer charge revenue will be $6,732,937, or 32.3% of the total proposed delivery revenue of $20,851,263. Volumetric delivery revenue attributed to the first rate block will be $9,067,155, or 43.5% of the total proposed delivery revenue. Delivery revenue attributed to the second block will be $5,048,999, or 24.2% of the total proposed delivery revenue. Detailed analysis of how the May 1, 2012 adjustments will impact the proposed rate design is provided in Exhibit 6. Analysis of what the bill impacts will be as a result of the May 1, 2012 adjustments to the proposed rate design is provided in Exhibit 7.

Q. Does this conclude your testimony?

A. Yes.