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PUBLIC UTILITIES COMMISSION
21 S. Fruit Street, Suite 10
Concord, N.H. 03301-2429

March 13, 2007
Patricia M. French, Esq.
Northern Utilities, Inc., New Hampshire Division
300 Friberg Parkway
Westborough, MA 01581
Re: DG 06-129 Northern Utilities, Inc., New Hampshire Division 2006-07 Winter Cost of Gas

Dear Ms. French:
In Order 24,684 the Commission directed the parties to explore possible double recovery of interest by Northern in its cost of gas recovery mechanism and directed the parties to explore that issue further and report back to the Commission. Enclosed is Staff and OCA's report and recommendation on Northern's interest recovery. Staff will issue a similar report and recommendation on KeySpan's interest recovery shortly.

If you have any questions please feel free to contact me.

Sincerely yours,

F. Anne Ross, Esq. Staff Attorney
cc: Service List

# REPORT ON NORTHERN'S CALCULATION <br> OF CARRYING CHARGES RELATED TO THE DEVELOPMENT OF THE COST OF GAS RATE 

## Introduction

Each fall, Northern Utilities Inc. (Northern or Company) files with the Commission an estimated Cost of Gas (COG) rate for the upcoming six month winter period which begins November of the current year and ends April of the following year. ${ }^{1}$ In addition to the projected direct gas costs for the winter period, the winter COG rate covers several other costs that relate to gas supply service. These include: (i) prior winter period under/over collection; (ii) demand-related costs incurred during the summer period ${ }^{2}$ but deferred for recovery during the winter period; (iii) carrying charges on the deferred costs; (iv) carrying charges on mismatch between monthly direct gas costs and revenues; (v) carrying charges on working capital; (vi) bad debt costs; (vii) depreciation and return on peak shaving plant; (viii) labor costs related to gas dispatch operations; and (ix) interruptible profits. This report focuses on the methods used by Northern to calculate the amounts covered by items (i), (iii), (iv) and (v).

In the COG filing for the winter 2006-07 period, Northern sought to recover: (i) an undercollection of $\$ 2,122,758$ for the prior winter period including $\$ 264,222$ in carrying charges; (ii) carrying charges of $\$ 142,327$ on both the deferred and direct gas costs; and (iii) carrying charges of $\$ 76,065$ relating to working capital. These amounts compare to total direct gas costs of $\$ 40,052,618$ for the 2006-07 winter period. ${ }^{3}$ At the October 18, 2006 hearing, Staff and the OCA expressed the concern that the method used by Northern

[^0]to account for revenues in its prior period reconciliation calculation may be creating imbalances between monthly gas costs and revenues that must be financed, resulting in additional costs to consumers. Also, Staff and the OCA was concerned that the recovery of these carrying costs through the winter COG rate could result in the Company being compensated twice for these costs, once through a rate adjustment to collect the prior period under-collection and a second time through a rate adjustment to collect the carrying costs on working capital. In order to address this concern, Staff and the OCA recommended that they work with the Company to determine whether their concerns are valid and, if so, how they might be resolved. In Order No. 24,684, the Commission directed the parties and Staff to file a report on the results of their discussions prior to Northern filing its Summer 2007 COG rate. Because the parties and Staff have been unable to reach agreement on whether the Company is over-collecting its carrying costs, this report presents the views of Staff and the OCA only.

## Reconciliation Calculation

As noted above, Northern's reconciliation calculation produced an under-collection of $\$ 2,122,758$ inclusive of carrying charges totaling $\$ 264,222$. See Attachment 1. The period covered by this calculation is the twelve months May 2005 through April 2006 instead of the six winter months because the Company defers for recovery during the winter a portion of the demand-related gas costs incurred during the summer. Because of these cost deferrals, imbalances between monthly gas costs and revenues are created throughout the summer period. It is also important to note that the reconciliation calculation includes a thirteenth month (May 2006) that relates to Northern's practice of
using billed as opposed to accrued revenues in its reconciliation calculation. ${ }^{4}$ This report contends that the use of billed revenue in the reconciliation calculation for the prior winter period resulted in carrying charges that are more than double the amount that would have been incurred had accrued revenues been used. ${ }^{5}$ See Attachment 2.

Attachment 1 shows that despite the fact that the prior winter period beginning balance was a credit of $\$ 544,444$, the deferral of summer demand charges resulted in an end-ofOctober under-collection of $\$ 2,185,271$. In November 2005, however, the undercollection swelled to $\$ 5,773,513$. This increase is explained, in part, by the use of different accounting treatments for costs and revenues in the reconciliation calculation. November gas costs correspond to the full cost of gas purchased in the month, a practice known as accrual accounting. In contrast, November revenue is not based on the total amount of gas consumed in the month. Rather, that revenue is based only on the amount of gas that the Company calculated would be billed and consumed in November.

Revenue associated with gas consumed in November but billed in December is assigned to December. ${ }^{6}$ Continuing the comparison into the next month, December gas costs correspond to the cost of gas purchased in that month whereas December revenue comprises revenue associated with gas consumed in November but billed in December plus revenue associated with gas billed and consumed in December.

[^1]Despite the use of different accounting treatments, it might be argued that billed revenue is a reasonable proxy for accrued revenue and, therefore, unlikely to produce large monthly imbalances and associated large financing charges. There are two facts that suggest this outcome is improbable. The first relates to the Company's implementation of billed revenue accounting. Under the above described billed revenue accounting, revenue associated with gas consumed in October but billed in November would be assigned to November. The Company, however, assigns that revenue to October because October falls outside of the winter period. As a result, November billed revenue should be much less than November gas costs producing a large cost under-collection. In fact, if the number of daily meter reads is constant and daily gas consumption does not change, November billed revenue would only be half November gas costs. This suggests that the use of billed revenue accounting produces on average a delay of half a month, or 15 days, between the time a customer receives service and the time when the customer's meter is read. Northern, however, is compensated through its working capital rate adjustment for the carrying costs associated with this 15 day lag. Accordingly, allowing the recovery of these carrying charges through a second rate adjustment would constitute double recovery.

The second fact relates to the assumption of constant daily gas consumption. Because the weather in November becomes increasingly colder as the month progresses, daily gas consumption does not remain constant but actually increases. This means that the revenue associated with consumption in the second half of the month is greater than the revenue associated with consumption in the first half. It also means that the revenue
shifted to December because of the 15 day lag is greater than half the November total. Thus, November billed revenue should be less than half November gas costs. This is confirmed in Attachment 1, which shows November gas costs of $\$ 5,142,673$ and November revenue of only $\$ 1,575,928$. While most of this November difference would be eliminated under accrual accounting, it is unclear whether the Company's existing working capital rate adjustment appropriately takes into account the effect on carrying charges of changes in daily gas consumption over the full winter period. If not, Northern should conduct a more detailed lead/lag study and use the results of that study to justify any proposed modifications.

## Staff and OCA Recommendations

Based on the above analysis, Staff and the OCA believe that the combination of Northern's working capital and reconciliation rate adjustments over-collects the costs of timing differences. In order to correct this problem, Staff and the OCA recommend that Northern's reconciliation calculation be modified such that monthly revenues reflect accrued revenues derived from the amount utilized by customers each calendar month. Also, Staff and the OCA recommend that the Company conduct an analysis to determine whether its current supply-related working capital calculation appropriately takes into account the effect on carrying charges of variations in daily gas consumption throughout the winter period.

## Northern Utilities, Inc

## Attachment 1

Prior Period Reconciliation Calculation
May 2005 - April 2006

## Billed Revenues

|  |  | May-05 | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 | Nov-05 | Dec-05 |  | Jan-06 | Feb-06 | Mar-06 | Apr-06 | May-06 |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per Settlement in OG 05-080 | \$ | $(544,444)$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning Balance | \$ | 501,688 | \$639,135 | \$ 708,853 | \$ 1,580,586 | \$1,381,097 | \$1,705,111 | \$ 2,185,271 | \$ 5,773,513 | \$ | 7,425,449 | \$ 6,832,502 | \$ 7,059,875 | \$ 6,296,649 | \$ 3,910,786 |  |  |
| Gas Costs | \$ | 681,577 | \$ 66,636 | \$ 866,024 | \$ $(206,875)$ | \$ 316,318 | \$ 469,652 | \$ 5,142,673 | \$ 7,985,684 | \$ | 8,304,079 | \$ 7,506,372 | \$ 6,407,299 | \$ 2,413,891 | \$ 22,782 |  |  |
| Billed Revenues | \$ | - | \$ | \$ | \$ - | \$ . | \$ - | \$(1,575,928) | \$(6,369,399) | \$ | $(8,938,491)$ | \$(7,319,399) | \$(7,209,368) | \$(4,831,553) | \$(1,830,680) |  |  |
| Ending Balance w/o Interest | \$ | 638,821 | \$705,771 | \$1,574,877 | \$ 1,373,711 | \$1,697,415 | \$2,174,763 | \$ 5.752,016 | \$ 7,389,798 | \$ | 6,791,037 | \$ 7,019,475 | \$ 6,257,806 | \$ 3,878,987 | \$ 2,102,888 |  |  |
| Average Balance | \$ | 570,254 | \$672,453 | \$1,141,865 | \$ 1,477,149 | \$ 1,539,256 | \$1,939,937 | \$ 3,968,644 | \$ 6,581,656 | \$ | 7,108,243 | \$ 6,925,988 | \$ 6,658,841 | \$ 5,087,818 | \$ 3,006,837 |  |  |
| Prime Rate |  | 5.50\% | 5.50\% | 6.00\% | 6.00\% | 6.00\% | 6.50\% | 6.50\% | 6.50\% |  | 7.00\% | 7.00\% | 7.00\% | 7.50\% | 7.93\% |  |  |
| Interest Applied | \$ | 314 | \$ 3,082 | \$ 5,709 | \$ 7,386 | \$ 7,696 | \$ 10,508 | \$ 21,497 | \$ 35,651 | \$ | 41,465 | \$ 40,402 | \$ 38,843 | \$ 31,799 | \$ 19,870 | \$ | 264,222 |
| Ending Balance with Interest | \$ | 639,135 | \$708,853 | \$1,580,586 | \$ 1,381,097 | \$1,705,111 | \$2,185,271 | \$ 5,773,513 | \$ 7,425,449 | \$ | 6,832,502 | \$ 7,059,875 | \$ 6,296,649 | \$ 3,910,786 | \$ 2,122,759 |  |  |

## Calendar Month Revenues

|  |  | May-05 |  | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 |  | Nov-05 | Dec-05 |  | Jan-06 | Feb-06 | Mar-06 | Apr-06 |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per Settlement in DG 05-080 | \$ | $(544,444)$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Beginning Balance | \$ | 501,688 | \$ | 639,135 | \$ 708,853 | \$ 1,580,586 | \$1,381,097 | \$1,705.111 |  | 2,185,271 | \$ 2,499,745 | \$ | 2,221,022 | \$(1,454,895) | \$ 2,825,338 | \$ 2,819,467 |  |  |
| Gas Costs | \$ | 681.577 | \$ | 66,636 | \$ 866,024 | \$ (206,875) | \$ 316,318 | \$ 469,652 | \$ | 5,142,673 | \$ 7,985,684 | \$ | 8,304,079 | \$ 7,506,372 | \$ 6.407,299 | \$ $2,413,891$ |  |  |
| Calendar Month Revenues* | \$ | - | \$ | - | \$ | \$ | \$ | \$ |  | $(4,840,854)$ | \$ $(8,277,158)$ |  | 11,982.224) | \$ $(3,230.123)$ | \$ $(6,429,586)$ | \$(3,353,747) |  |  |
| Ending Balance w/o Interest | \$ | 638,821 | \$ | 705.771 | \$1,574,877 | \$ 1,373,711 | \$1,697.415 | \$2,174,763 | \$ | 2,487,090 | \$ 2,208,271 | \$ | $(1,457,123)$ | \$ 2,821,354 | \$ 2,803,051 | \$ 1,879,611 |  |  |
| Average Balance | \$ | 570,254 | \$ | 672,453 | \$1,141,865 | \$ 1,477,149 | \$1,539,256 | \$1,939,937 | \$ | 2,336.181 | \$ 2,354,008 | \$ | 381,949 | \$ 683,229 | \$ 2,814,195 | \$ 2,349,539 |  |  |
| Prime Rate |  | 5.50\% |  | 5.50\% | 6.00\% | 6.00\% | 6.00\% | 6.50\% |  | 6.50\% | 6.50\% |  | 7.00\% | 7.00\% | 7.00\% | 7.50\% |  |  |
| Interest Applied | \$ | 314 | \$ | 3,082 | \$ 5,709 | \$ 7,386 | \$ 7,696 | \$ 10,508 | \$ | 12,654 | \$ 12,751 | \$ | 2,228 | \$ 3,986 | \$ 16,416 | \$ 14,685 | \$ | 97,415 |
| Ending Balance with Interest | \$ | 639,135 | \$ | 708,853 | \$1,580,586 | \$ 1,381,097 | \$1,705,111 | \$2,185,271 | \$ | 2,499,745 | \$ 2,221,022 |  | $(1,454,895)$ | \$ 2,825,338 | \$ 2,819,467 | \$ 1,894,296 |  |  |

*Source of data: Northem Response to Staff 2-7, Page 1 of 4, Docket DG 06-129.


[^0]:    ${ }^{1}$ Also known as the peak period.
    ${ }^{2}$ The summer period, May through October, is also known as the off-peak period.
    ${ }^{3}$ Including summer demand-related deferred costs.

[^1]:    ${ }^{4}$ Northern also uses billed revenues to calculate the carrying costs to be collected on a going forward basis through the winter COG rate.
    ${ }^{5}$ It is interesting to note that the approved COG rate for the 2005-06 winter period included $\$ 78,993$ in estimated carrying costs. Thus, if the $\$ 264,222$ request is approved, Northern would have collected a total of $\$ 343,215$ in carrying costs for the 2005-06 winter period.
    ${ }^{6}$ Revenue that is assigned based on the month in which it was billed is known as billed revenue.

