**STATE OF NEW HAMPSHIRE**
**BEFORE THE**
**PUBLIC UTILITIES COMMISSION**

**Docket No. DG 07-033**

**NORTHERN UTILITIES, INC.**
**2007 SUMMER COST OF GAS**

## MOTION FOR RECONSIDERATION, REHEARING AND CLARIFICATION

NOW COMES Northern Utilities, Inc. ("Northern"), by and through its undersigned counsel, and pursuant to N.H. RSAs 541:3 and 541:4, respectfully moves the New Hampshire Public Utilities Commission ("the Commission") to reconsider, rehear and clarify Order No. 24, 786. In support of this Motion, Northern states as follows:

1. On September 13, 2007, the Commission issued Order No. 24, 786 ("the Order") which, *inter alia,* changes Northern's long-standing methodology for calculating its cost of gas (COG) rates, directs Northern to adjust its summer period ending balance by recording "October sales billed in November as October sales" and orders Northern to make a compliance filing in its winter 2007-2008 COG filing.

2. On October 1, 2007, Northern filed a Motion to Stay in which it seeks to be relieved of the obligation to make the above-reference compliance filing until such time as Northern's appellate rights in the instant docket have been exhausted. At its public meeting held October 4, 2007, the Commission granted Northern's Motion to Stay. *See* Secretarial Letter dated October 10, 2007.

## LEGAL STANDARD FOR REHEARING

3. RSA 541:4 requires that a rehearing motion "set forth fully every ground upon which it is claimed that the decision or order complained of is unlawful or unreasonable." RSA 541:3 authorizes the Commission to grant rehearing upon a showing that good reason exists for such relief. Such a showing may be made "by new evidence that was unavailable at the original hearing, or by identifying specific matters that were either 'overlooked or mistakenly conceived.'" *Verizon New Hampshire Wire Center Investigation*, DT 05-083, DT 06-012, Order No. 24, 629 (June 1, 2006), p. 7 *quoting Dumais v. State*, 118 N.H. 309 (1978).

4. As discussed more fully below, the Order is unreasonable and unlawful because, without substantial supporting evidence, it departs from a long-standing rate making methodology which has been continuously approved by this Commission for approximately 30 years. The Order is unlawful because both the new accounting methodology ordered by the Commission as well as, and even more significantly and blatantly, the changeover or transition from the old methodology to the new methodology result in confiscation of Company property. Moreover, the transition method ordered by the Commission is not based on any substantial record evidence and is inconsistent with precedent and applicable ratemaking principles. Thus, good cause exists for the Commission to rehear, reconsider and to clarify the Order.

## DISCUSSION

5. The Commission's rejection of a long-standing methodology which has been used to calculate rates that have been consistently found by the Commission to be just and reasonable for a period of approximately 30 years is arbitrary and capricious and

therefore is unlawful. Moreover, given that the Order is devoid of any financial calculations that numerically substantiate the Commission's opinion that Northern is over-recovering its working capital costs, or that any such alleged over-recovery results in unjust or unreasonable rates, good cause exists for a rehearing of this matter.

6. Although the Order states that the Commission agrees "with Staff that a double recovery of certain working capital costs occurs when interest is calculated on deferred gas costs using accrued costs and billed revenues", *Order*, p. 12, (a statement with which Northern strongly disagrees), the Order is completely barren of quantitative analysis to support this finding. It does not provide a mathematical derivation; it fails to identify which costs the Commission has determined, based on sufficient evidence, are actually double-recovered. Nor can it. This is because there never have been any nor are there any now.

In addition, the Order erroneously concludes that Northern's need for working capital associated with gas costs, and the attendant need for a return on that working capital, is adequately captured by 6.33 days identified in the Company's lead-lag study. *Order*, p. 13. This conclusion totally overlooks and is flatly contradicted by the sworn testimony presented by Mr. Ferro which indicates that the 6.33 day factor produced by the lead-lag study does not fully compensate the Company for mismatches that occur between the Company's actually incurred gas costs and the monthly billed revenues; instead it is the interest on the monthly over/under-collected balances which complements the lead/lag factor in order to properly compensate the Company for the monthly revenue imbalances that result from volumetric swings that occur within each season. Tr. 4/23/07 at 87. The Commission did not and cannot reconcile that factual finding with its order and still find the Order to be based upon substantive evidence. Therefore, Northern requests that the Commission address this issue on rehearing.

The accounting methodology that is used to calculate the above-referenced monthly balances has been in place for approximately 30 years. Tr. 4/23/07 at 90-91. This long-standing methodology of tracking monthly under- and over-recoveries by comparing actual/billed sales (i.e. bills for gas provided by Northern to its customers in a given month) and actual/incurred gas costs (i.e. costs based on actual meter readings that are billed by suppliers to Northern each month) to determine the monthly COG deferred balance to which interest is applied is also in place for Northern's Maine Division and for its Massachusetts affiliate Bay State Gas Company ("Bay State"). Tr. 4/23/07 at 91. Absent clear quantitative evidence that demonstrates that Northern is over-collecting its gas costs, the Commission's decision to abandon Northern's long-standing accounting methodology is unreasonable, arbitrary and unsupported by substantial evidence. It therefore should be reconsidered.

7. The Order is also unreasonable as it lacks any discussion or analysis of whether or how the existing methodology affects the justness or reasonableness of the rates it produces. Consistent with the United States Supreme Court's holding in *Federal Power Commission v. Hope Natural Gas Co.,* 320 U.S. 591 (1944), the New Hampshire Supreme Court has recognized that "the methodology used to set rates is irrelevant. [citation omitted]. Instead, it is the result reached that is important…". *Appeal of Richards,* 134 N.H. 148, 164 (1991). In the instant case, the Order contains no analysis of whether the rates produced by the existing 30-year methodology are unjust or unreasonable. More importantly, the Order fails to make any prediction with regard to

the impact that the newly-adopted methodology will have on rates, even though Northern has produced evidence to indicate that the new methodology will not compensate it for bearing over- and under-collections. The absence of such analysis demonstrates the unreasonableness of the Order and therefore constitutes good cause for reconsideration and/or rehearing.

8. While the Order is devoid of any quantitative analysis of the effect of either methodology on the justness and reasonableness of rates, the substantive and uncontroverted evidence in the record does quantify the confiscatory effect that the "accrued costs and accrued revenues" methodology has upon the Company. The Company, therefore, should be protected from the harm created by the Commission's newly desired change in methodology.

In Exhibit 9 (Schedule JAF-1 Page 2 of 4) filed by Northern on April 27, 2007, Northern demonstrates the cumulative and confiscatory effect of using the "accrued" methodology for a full year, assuming that the transition to the new methodology occurs properly. Exhibit 9 illustrates that the financial harm to Northern is approximately $75,000 annually, again, assuming that the process for transitioning to the new methodology is proper and so that 12 months of revenues are matched with 12 months of costs.

The financial harm plainly apparent in Exhibit 9 is produced by using the new methodology that requires Northern to reflect and essentially advance revenues that are associated with gas consumed by its ratepayers during the month of November but that are not billed to all customers in November. Because some of those "new November revenues" are neither billed nor actually received in November, the beginning balance for the winter COG period under the new methodology will be artificially high. When this artificially high revenue amount is compared with the actual bills for gas supplied to Northern by its suppliers, less of a revenue shortfall is calculated and reported than under the current methodology. In sum, this means that the monthly interest on that balance will be lower than under the current methodology and therefore will require that Northern bear that shortfall and assume that financial responsibility. Moreover, a reduction in the November 2005 beginning balance will adversely impact the calculation of interest going forward in perpetuity. This constitutes a permanent reduction in funds and therefore is impermissible confiscation of Northern's property. The Commission must therefore reconsider its decision on these grounds.

Because the Order fails to consider the confiscatory effect associated with the new methodology as well as that associated with transitioning from the existing methodology to the new one, as described more fully below, good cause exists for a rehearing of this matter.

**CLARIFICATION REQUEST REGARDING TRANSITION ISSUE**

9. Good cause exists for rehearing on the issue of how the Company is to transition from the existing methodology to the new methodology. In addition to the lack of an adequate or substantial evidentiary record on this issue, it is also unclear from the Order exactly how the transition from "billed" to "accrued" revenues, for purposes of calculating the deferred gas costs reconciliation balance, is to be accomplished. The Order seems oblivious to this critical issue as there is no formal articulation of the transition issue in the Order.

10. At this point, because of the lack of clarity in the Order, the Company's understanding of the Commission's wishes with regard to the transition issue is based on informal, off-the-record discussions with Staff and others. If that understanding of the Order is correct, the Order produces significant additional confiscation of Northern's property, because it artificially reduces the beginning balance of the deferred gas cost reconciliation account.

11. Because of the ambiguity in the Order, Northern believes it may be required to include one and one-half months of revenue, but only one month of gas costs in the reconciliation account in the first month after the transition. This is improper. Moreover, this "transition issue" does not impact the Company only in the first month of the new accounting mechanism. Rather, the extra half-month of revenue in the reconciliation account never leaves; it would improperly and inappropriately reduce the monthly COG balances on a permanent basis. This has a significant confiscatory effect because artificially reduced monthly COG balances will produce artificially low interest to be applied to the recovery of Northern's actual gas costs.

12. To the extent that the Order may be interpreted as requiring Northern to transition to the new methodology for calculating its COG balances by using a November 2005 starting balance that contains one and one-half months of revenues (which occurs by imputing revenues from bills that are issued in December), the Order clearly results in confiscation of Northern's property because of the mismatch that occurs when 12- and one-half months of revenues are compared with 12- months of gas costs. In terms of the magnitude of harm, for the first year alone, Northern has calculated the amount of this financial harm to be approximately $198,000. Northern provided this information to

Commission Staff in response to Staff Data Request 2-7 (page 2 of 4) in DG 06-129. *See* Attachment 1. Given the ambiguity in the Order and the fact that Staff's interpretation of the Order would have significant confiscatory effect, good cause exists for rehearing, reconsideration and clarification.

13. In addition to being unclear about how Northern is to transition from the existing methodology to the new methodology, the Order contains erroneous assertions, which, in and of themselves, require rehearing and clarification. More specifically, in directing Northern to shift to "full accrual accounting" the Order states: "[r]evenues billed in the first month related to prior month sales would not be included in the first month's revenues under accrual accounting. October sales billed in November will not be recorded as November revenue…[]. The summer COG reconciliation will be similarly adjusted to record October sales billed in November as October sales…[]." *Order*, p. 14. Although these statements appear to reflect the Commission's position on how the "new" methodology would work, in actuality, this is precisely how the **existing** or "as billed" methodology works, i.e., under the current methodology, gas consumption that occurs in October but is billed in November is not reflected as November revenue--rather, it is recorded as October revenue. This is entirely appropriate because the November bills that are associated with October consumption reflect the summer COG rate. Thus, in light of the Order's fundamentally flawed description of the new "accrual" methodology, the Order must be reconsidered or, at the very least, clarified to reflect more accurate descriptions of the billed methodology, accrued methodology and a transition methodology that avoids matching 12- and one-half months of revenues with 12- months of costs.

14. Because of the highly technical nature of the issues involved in the process for transitioning from the use of billed to accrued revenues, as well as the significant potential and continuing confiscatory effects of that process, Northern believes that it is critical that the Commission conduct a rehearing of this matter.

WHEREFORE, Northern respectfully requests that this honorable Commission:

A. Grant rehearing, reconsideration and clarification of its Order; and

B. Grant such further relief as it deems appropriate.

Respectfully submitted,
NORTHERN UTILITIES, INC.

By its attorneys,

Patricia M. French (ssg)

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Date: October 15, 2007

Certificate of Service

I hereby certify that on this 15th day of October, 2007, a copy of the within Motion was sent to the Service List via electronic mail and that hard copies were hand delivered to Attorneys Ross and Hollenberg.

Susan S. Geiger

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ATTACHMENT 1

NiSource
Corporate Services

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December 1, 2006

VIA OVERNIGHT DELIVERY AND ELECTRONIC FILING

F. Anne Ross, Esq.
New Hampshire Public Utilities Commission
21 S. Fruit St., Suite 10
Concord, New Hampshire 03301

Re: Northern Utilities, Inc., New Hampshire Division – DG 06-129

Dear Ms. Ross:

On behalf of Northern Utilities, Inc. ("Northern"), enclosed for filing please find an original and two (2) copies of Northern's responses to the following data requests issued by Staff:

Staff 2-7

Please do not hesitate to call me if you have any questions regarding this filing.

Very truly yours,

Patricia M. French

Enclosures

cc: NHPUC Service List

Northern Utilities, Inc.
New Hampshire Division
DG 06-129
Staff Request Set No. 2
Response: 7
Responsible: Joseph A. Ferro,
Manager, Regulatory Policy

Request: For each month, specify the amount of the average balance due to timing differences, if any, between costs and revenues.

Response: Northern bills its customers based on billing cycles throughout the month creating a difference between the billing cycle period that generates COG collections and the calendar month period associated with monthly gas costs. Further, the Company begins each COG season by prorating customer consumption and associated bills creating only approximately one-half month of COG collections for the new COG period in that first month, which are applied to a full calendar month of costs. This difference in revenue and cost periods, in particular the difference in the prorated first month of the COG period, causes collections or revenues to lag behind the monthly gas costs charged to the Company. This lag that the Company on-going experiences is captured through the COG mechanism, specifically in the average deferred gas cost balance, on which monthly interest is calculated. To capture the impact of this timing difference in the average deferred gas cost balance between costs (calendar month) and revenues (billing month), Northern has re-calculated its deferred gas cost balances reflecting collections from calendar month sales for both the November 2005 – April 2006 Winter period and May 2006 through October 2006 Summer period. Page 1 (Winter) and page 2 (Summer) of Attachment Staff 2-7 presents the monthly average balances based on this calendar month accrual of collections and also shows the average month balance based on the billing month as-billed collections.

On the other hand, Northern's lead-lag study captures the difference between the lag in customers paying their bills versus the lead resulting from the Company paying the purchased gas cost bills from the pipelines and suppliers, resulting in net lag days of 6.33. This lead-lag study essentially captures or accounts for the lag of billing month revenues on an annual average basis, but does not capture the monthly differences of collections and costs in each COG season, nor the billing of approximately one-half month of COG charges, by prorating customers' bills, in the first month of each COG season. Through Northern's lead-lag study filed and approved in DG 01-182, and thus currently used in the recovery of Working Capital expense on purchased gas costs through the COG, this is illustrated as follows:

| Lead-Lag Components | Collection Lag Days | Cost Lead Days | Net Lag Days |
|---|---|---|---|
| Meter Read | 15.20 | 15.20 | 0.00 |
| Billing | 00.00 | N/A | 0.00 |
| Collection / Purchase | 29.61 | 23.28 | 6.33 |
| Total | 44.81 | 38.48 | 6.33 |

The lead-lag study recognizes that the Company has use of the purchased gas from the 1st to the end of the month, and thus, on average 15.2 days a month before the end of the month. This purchase gas cost lead offsets the billing month lag of collections of the same 15.2 days.

To assess Northern's working capital requirement on purchased gas costs and how such requirement stacks up against the Company recovering working capital through the COG plus carrying charges on the deferred gas cost balance, the Company has calculated the actual working capital expense on purchased gas costs in Attachment Staff 2-7, page 3. This analysis reflects the application of the lead-lag components (yielding 6.33 net lag days) to the actual gas costs and collections presented in pages 1 and 2 of Attachment Staff 2-7. In this cash flow analysis a 30-day lead of the costs is reflected by including such monthly costs in the next month, while the collection lag of 36.33 days is factored by reflecting one month less 6.33 days of the monthly collections in the next month ([# days in mo. – 6.33] / # days in mo.). The remaining collections for that month are collected in the next month. After this cost lead and collection lag application, the monthly average balances are derived, and then the average of the monthly average balances for the year. On page 4 of Staff 2-7 this average monthly balance, or benchmark cash required, is then compared with the sum of the average balance applicable to the lead-lag working capital mechanism and the average deferred gas cost balance on which interest is calculated and recovered, which comes from pages 1 and 2 of Attachment Staff 2-7. This comparison shows that under accrual accounting of the collections (calendar month) the actual monthly cash required of $3,259,442 is much greater than the average monthly balance subject to interest through the COG working capital mechanism plus the interest on the deferred gas cost application. Thus, the recovery of the actual working capital expense would be quite deficient if using calendar month collections in the Company's calculation of interest in the deferred gas costs. On the other hand, this schedule shows that using the current method of as-billed billing month sales to derive the monthly deferred gas cost balance and associated interest, there is very little difference between the actual benchmark average monthly cash required and the combination of the deferred gas cost and working capital mechanisms. The Company believes that this billing month comparison does not precisely match primarily because of the variable monthly interest rates reflected in the analysis.

NORTHERN UTILTIES, INC. - New Hampshire Division
November 2005 - October 2006 PEAK
Analysis of Interest on Over/Undercollection-Calendar Month vs. Billing Month
Actuals



| WINTER PERIOD | November | December | January 2006 | February | March | April | May | June | July | August | September | October | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CALENDAR MONTHS** | | | | | | | | | | | | | |
| Volumes Per Settlement in DG05-080 | 3,819,873 | 6,432,626 | 9,209,011 | 3,768,790 | 6,187,779 | 2,560,017 | 0 | 0 | 0 | 0 | 0 | 0 | 31,978,096 |
| Winter Period Account Beginning Balance | $ - | $ 302,637 | $ 12,013 | $ (3,676,790) | $ 590,483 | $ 571,576 | $ (367,645) | $ (173,601) | $ 40,098 | $ 256,135 | $ 409,275 | $ 627,851 | $ - |
| Plus: Cost of Firm Gas (Schedule 4) | $ 5,142,673 | $ 7,985,684 | $ 8,304,079 | $ 7,506,372 | $ 6,407,299 | $ 2,413,891 | $ 195,826 | $ 214,143 | $ 215,022 | $ 150,861 | $ 215,022 | $ 215,022 | $ 38,965,896 |
| Less: Reported Collections (Schedule 3) | $ (4,840,854) | $ (8,277,158) | $ (11,982,224) | $ (3,230,123) | $ (6,429,586) | $ (3,353,747) | $ - | $ - | $ - | $ - | $ - | $ - | $ (38,113,692) |
| Winter Period Ending Balance | $ 301,819 | $ 11,163 | $ (3,666,132) | $ 599,459 | $ 568,196 | $ (368,280) | $ (171,819) | $ 40,542 | $ 255,120 | $ 406,996 | $ 624,298 | $ 842,873 | $ 852,204 |
| Month's Average Balance | $ 150,910 | $ 156,900 | $ (1,827,060) | $ (1,538,665) | $ 579,340 | $ 101,648 | $ (269,732) | $ (66,529) | $ 147,609 | $ 331,565 | $ 516,787 | $ 735,362 | $ (981,866) |
| Interest Rate (Prime Rate) | 6.50% | 6.50% | 7.00% | 7.00% | 7.00% | 7.50% | 7.93% | 8.02% | 8.25% | 8.25% | 8.25% | 8.25% | |
| Interest Applied | $ 817 | $ 850 | $ (10,658) | $ (8,976) | $ 3,379 | $ 635 | $ (1,782) | $ (445) | $ 1,015 | $ 2,280 | $ 3,553 | $ 5,056 | $ (4,276) |
| Winter Period Account Ending Balance | $ 302,637 | $ 12,013 | $ (3,676,790) | $ 590,483 | $ 571,576 | $ (367,645) | $ (173,601) | $ 40,098 | $ 256,135 | $ 409,275 | $ 627,851 | $ 847,929 | $ 847,929 |
| Average Monthly Balance | | | | | | | | | | | | | $ (81,822) |
| **BILLING MONTHS** | | | | | | | | | | | | | |
| Volumes Per Settlement in DG05-080 | 1,254,534 | 4,972,802 | 7,042,716 | 6,190,342 | 6,762,855 | 4,293,546 | 1,461,301 | 0 | 0 | 0 | 0 | 0 | 31,978,096 |
| Winter Period Account Beginning Balance | $ - | $ 3,576,405 | $ 5,216,439 | $ 4,610,605 | $ 4,825,017 | $ 4,009,771 | $ 1,609,611 | $ (20,007) | $ 194,718 | $ 411,818 | $ 566,029 | $ 785,682 | $ - |
| Plus: Cost of Firm Gas (Schedule 4) | $ 5,142,673 | $ 7,985,684 | $ 8,304,079 | $ 7,506,372 | $ 6,407,299 | $ 2,413,891 | $ 195,826 | $ 214,143 | $ 215,022 | $ 150,861 | $ 215,022 | $ 215,022 | $ 38,965,896 |
| Less: Reported Collections (Schedule 3) | $ (1,575,928) | $ (6,369,400) | $ (8,938,492) | $ (7,319,400) | $ (7,248,238) | $ (4,831,557) | $ (1,830,680) | $ - | $ - | $ - | $ - | $ - | $ (38,113,695) |
| Winter Period Ending Balance | $ 3,566,745 | $ 5,192,689 | $ 4,582,026 | $ 4,797,577 | $ 3,984,078 | $ 1,592,106 | $ (25,242) | $ 194,136 | $ 409,741 | $ 562,679 | $ 781,051 | $ 1,000,704 | $ 852,201 |
| Month's Average Balance | $ 1,783,373 | $ 4,384,547 | $ 4,899,233 | $ 4,704,091 | $ 4,404,548 | $ 2,800,939 | $ 792,185 | $ 87,065 | $ 302,229 | $ 487,249 | $ 673,540 | $ 893,193 | $ 26,212,191 |
| Interest Rate (Prime Rate) | 6.50% | 6.50% | 7.00% | 7.00% | 7.00% | 7.50% | 7.93% | 8.02% | 8.25% | 8.25% | 8.25% | 8.25% | |
| Interest Applied | $ 9,660 | $ 23,750 | $ 28,579 | $ 27,441 | $ 25,693 | $ 17,506 | $ 5,235 | $ 582 | $ 2,078 | $ 3,350 | $ 4,631 | $ 6,141 | $ 154,644 |
| Winter Period Account Ending Balance | $ 3,576,405 | $ 5,216,439 | $ 4,610,605 | $ 4,825,017 | $ 4,009,771 | $ 1,609,611 | $ (20,007) | $ 194,718 | $ 411,818 | $ 566,029 | $ 785,682 | $ 1,006,845 | $ 1,006,845 |
| Average Monthly Balance | | | | | | | | | | | | | $ 2,016,322 |
| Interest Calculation Difference | $ (8,843) | $ (22,900) | $ (39,237) | $ (36,416) | $ (22,314) | $ (16,871) | $ (7,017) | $ (1,027) | $ (1,063) | $ (1,070) | $ (1,078) | $ (1,085) | $ (158,919) |

NORTHERN UTILTIES, INC. - New Hampshire Division
November 2005 - October 2006 OFF PEAK
Analysis of Interest on Over/Undercollection-Calendar Month vs. Billing Month
Actuals

| SUMMER PERIOD | November | December | January 2006 | February | March | April | May | June | July | August | September | October | November | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CALENDAR MONTHS** | | | | | | | | | | | | | | |
| Volumes | | 0 | 0 | 0 | 0 | 0 | 2,671,906 | 1,404,385 | 1,070,355 | 1,197,235 | 1,248,641 | 2,161,855 | | 9,754,377 |
| Per Settlement in DG05-080 | | | | | | | | | | | | | | |
| Summer Period Account Beginning Balance | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ (738,218) | $ (638,638) | $ (263,534) | $ (138,026) | $ 207,261 | $ 1,027,874 | |
| Plus: Cost of Firm Gas (Schedule 4) | $ - | $ - | $ - | $ - | $ - | $ - | $ 1,944,852 | $ 1,287,948 | $ 1,314,273 | $ 1,173,138 | $ 1,540,268 | $ 2,864,147 | | 10,124,626 |
| Less: Reported Collections (Schedule 3) | $ - | $ - | $ - | $ - | $ - | $ - | $ (2,680,639) | $ (1,183,782) | $ (936,079) | $ (1,046,254) | $ (1,195,218) | $ (2,047,765) | | (9,089,737) |
| Summer Period Ending Balance | $ - | $ - | $ - | $ - | $ - | $ - | $ (735,787) | $ (634,052) | $ (260,444) | $ (136,650) | $ 207,024 | $ 1,023,643 | $ 1,027,874 | $ 1,034,889 |
| Month's Average Balance | $ - | $ - | $ - | $ - | $ - | $ - | $ (367,894) | $ (686,135) | $ (449,541) | $ (200,092) | $ 34,499 | $ 615,452 | $ 1,027,874 | (25,837) |
| Interest Rate (Prime Rate) | 6.50% | 6.50% | 7.00% | 7.00% | 7.00% | 7.50% | 7.93% | 8.02% | 8.25% | 8.25% | 8.25% | 8.25% | 8.25% | |
| Interest Applied | $ - | $ - | $ - | $ - | $ - | $ - | $ (2,431) | $ (4,586) | $ (3,091) | $ (1,376) | $ 237 | $ 4,231 | $ 7,067 | $ 52 |
| Summer Period Account Ending Balance | $ - | $ - | $ - | $ - | $ - | $ - | $ (738,218) | $ (638,638) | $ (263,534) | $ (138,026) | $ 207,261 | $ 1,027,874 | $ 1,034,941 | $ 1,034,941 |
| Average of Month's Average Balance | | | | | | | | | | | | | | $ (1,987) |
| **BILLING MONTHS** | | | | | | | | | | | | | | |
| Volumes | 0 | 0 | 0 | 0 | 0 | 0 | 1,272,403 | 1,996,319 | 1,187,676 | 1,072,847 | 1,203,754 | 1,438,722 | 1,582,656 | 9,754,377 |
| Per Settlement in DG05-080 | | | | | | | | | | | | | | |
| Summer Period Account Beginning Balance | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ 670,547 | $ 78,594 | $ 355,918 | $ 594,792 | $ 1,047,521 | $ 2,561,473 | |
| Plus: Cost of Firm Gas (Schedule 4) | | | | | | | $ 1,944,852 | $ 1,287,948 | $ 1,314,273 | $ 1,173,138 | $ 1,540,268 | $ 2,864,147 | $ - | 10,124,626 |
| Less: Reported Collections (Schedule 3) (Oct '05 Prorated Vols of 1,761,543) | | | | | | | $ (1,276,513) | $ (1,882,396) | $ (1,038,438) | $ (937,521) | $ (1,093,165) | $ (1,362,558) | $ (1,499,147) | (9,089,738) |
| Summer Period Ending Balance | $ - | $ - | $ - | $ - | $ - | $ - | $ 668,339 | $ 76,099 | $ 354,429 | $ 591,535 | $ 1,041,895 | $ 2,549,110 | $ 1,062,326 | $ 1,034,888 |
| Month's Average Balance | $ - | $ - | $ - | $ - | $ - | $ - | $ 334,170 | $ 373,323 | $ 216,512 | $ 473,726 | $ 818,343 | $ 1,798,315 | $ 1,811,900 | 5,826,289 |
| Interest Rate (Prime Rate) | 6.50% | 6.50% | 7.00% | 7.00% | 7.00% | 7.50% | 7.93% | 8.02% | 8.25% | 8.25% | 8.25% | 8.25% | 8.25% | |
| Interest Applied | $ - | $ - | $ - | $ - | $ - | $ - | $ 2,208 | $ 2,495 | $ 1,489 | $ 3,257 | $ 5,626 | $ 12,363 | $ 12,457 | $ 39,895 |
| Summer Period Account Ending Balance | $ - | $ - | $ - | $ - | $ - | $ - | $ 670,547 | $ 78,594 | $ 355,918 | $ 594,792 | $ 1,047,521 | $ 2,561,473 | $ 1,074,783 | $ 1,074,783 |
| Average of Month's Average Balance | | | | | | | | | | | | | | $ 448,176 |
| Interest Calculation Difference | $ - | $ - | $ - | $ - | $ - | $ - | $ (4,639) | $ (7,081) | $ (4,579) | $ (4,633) | $ (5,389) | $ (8,132) | $ (5,390) | $ (39,843) |
| WINTER PERIOD Interest Difference | | | | | | | | | | | | | | $ (158,919) |
| TOTAL NOV 05 - OCT 06 Interest Difference | | | | | | | | | | | | | | $ (198,763) |

| | |
|---|---|
| Calendar Volumes | 41,732,473 |
| Billing Volumes | 41,732,473 |
| Difference | - |

NORTHERN UTILTIES, INC. - New Hampshire Division
November 2005 - January 2006
Analysis of Actual Cash Flow

| | November | December | January 2006 | February | March | April | May | June | July | August | September | October | November | December | January | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Days | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | | |
| **Since billings are performed on a Billing Month Basis, the Calendar Month calculation is irrelevant** | | | | | | | | | | | | | | | | |
| CALENDAR MONTHS | | | | | | | | | | | | | | | | |
| Volumes | 3,819,873 | 6,432,626 | 9,209,011 | 3,768,790 | 6,187,779 | 2,560,017 | 2,671,906 | 1,404,385 | 1,070,355 | 1,197,235 | 1,248,641 | 2,161,855 | 0 | | | 41,732,473 |
| Account Beginning Balance | $ - | $ - | $ 1,293,785 | $ 1,712,726 | $ (944,489) | $ 1,283,478 | $ 1,968,393 | $ 364,391 | $ (294,536) | $ (302,165) | $ 240,260 | $ 550,332 | $ 1,139,489 | $ 2,370,942 | | $ - |
| Plus: Cost of Firm Gas (Schedule 4) (30 Day Lag) | $ - | $ 5,142,673 | $ 7,985,684 | $ 8,304,079 | $ 7,506,372 | $ 6,407,299 | $ 2,413,891 | $ 2,140,678 | $ 1,502,091 | $ 1,529,295 | $ 1,323,999 | $ 1,755,290 | $ 3,079,169 | $ 38,965,896 | | $ 88,056,419 |
| Less: Expected Collections (Schedule 3) | $ - | $ (3,852,383) | $ (6,587,016) | $ (9,273,386) | $ (2,570,553) | $ (5,072,943) | $ (2,668,933) | $ (2,115,024) | $ (942,061) | $ (744,938) | $ (825,494) | $ (951,162) | $ (1,615,687) | $ - | | $ (37,219,560) |
| Less: Expected Collections (Schedule 3) | | | $ (988,471) | $ (1,690,142) | $ (2,708,838) | $ (659,570) | $ (1,356,643) | $ (684,814) | $ (565,615) | $ (241,721) | $ (191,141) | $ (220,760) | $ (244,056) | $ (432,078) | | $ (9,983,849) |
| Ending Balance | $ - | $ 1,290,290 | $ 1,703,982 | $ (946,723) | $ 1,282,492 | $ 1,958,263 | $ 356,708 | $ (294,768) | $ (300,120) | $ 240,472 | $ 547,624 | $ 1,133,701 | $ 2,358,916 | $ 40,904,760 | | $ 40,852,890 |
| Month's Average Balance | $ - | $ 645,145 | $ 1,498,884 | $ 383,002 | $ 169,002 | $ 1,620,870 | $ 1,162,551 | $ 34,811 | $ (297,328) | $ (30,846) | $ 393,942 | $ 842,016 | $ 1,749,203 | $ 21,637,851 | | $ 29,809,103 |
| Interest Rate (Prime Rate) | 6.50% | 6.50% | 7.00% | 7.00% | 7.00% | 7.50% | 7.93% | 8.02% | 8.25% | 8.25% | 8.25% | 8.25% | 8.25% | 8.25% | | |
| Interest Applied | $ - | $ 3,495 | $ 8,743 | $ 2,234 | $ 986 | $ 10,130 | $ 7,683 | $ 233 | $ (2,044) | $ (212) | $ 2,708 | $ 5,789 | $ 12,026 | $ 148,760 | | $ 200,531 |
| Winter Period Account Ending Balance | $ - | $ 1,293,785 | $ 1,712,726 | $ (944,489) | $ 1,283,478 | $ 1,968,393 | $ 364,391 | $ (294,536) | $ (302,165) | $ 240,260 | $ 550,332 | $ 1,139,489 | $ 2,370,942 | $ 41,053,520 | | $ 41,053,520 |
| BILLING MONTHS | | | | | | | | | | | | | | | | |
| Volumes | 1,254,534 | 4,972,802 | 7,042,716 | 6,190,342 | 6,762,855 | 4,293,546 | 2,733,704 | 1,996,319 | 1,187,676 | 1,072,847 | 1,203,754 | 1,438,722 | 1,582,656 | | | 41,732,473 |
| Account Beginning Balance | | $ - | $ 3,899,071 | $ 6,524,465 | $ 6,648,509 | $ 6,347,111 | $ 5,578,126 | $ 2,644,735 | $ 1,360,605 | $ 716,170 | $ 1,040,716 | $ 1,421,403 | $ 2,121,064 | $ 3,922,662 | $ 2,464,010 | $ - |
| Plus: Cost of Firm Gas (Schedule 4) (30 Day Lag) * | | $ 5,142,673 | $ 7,985,684 | $ 8,304,079 | $ 7,506,372 | $ 6,407,299 | $ 2,413,891 | $ 2,140,678 | $ 1,502,091 | $ 1,529,295 | $ 1,323,999 | $ 1,755,290 | $ 3,079,169 | | | $ 49,090,522 |
| Less: Expected Collections (Prior Month) ** | | $ (1,254,134) | $ (5,068,810) | $ (6,917,754) | $ (5,824,826) | $ (5,718,860) | $ (3,844,984) | $ (1,444,407) | | | | | | | | $ (30,073,774) |
| Less: Expected Collections (2nd Prior Month) ** | | | $ (321,794) | $ (1,300,590) | $ (2,020,738) | $ (1,494,574) | $ (1,529,378) | $ (986,573) | $ (386,273) | | | | | | | $ (8,039,921) |
| Less: Expected Collections (Prior Month) | | | | | | | | $ (1,007,169) | $ (1,498,023) | $ (826,396) | $ (739,704) | $ (869,948) | $ (1,075,058) | $ (1,193,031) | | $ (7,209,328) |
| Less: Expected Collections (2nd Prior Month) | | | | | | | | | $ (269,344) | $ (384,373) | $ (212,042) | $ (197,817) | $ (223,217) | $ (287,500) | $ (306,116) | $ (1,880,410) |
| Ending Balance | | $ 3,888,539 | $ 6,494,151 | $ 6,610,199 | $ 6,309,317 | $ 5,540,976 | $ 2,617,655 | $ 1,347,265 | $ 709,056 | $ 1,034,697 | $ 1,412,968 | $ 2,108,928 | $ 3,901,958 | $ 2,442,131 | $ 2,157,894 | $ 1,887,089 |
| Month's Average Balance | | $ 1,944,270 | $ 5,196,611 | $ 6,567,332 | $ 6,478,913 | $ 5,944,043 | $ 4,097,890 | $ 1,996,000 | $ 1,034,830 | $ 875,434 | $ 1,226,842 | $ 1,765,165 | $ 3,011,511 | $ 3,182,397 | $ 2,310,952 | $ 45,632,191 |
| Interest Rate (Prime Rate) | 6.50% | 6.50% | 7.00% | 7.00% | 7.00% | 7.50% | 7.93% | 8.02% | 8.25% | 8.25% | 8.25% | 8.25% | 8.25% | 8.25% | 8.25% | |
| Interest Applied | $ - | $ 10,531 | $ 30,314 | $ 38,309 | $ 37,794 | $ 37,150 | $ 27,080 | $ 13,340 | $ 7,114 | $ 6,019 | $ 8,435 | $ 12,136 | $ 20,704 | $ 21,879 | $ 15,888 | $ 286,693 |
| Winter Period Account Ending Balance | $ - | $ 3,899,071 | $ 6,524,465 | $ 6,648,509 | $ 6,347,111 | $ 5,578,126 | $ 2,644,735 | $ 1,360,605 | $ 716,170 | $ 1,040,716 | $ 1,421,403 | $ 2,121,064 | $ 3,922,662 | $ 2,464,010 | $ 2,173,782 | $ 2,173,782 |
| Average of Month's Average Balance | | | | | | | | | | | | | | | | $ 3,259,442 |
| | | | | | | | | | | | | | | | | (Dec. through Jan. average) |

* The 30-day Cost of Gas lead is factored into the analysis, as the monthly costs are reflected in the next mon

** The 36.33 Collection lag is included, as the #of days in the month less 6.33 is the portion of the collections in the next month, with the remaining collections (6.33 / # of days in mo.) in 2nd mo.

NORTHERN UTILTIES, INC. - New Hampshire Division
Analysis of Interest on Over/Undercollection-Calendar Month vs. Billing Month
Proof

The Northern Utilities COGC provides working cash through two mechanisms, the lead lag study's allowance and the interest on over/under collection. If the COGC is working properly, the working capital allowances from these two mechanisms, when summed, should equal the stockholder's cash requirements derived from an analysis of actual cash flows. In the proof provided below, we have identified the average monthly balance upon which carrying charges are permitted under the COGC and in accordance with the lead-lag study's results and compared that to the average monthly balance required on a cash basis. Two scenarios are shown for the over/under collection calculation, one using calendar month revenues (accrual accounting) and one based on billing month, as-billed, revenues.

| | Calendar Month Basis | Billing Month Basis |
|---|---|---|
| **Over/Under Collection analysis** | | |
| Winter Average Balance | $ (81,822) | $ 2,016,322 |
| Summer Average Balance | $ (1,987) | $ 448,176 |
| Total | $ (83,810) | $ 2,464,498 |
| | | |
| **Lead-Lag W/C Allowance** | | |
| Winter Cost of Gas | $ 38,965,896 | $ 38,965,896 |
| Summer Cost of Gas | $ 10,124,626 | $ 10,124,626 |
| Cost of Gas | $ 49,090,522 | $ 49,090,522 |
| Average Daily cost of Gas | $ 134,495 | $ 134,495 |
| Lead-Lag Net Days | 6.33 | 6.33 |
| W/C for Net Lag | $ 851,351 | $ 851,351 |
| | | |
| Monthly Average W/C Subject to Interest | $ 767,541 | $ 3,315,849 |
| | | |
| **Cash flow Analysis** | | |
| Actual Average Monthly Cash Required | $ 3,259,442 | $ 3,259,442 |
| | | |
| **Variance or Over Collection (Under Collection)** | **$ (2,491,901)** | **$ 56,407** |
| | | |
| Carrying Charge Impact @ 8% | $ (199,352) | $ 4,513 |