position in Energy Supply at NSTAR, I was a Senior Financial Analyst within the NSTAR Investment Planning group from 2004 to 2008.
Q. Have you previously testified in regulatory proceedings before the New Hampshire Public Utilities Commission (the "Commission")?
A. Yes. I have testified on numerous occasions before the Commission.
Q. What is the purpose of your testimony?
A. The purpose of my testimony is to explain the Company's proposed firm sales cost of gas rates for the 2016/17 Winter (Peak) Period and the Company's proposed 2016/17 Local Distribution Adjustment Charge, both effective November 1, 2016. I also describe the Company's proposal to have one annual cost of gas filing that would contain information for both the winter and summer cost of gas rates.

## II. COST OF GAS FACTOR

## Q. What are the proposed firm sales and firm transportation cost of gas rates?

A. The Company proposes a firm sales cost of gas rate of $\$ 0.7162$ per therm for residential customers, $\$ 0.7121$ per therm for commercial/industrial high winter use customers, and $\$ 0.7305$ per therm for commercial/industrial low winter use customers as shown on Proposed Tenth Revised Page 77. The Company proposes a firm transportation cost of gas rate of $\$ 0.0006$ per therm as shown on Proposed Second Revised Page 79.

## Q. Would you please explain tariff page Proposed Third Revised Page 76 and Proposed Tenth Revised Page 77?

A. Proposed Third Revised Page 76 and Proposed Tenth Revised Page 77 contain the calculation of the 2016/17 Winter Period Cost of Gas Rate and summarize the Company's forecast of firm gas costs and firm gas sales. As shown on Page 77, the proposed 2016/17 Average Cost of Gas of $\$ 0.7162$ per therm is derived by adding the Direct Cost of Gas Rate of $\$ 0.6640$ per therm to the Indirect Cost of Gas Rate of $\$ 0.0522$ per therm. The estimated total Anticipated Direct Cost of gas, derived on Page 76 and repeated on Page 77 , is $\$ 59,710,049$. The estimated Indirect Cost of Gas, also derived on Page 76 and repeated on Page 77 , is $\$ 4,696,563$. The Direct Cost of Gas Rate of $\$ 0.6640$ and the Indirect Cost of Gas Rate of $\$ 0.0522$ are determined by dividing each of these total cost figures by the projected winter period firm sales volumes of 89,920,078 therms.

To calculate the total Anticipated Direct Cost of Gas, the Company adds a list of allowable adjustments from deferred gas cost accounts to the projected demand and commodity costs for the winter period supply portfolio. These allowable adjustments, shown on Page 76, total $(\$ 4,106,050)$. These adjustments are added to the Unadjusted Anticipated Cost of Gas of \$63,816,099 to determine the Total Anticipated Direct Cost of Gas of \$59,710,045.

## Q. What are the components of the Unadjusted Anticipated Cost of Gas?

A. The Unadjusted Anticipated Cost of Gas shown on Proposed Third Revised Page 76 consists of the following components:

1. Purchased Gas Demand Costs
\$7,527,898
2. Purchased Gas Commodity Costs
3. Storage Demand and Capacity Costs
4. Storage Commodity Costs
5. Produced Gas Cost

Total (does not add due to rounding)

49,523,042
941,660
4,026,000
1,797,499
$\$ 63,816,099$

## Q. What are the components of the allowable adjustments to the Cost of Gas?

A. The allowable adjustments to gas costs, listed on Proposed Third Revised Page 76 are as follows:

1. Prior Period Under Collection
\$2,690,610
2. Interest
3. Broker Revenues
$(1,374,947)$
4. Transportation COG Revenue
$(29,471)$
5. Capacity Release Margin
$(5,448,856)$
6. Fixed Price Administrative Cost

41,972
Total Adjustments (does not add due to rounding)
(\$4,106,050)

These allowable adjustments are standard adjustments made to the deferred gas cost balance through the operation of the Company's cost of gas adjustment clause. I will discuss the factors contributing to the prior period over collection later in this testimony.
Q. How does the proposed average cost of gas rate in this filing compare to the average cost of gas rate approved by the Commission in Docket No. DG 15-353 for the 2015/16 Winter Period?
A. The average cost of gas rate proposed in this filing is $\$ 0.0354$ per therm lower than the initial rate of $\$ 0.7516^{1}$ approved by the Commission in Order No. 25,833 dated October 30, 2015, in Docket No. DG 15-353. The decrease in the rate reflects a decrease in the total cost of gas of only approximately $\$ 50$ thousand with a projected increase of approximately 4.2 million in firm therm sales.
Q. How does the proposed firm transportation winter cost of gas rate compare to the rate approved by the Commission for the 2016/17 winter period?
A. The proposed firm transportation winter cost of gas rate is $\$ 0.0006$ per therm. The rate approved in Docket No. DG 15-353 was (\$0.0007). The increase in the rate relates to an estimated $\$ 63,000$ in transportation customer costs offset by the prior period over collection of \$33,912.

1 For comparison purposes, by the end of the 2015/16 Winter Period, the residential cost of gas rate decreased to \$0.4423 per therm through the operation of the monthly adjustment mechanism.
Q. Has the Company also updated its Company Allowance percentage for the period November 2016 through October 2017 in accordance with Section 8 of the Company's Delivery Terms and Condition?
A. Yes, in Schedule 25 the Company has recalculated its Company Allowance for the period November 2016 through October 2017. The Company calculated the Company Allowance of $2.48 \%$ based on sendout and throughput data for the twelve-month period ending June 2016. This recalculated Company Allowance is proposed to be applied to all supplier deliveries beginning in November 2016.

## VI. CUSTOMER BILL IMPACTS

Q. What is the estimated impact of the proposed firm sales cost of gas rate and proposed LDAC surcharges on an average heating customer's seasonal bill as compared to the rates in effect last year?
A. The bill impact analysis is presented in Schedule 8 of this filing. These bill impacts reflect the implementation of the increases approved in Docket No DG 16-449 effective July 1, 2016, relating to permanent distribution rate increases and the cast iron/bare steel main replacement program. The total bill impact over the winter period for an average residential heating customer is an increase of approximately $\$ 100$, or $14.0 \%$. The total bill impact for an average commercial/industrial G-41 customer is an increase of approximately $\$ 325$, or $18.4 \%$. Schedule 8 of this filing provides more detail of the impact of the proposed rate adjustments on heating customers.

## VII. OTHER TARIFF CHANGES

Q. Is the Company updating its Delivery Terms and Conditions in the filing?
A. Yes. The Company is submitting Proposed Second Revised Page 143 relating to Supplier Balancing and Peaking Demand Charges and Proposed Second Revised Page 144 relating to Capacity Allocation.
Q. Please describe the changes to tariff Page 143.
A. In Proposed Second Revised Page 143, the Company is updating the Peaking Demand Charge from $\$ 12.89$ per MMBtu of Peak MDQ to $\$ 11.39$ per MMBtu of Peak MDQ, a \$1.50 decrease. This calculation is also presented in Schedule 21.
Q. Please describe the changes to tariff Page 144.
A. Proposed Second Revised Page 144 updates the Capacity Allocator percentages used to allocate pipeline, storage, and local peaking capacity to high and low load factor customers under the mandatory capacity assignment requirement for firm transportation service. Schedule 22 contains the six-page worksheet that backs up the calculations for the updated allocators.
Q. Is the Company proposing to have one annual cost of gas filing?
A. Yes, the Company is proposing to have one annual cost of gas filing beginning with this winter 2016/2017 filing. The Company is proposing that during the winter cost of gas filing the Company incorporates a summer cost of gas filing that includes summer cost of gas rates.
Q. Is the Company requesting the Commission to approve the summer cost of gas rate during the winter cost of gas proceeding?
A. Yes, the Company is proposing to have the summer cost of gas rate approved during the winter cost of gas proceeding.
Q. What is the process proposed to calculate the summer cost of gas rates?
A. The winter cost of gas filing will include a summer cost of gas filing with all relevant schedules updated. All reconciliation and accounting processes remain the same.
Q. What are the proposed 2017 summer firm sales cost of gas rates?
A. The Company proposes an firm sales cost of gas rate of $\$ 0.4368$ per therm for residential customers, $\$ 0.4574$ per therm for commercial/industrial low winter use customers, and $\$ 0.4206$ per therm for commercial/industrial high winter use customers as shown on Proposed Revised Eleventh Page 77.
Q. Would you please explain tariff pages Proposed Fourth Revised Page 76 and Proposed Eleventh Revised Page 77?
A. Proposed Fourth Revised Page 76 and Proposed Eleventh Revised Page 77 contain the calculation of the 2017 Summer Period Cost of Gas Rate and summarize the Company's forecast of firm gas sales, firm gas sendout, and gas costs. On Proposed Eleventh Revised Page 77, the 2017 Average Cost of Gas of $\$ 0.4368$ per therm is derived by adding the Direct Cost of Gas Rate of $\$ 0.4197$ per therm to the Indirect Cost of Gas Rate of $\$ 0.0171$ per therm. The estimated total Anticipated Direct Cost of gas is $\$ 9,323,101$ and the estimated Indirect Cost of Gas is $\$ 379,944$. The Direct Cost of Gas Rate and the

Indirect Cost of Gas Rates are determined by dividing each of these total cost figures by the projected firm sales volumes of 22,215,128 therms. Proposed Eleventh Revised Page 77 further shows that the Residential Cost of Gas Rate of $\$ 0.4368$ per therm is equal to the Average Cost of Gas for all firm sales customers. It also shows the calculation of the Commercial/Industrial Low Winter Use Cost of Gas Rate of $\$ 0.4574$ per therm and the Commercial/Industrial High Winter Use Cost of Gas Rate of \$0.4206 per therm.

The calculation of the Anticipated Direct Cost of Gas is shown on Proposed Fourth Revised Page 76. To derive the total Anticipated Direct Cost of Gas of \$9,323,101, the Company starts with the Unadjusted Anticipated Cost of Gas of \$10,071,255 and adds the Net Adjustment totaling (\$748,154) (an over collection).

## Q. What are the components of the Unadjusted Anticipated Cost of Gas?

A. The Unadjusted Anticipated Cost of Gas consists of the following:

1. Purchased Gas Demand Costs
\$4,376,173
2. Purchased Gas Supply Costs 5,605,785
3. Produced Gas Costs

89,297
Total Unadjusted Anticipated Cost of Gas
\$10,071,255
Q. What are the components of the adjustments to the cost of gas?
A. The adjustments to gas costs, listed on Proposed Fourth Revised Page 76, are as follows:

1. Prior Period (Over)/Under Collection $(\$ 727,882)$
2. Interest
$(20,272)$
Total Adjustments
Q. How does the proposed average cost of gas rate in this filing compare to the initial cost of gas rate approved by the Commission for the 2016 Summer Period?
A. The cost of gas rate proposed in this filing is $\$ 0.0251$ per therm higher than the initial rate approved by the Commission for the 2016 Summer Period (\$0.4368 vs. \$0.4117). This increase is primarily due to the $\$ 1,745,175$ difference between the current over collection and interest balance of $(\$ 748,154)$ and the 2015 Summer Period under collection and interest balance of \$997,021.
Q. Does this conclude your testimony?
A. Yes, it does.

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