STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Northern Illinois Gas Company	**)**	
d/b/a Nicor Gas Company	**)**	**08-0363**
	)	
Proposed general increase in natural gas rates.	**)**	

BRIEF ON EXCEPTIONS OF

THE CITIZENS UTILITY BOARD

CITIZENS UTILITY BOARD
Julie Soderna
Director of Litigation
Kavita Chopra
Attorney
309 W. Washington
Suite 800
Chicago, Illinois 60606
312-263-4282
jsoderna@citizensutilityboard.org
kchopra@citizensutilityboard.org

Dated: February 25, 2009

TABLE OF CONTENTS

I. Introduction/ Statement of the Case……………………………………………………1

II. Overall Revenue Requirement and Revenue Deficiency

III. Test Year

IV. Rate Base……………………………………………………………………………….2

- **A. Overview……………………………………………………………………….2**
- B. Uncontested Issues
  - 1. Northern Region Reporting Center ("NRRC")
  - 2. Plant Additions – Original Cost Finding
- **C. Contested Issues……………………………………………………………….2**
  - 1. Cash Working Capital
  - **2. Gas in Storage…………………………………………………………2**
  - 3. Pension Asset
  - 4. Gross Plant
  - 5. Accumulated Reserve for Depreciation and Amortization
  - 6. Incentive Compensation
  - 7. Other

V. Operating Expenses………………………………………...……………………4

- **A. Overview……………………………………...……………………...…4**
- B. Uncontested Issues
  - 1. Incentive Compensation
  - 2. Pension Credit
  - 3. Environmental Expenditures
  - 4. Invested Capital Taxes
  - 5. Promotional Expenses
  - 6. Training / Seminar Expenses / Economic
  - 7. Membership Dues
  - 8. Certain Charitable Expenses
  - 9. Taxes Other Than Income Taxes
- **C. Contested Issues……………………………………………………………….4**

1. Incentive Compensation Costs and Expenses
2. Uncollectible Accounts Expense
3. Rate Case Expense
4. Payroll /Headcount……………………………………………………....4
5. Mains and Services Expenses………………………………………...5
6. Customer Records and Collection Expenses…………………………...7
7. Charitable Contributions
(a) Aurora Foundation
(b) Salvation Army – Chicago
8. Depreciation and Amortization Expenses
9. Income Taxes
10. Interest Synchronization
VI. Rate of Return…………………………………………………………………………9
A. Uncontested Issues
1. Embedded Cost of Long Term Debt
2. Embedded Cost of Preferred Stock
B. Contested
1. Capital Structure (inclusion of short-term debt)
a. Inclusion of Short-Term Debt
b. Adjustments to Other Capital Components Based on the Calculation of AFUDC Balances
2. Cost of Short-Term Debt
3. Cost of Common Equity…………………………………………………9
a. ROE Calculation
b. Effect of Proposed Riders
4. Overall Cost of Capital(Derivative)
VII. Cost of Service and Allocation Issues
A. Overview
B. Uncontested Issues
1. Allocation Factor Based on Services Investment by Customer Class
2. Allocation of Storage Losses

C. Contested Issues
1. Main Size Allocation
2. Allocation of Storage Costs to Unbundled Rate Classes
D. Interclass Allocation Issues
VIII. Rate Design……………………………………………………………………...22
A. Overview
B. Uncontested Issues
1. Rate 6 and Rate 76 Design
C. Contested Issues
1. Rate 1 Design
2. Rate 1 Design and Conservation
3. Rate 1 design – Alternative Straight Fixed Variable
4. Rate 4 and 74 Design
5. Rate 5 and 75 Design
(a) Overview
(b) Annual Therm Limitation
6. Rate 7 and 77 Design
7. Other
IX. Tariff Revisions Affecting Transportation Customers
A. Overview
B. Uncontested Issues
1. Individual and Group Administration Charges
2. Recording Device Charges
3. Group Change Fees
4. Transportation Service Credit
5. Gas Supply Cost / Demand Gas Cost
6. Timing of MDCQ
C. Contested Issues
1. Proposed Reductions in Nomination Rights
(a) Reduction of Maximum Daily Nominations (“MDN”) in the months of July through October

(b) Reduction of Maximum Daily Nominations ("MDN") in the months of March and April

2. Storage Calculations

(a) Storage Banking Service ("SBS") Entitlement

(b) Storage Banking Service ("SBS") Charge

(c) Storage Withdrawal Factor

(i) Storage Withdrawal Constant

(ii) Timing of the Storage Withdrawal Factor Calculation

(iii) Other

3. Costs Associated with Storage and System Losses

(a) Storage Loss Adjustment ("SLA") Factor

(b) Unaccounted for Gas Adjustment ("UFGA")

4. Intra-Day Nominations

5. Trading of Stored Gas

6. Super-Pooling on Critical Days

7. Seasonal Usage Maximum

8. Other

X. Tariff Revisions Affecting Customer Select Customers

A. Overview

B. Uncontested Issues

1. Customer Select Balancing Charge ("CSBC")

2. Carrying Cost of Capital for Working Gas

3. Customer Select Administrative Fee

4. Access to Nicor Gas Assets

XI. Existing Riders

A. Rider 2 – Franchise Cost Adjustment

B. Rider 5 – Storage Service Cost Recovery

C. Rider 8 – Adjustments for Municipal and State Utility Taxes

XII. New Riders……………………………………………………………………………23

A. Overview

B. Rider 26 – Uncollectible Expense Adjustment

C. Rider 27 – Company Use Adjustment
D. Rider 28 – Volume Balancing Adjustment
E. Rider 29 – Energy Efficiency Plan
F. Rider 30 – Qualifying Infrastructure Plant
XIII. Terms and Conditions
A. Proposed Changes
B. Uncontested Issues
C. Contested Issues
1. Non-Sufficient Funds ("NSF")
XIV. Revenues
A. Total Billing Units / Rate 4 and Rate 74 Billing Units
B. Nicor Energy Services Billing Adjustment
XV. Gross Revenue Conversion Factor
XVI. Other Issues
A. Accounting for Storage Gas Losses
B. Reporting of Affiliate Transactions
C. Operating Agreement
XVII. Conclusion……………………………………………………………………………23

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Northern Illinois Gas Company	**)**	
d/b/a Nicor Gas Company	**)**	**08-0363**
	)	
Proposed general increase in natural gas rates.	**)**	

BRIEF ON EXCEPTIONS OF
THE CITIZENS UTILITY BOARD

Pursuant to Section 200.830 of the Rules of Practice[1] of the Illinois Commerce Commission ("Commission" or "ICC") and the briefing schedule set by the Administrative Law Judges ("ALJ") in their July 18, 2008 case management order, the CITIZENS UTILITY BOARD ("CUB") hereby submits its Brief on Exceptions in this proceeding. This proceeding concerns rate increase requests filed by Northern Illinois Gas Company d/b/a Nicor Gas Company ("Nicor," the "Company" or the "utility"). The sections of this brief are organized in accordance with the outline of issues submitted to the Administrative Law Judges ("ALJ") on November 7, 2008.

I. INTRODUCTION / STATEMENT OF THE CASE

In this Brief on Exceptions, CUB addresses the Proposed Order's determinations with regard to gas in storage, payroll/headcount, mains and services expense, customer records and collections expense, and Nicor's cost of equity. Additionally, CUB adopts the positions, arguments and exceptions presented by the People of the State of Illinois by Attorney General, Lisa Madigan ("AG") with regard to Rider VBA (Section XII. D.) and rate design (Section VIII). CUB's failure to address any issue in this brief should not be construed as CUB's agreement

1 83 Ill. Adm. Code Part 200.830.

with the Proposed Order's findings, nor does CUB waive its right to address other issues or raise other arguments in the future.

IV. RATE BASE

A. Overview

C. Contested Issues

1. Cash Working Capital

2. Gas in Storage

The PO erred in favoring inflated estimated storage volumes over more accurate actual gas balances for the test year.

The Proposed Order ("PO") rejects CUB's recommended adjustment to gas in storage because "Mr. Effron only used one year of information, and he used information that does not appear to be totally accurate for the months of October and November of 2008. Even assuming that Mr. Effron's figures for October and November are correct, he has only taken one year into account." PO at 16. The PO fails to recognize the sound policy rationale for Mr. Effron's use of the most recent gas in storage volumes to estimate Nicor's test year volumes of gas in storage, which is simply that the more recent period is more likely to be representative of the test year because it is closer in time to the test year. In fact, the PO itself expresses a preference for using actual balances, as they are more accurate. PO at 16. As Mr. Effron testified, as a practical matter, the level of gas in storage periods during more recent periods is more likely to be representative of the future actual experience. AG/CUB Ex. 4.0 at 6. Nicor's estimated gas in storage level – and the PO's adoption of that estimate - improperly disregards the Company's most recent actual experience.

AG/CUB witness Effron testified that the forecasted balances used by Nicor for the test year are significantly higher than the actual recent balances of gas in storage. AG/CUB Ex. 1.0

at 10. This is especially true for the months of July through December, which account for nearly all of the differences between the actual average balance in 2007 and the forecasted average balance in 2009. AG/CUB Ex. 1.0 at 10. In fact, Mr. Effron testified that the actual balance of gas in storage as of September 2008, which was the last month of data available in this proceeding, ($221 million), was approximately $113 million less that the Company's forecast for that month. AG/CUB Ex. 4.0 at 6. This fact undermines the reliability of Nicor's forecasts and further substantiates Mr. Effron's analysis and recommendation to reduce Nicor's proposed, estimated gas in storage amount by $4,599,000. In order to properly account for Nicor's inaccurate, inflated forecast, the PO should be revised to adopt Mr. Effron's recommended disallowance for gas in storage.

EXCEPTION #1:

The second paragraph on page 16 of the Proposed Order should be modified as follows:

> The issue here is, essentially, whether the use of estimated (forecasted) balances, as opposed to actual balances, is more accurate. While generally, actual balances ~~would seem to be~~ are more accurate, Mr. Effron only used one year of information, and he used information that does ~~not~~ appear to be ~~totally~~ accurate for the months of October and November of 2008. Even assuming that Mr. Effron's figures for October and November of 2008 are correct, he has only taken one year into account. As Mr. Bartlett pointed out, anomalous weather and other out of the ordinary conditions can occur in any given year. Therefore, Mr. Bartlett's calculation, which is based upon estimated forecasted balances, is not more accurate that that proposed by Mr. Effron. In fact, Mr. Effron testified that the forecasted balances used by Nicor for the test year are significantly higher than the actual recent balances of gas in storage. ~~We also note that the veracity of Mr. Bartlett's forecasted averages is further bolstered by his calculations based upon actual figures, which are remarkably similar to his forecasted averages. There is no indication of record that Mr. Bartlett's three-year and four-year averages, which are very close to the amount Nicor seeks, but are computed using actual volumes, are incorrect.~~

~~Therefore, we conclude that Mr. Bartlett is correct.~~ ~~No~~ An adjustment to the amount Nicor seeks for gas in storage is warranted, because as Mr. Effron testified, the Company's forecasts are inflated and not representative of its most recent actual experience. Therefore, we disallow $4,599,000 from Nicor's requested gas in storage amount.

V. OPERATING EXPENSES

A. Overview

B. Contested Issues

4. Payroll / Headcount

The Commission should cut Nicor's payroll expense because Nicor has not met its burden of establishing that its Payroll Expense is both reasonable and will be prudently incurred.

The PO erroneously concludes that Nicor has met its burden of demonstrating the reasonableness of its payroll expense despite unrebutted evidence that the Company's previous forecasts of employee counts were inaccurate and inflated. AG/CUB Ex. 4.0 at 10. Mr. Effron testified that Nicor's forecast for the increase in the number of employees from December 2007 to January 2008 did not materialize and its forecasted test year payroll expense for the 2009 test year represents an increase of approximately 12% over the actual payroll expense in 2007, or nearly 6% per year. AG/CUB Ex. 1.0 at 19. Mr. Effron's proposed adjustment allows for a reasonable increase in the number of authorized positions based on the Company's actual experience, taking into account reasonable increase in headcount from 2008 to 2009. AG/CUB Ex. 4.0 at 9. The evidence in this proceeding therefore demonstrates that Nicor's proposed, estimated payroll expense is unreasonably inflated and should be adjusted downward by $1,636,000.

EXCEPTION #2:

The last paragraph on the bottom of page 34 and top of page 35 of the Proposed Order should be modified as follows:

> The AG/CUB propose to cut the Company's payroll expense, based upon the fact that authorized positions remain unfilled. Nicor argues that, much of the variance in actual versus authorized headcount is related to positions that, while currently unfilled by additional headcount, encompass work that is currently being performed by overtime work and contractors. AG/CUB assert that the real basis for comparison is the difference between the Company's projected headcount and its actual headcount in prior years and not the total workload. In sum, AG/CUB proposes to reduce the headcount by 106 and the Company asserts that the work of 78 employees is being performed by overtime work and contractors.
>
> The Commission disagrees with Company and Staff and finds that Nicor has not met its burden of establishing that its Payroll Expense is both reasonable and will be prudently incurred. ~~The Commission adopts the Company's $97,545,000 2009 test year Payroll/Headcount Expense.~~ Because it is evident that the Company's forecasted increase in the number of employees from December 2007 to January 2008 did not take place, the Commission does not adopt the Company's $97,545,000 2009 test year Payroll/Headcount Expense; rather, the Commission adopts AG/CUB's position that Nicor's projected test year payroll expense in unjustly inflated and includes positions that are likely not to materialize. Nicor's Payroll/Headcount Expense, therefore, should be adjusted downward by $1,636,000.

5. Mains and Services Expenses

The PO's conclusion that Nicor sufficiently demonstrated a need for a 28% increase over their actual 2007 expenses, despite evidence that this extraordinarily large increase is unwarranted, is in error.

The PO errs in adopting Nicor's unreasonable 28% increase in Mains and Services Expense. PO at 36. The Company has not sufficiently supported its request to increase this expense item by 28% from its current levels. Therefore, Mr. Effron proposed to limit the increase in mains and services expense to 5% per year, concluding that this is "more than adequate" to allow for inflation and normal growth. AG/CUB Ex. 1.0 at 25-26; Ex. 4.1, Sched. C-2. The PO simply ignores the trend that mains and services expenses have not been increasing at the rate forecasted by the Company. For example, the Company forecasted an increase in Account 874 expenses of 17% from 2007 to 2008. AG Cross Exhibit 9. The actual increase in Account 874 expenses from the first six months of 2007 to the first six months of 2008 was only 3.3%. AG Cross Exhibit 10. The AG/CUB's adjustment allows for increases in these expenses and brings the projected expenses in line with the Company's actual experience. Mr. Effron adjusted his projection of expenses where Nicor offered specific reasons for the proposed increase in expenses, *e.g*. the amount of proposed increase related to the reclassification of accounts. Nicor Init. Br. at 39. The Company has not identified any other particular factors that would cause the expense charged to Account 874 to experience the extraordinary increases reflected in the forecast of 2009 test year operation and maintenance expense. AG/CUB Ex. 1.0 at 25. Therefore, the Commission should adopt Mr. Effron's recommended adjustment to allow reducing the forecasted test year operation and maintenance expense by $2,602,000.

EXCEPTION #3:

The first full paragraph on page 36 of the Proposed Order should be modified as follows:

> We disagree with Staff's and Nicor's contention that the test year Mains and Services Expenses should not be reduced. We ~~dis~~agree with Mr. Effron's assertion that Nicor did not substantiate its claim that an increase to Mains and Services Expenses is warranted. ~~As is set forth above, Nicor set forth several legitimate reasons for the increase in the amount of Mains and Services Expense that it requests. There also is no evidence that the reasons that Nicor articulated for its proposed increase are untrue or invalid.~~
>
> Moreover, Mr. Effron's adjustment of 5% per year allows for inflation and normal growth; which is more reasonable than

> Nicor's proposed increase, which is 28% over Nicor's actual Mains and Services Expenses for 2007.~~ does not appear to contemplate that Nicor had increased labor costs, and, it had increases in several other costs, such as, increased JULIE fees, and, an increase in employee training costs.~~ His proposed adjustment, therefore, does ~~not~~ appear to be reasonable and is adopted.

6. Customer Records and Collection Expenses

The Commission must recognize that Nicor's dramatically increased forecast for customer records and collection expenses is unwarranted.

The PO concludes that Nicor's proposed increase for Customer Records and Collection Expenses is justified. PO at 38. The evidence shows, however, that Nicor's forecast for customer records and collection expenses is significantly higher than what Nicor's actual customer records and collections expenses were in previous years. AG/CUB Ex. 1.0 at 26. The PO accepts Nicor's erroneous claim that, because it is forecasting increased activity related to Account 903 Customer Records and Collections Expenses and that none of that increased activity has been challenged as being unnecessary or unreasonable, its request should be adopted by the Commission. Nicor In. Br. at 40. The available evidence, however, shows that the expenses have not been increasing as forecasted by the Company. For example, the expenses charged to this account in 2006 were $31,127,000, and in 2007, these expenses were $30,061,000. AG/CUB Ex. 1.0 at 26. Nicor's 2009 forecast for this expense increased in the amount of $7,586,000 or 25% over the actual expenses that Nicor incurred in 2007. AG/CUB Ex. 1.0 at 26.

In contrast, Mr. Effron's proposed annual growth rate of 5% per year allows for inflation and normal system growth from 2007 to 2009, while being more representative of actual experience. Mr. Effron proposed to adjust the test year forecast by beginning with Nicor's actual 2007 expenses as a base, and then, he increased that amount by $1,400,000 to allow for additional billing (postage) costs. Escalating the remainder of Nicor's projected costs by 5% per year, results in an adjusted figure in the amount of $34,612,000. *Id.* at 27; AG Initial Brief at 19. Thus, the PO should be altered to adopt Mr. Effron's recommended disallowance to Customer Records and Collections Expense, which provides Nicor with a reasonable increase in this expense.

EXCEPTION # 4:

The second full paragraph on page 38 of the Proposed Order should be modified as follows:

> We disagree with Staff and Nicor that no adjustment to the amount Nicor seeks for Customer Records and Collections Expense is warranted. Instead, we focus on AG/CUB witness Effron, who explained that Nicor's 2009 forecast for this expense increased in the amount of $7,586,000, or 25% over the actual expenses that Nicor incurred in 2007. Mr. Effron correctly opined that the $1.4 million that Nicor allocated to its proposed increase in postage is reasonable. But, the remainder of the increase appears to be in excess of what would be expected from normal inflation and system growth. We agree with Mr. Effron that an annual growth rate of 5% per year should be more than adequate to allow for inflation and normal system growth from 2007 to 2009. ~~Staff witness Mr. Kahle's testimony establishes that he reviewed the bases, upon which, Nicor justifies its need for an increase to Customer Records and Collections Expenses. He concluded, after this review, that the amount of Nicor's requested increase is justified. Also, Mr. Kirby's testimony establishes that a large portion of this increase is directly or indirectly related to the increase in collection activities that Nicor is experiencing, due to the economic downturn and the rising price of natural gas. His testimony also established that Nicor is experiencing various increases in its billing costs, such as postage or the increase in costs due to elimination of Nicor's bi-monthly billing program.~~

VI. RATE OF RETURN

3. Cost of Common Equity

In rejecting CUB's recommended cost of common equity, the Proposed Order improperly rejects record evidence, in the form of substantial recent financial literature and undisputed detailed empirical evidence specific to this case, which demonstrates that adhering to past Commission practices will result in over-inflated cost of equity. PO at 68. In order to avoid awarding Nicor with an unjustifiably high return, thus establishing unjust and unreasonable rates, the Commission should reconsider the decision to ignore the latest research on cost of equity, and the undisputed supporting analysis conducted by Mr. Thomas, and render a decision consistent with this new knowledge and the law.

For all the reasons articulated in Mr. Thomas' direct testimony, the Proposed Order errs in utilizing a CAPM model in calculating the return on equity for the Ameren Utilities. See CUB Ex. 1.0 at 18. The Proposed Order ignores the uncontroverted evidence that the mean reversion adjustment is unsupportable for the sample companies, and is therefore inappropriate for use in determining Nicor's ROE. The return on equity ("ROE") that investors require for their investment in Nicor is no greater than 9.455%. CUB Ex. 1.0 at 30. While investors may, at times, desire higher rates of return, the utility is only entitled an opportunity to recover this **necessary** level of return through regulated rates as a prudently incurred cost. See, generally *Bluefield Water Works & Improvement Co. v. Public Service Comm'n of West Virginia*, 262 U.S. 679 (1923) ("*Bluefield*"); *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 US 591 (1944) ("*Hope*"); 220 ILCS 5/9-211, 5/9-230.

However, if the Commission persists in using the CAPM for estimating a utility's ROE, and ignores Mr. Thomas' independent analysis and the academic research and conclusions undermining the usefulness of CAPM in setting market required returns on equity in utility cases, then it should at a minimum recognize that unadjusted beta parameters are superior to adjusted beta parameters in their ability to accurately reflect Nicor's risk profile.

The Proposed Order errs in ignoring new evidence undermining the use of the CAPM for estimating utility returns on equity.

The Proposed Order improperly dismisses the use of academic findings, (PO at 68), as well as detailed uncontroverted empirical analysis, which clearly support CUB's position that the CAPM is not a useful model to use in establishing utility returns on equity. CUB Ex. 1.0 at 18. The CAPM is an analytical tool that has been used by the Commission to estimate investors' required rate of return, which is synonymous with the cost of equity capital. There are several important inputs to the CAPM, and the beta parameter, discussed extensively in this case, is a critical driver of CAPM results. CUB Ex. 1.0 at 5-6. Beta is also exceedingly difficult to estimate, so much so that its estimation has long been a topic of debate in the academic literature. CUB Ex. 1.0 at 5-6. In applying the CAPM to determine regulated utility ROEs, the Commission has accepted a methodology that requires an adjustment to raw, or unadjusted, beta parameters.

However, as the record clearly demonstrates, the mean reversion adjustment is not appropriate for utility companies because the risk (beta) of utility companies has not been shown to move towards the risk (beta) of other non-utility companies. Essentially, utility betas have not been shown to trend to a beta of 1.0. In fact, the financial literature demonstrates a contrary trend. CUB Ex. 1.0 at 7. A well know study by Gambola and Kahl in 1990 concluded that the mean reversion assumption is not appropriate for utility companies. CUB Ex. 1.0 at 9. Even the seminal paper by Dr. Marshall Blume, which is commonly cited at the primary source of evidence for the mean reversion adjustment, speculates that a one-size fits all reversion adjustment may not be appropriate for forward looking estimates. CUB Ex. 1.0 at 10. Dr. Blume, a well-respected economist and theorist, suggested that such a mean reversion adjustment may actually introduce larger error into CAPM results than using unadjusted betas. CUB Ex 1.0 at 10. The mean reversion adjustment proposed by Nicor, and accepted by the Commission, in this case is a static mean reversion adjustment, meaning that it is a one size fits all adjustment. CUB Ex. 1.0 at 7-8, 10.

Building upon the collective academic evidence, Mr. Thomas conducted a detailed empirical analysis of the companies in Dr. Makholm's sample of comparable natural gas and electric utilities. This analysis demonstrates that for the companies in the sample group, the static mean reversion adjustment that the Commission has traditionally relied on actually introduces larger error into the CAPM, produces less accurate results, and therefore unnecessarily increases the cost of equity. CUB Ex. 1.0 at 9. No party has disputed the results of this analysis.

Mr. Thomas' uncontroverted analysis, which the Commission has not previously reviewed, demonstrates that the PO erred in relying on the CAPM to establish utility ROEs, and that the Commission has erred in its rejection of CUB's positions in prior cases. As CUB has argued in this and other cases, a paper by Gregory L. Nagel, et. al., entitled "The Effect of Risk Factors on Cost of Equity Estimation" (the "Nagel paper") rejects the version of the CAPM traditionally used by the Commission because it has a higher forecast error than a very simplified version. Because of this forecast error, CUB has argued that Nagel, et. al.'s, findings indicate that the Commission should reexamine the overall usefulness of the CAPM in rate-setting proceedings. CUB Ex. 1.0 at 14-15.

The Commission has previously reviewed the Nagel paper, but has misinterpreted its implications. For example, the Commission incorrectly concluded in its Final Order in Docket No. 07-0507 that the research actually supports its longstanding practice of relying on adjusted betas in the CAPM, and the CAPM model itself, to determine the ROE. ICC Docket No. 07-0507 Final Order at 87; CUB Ex. 1.0 at 17. In its Final Order in ICC Docket No. 07-0507, the Commission found:

> CUB witness Thomas states, "[t]he version of the CAPM traditionally used by the Commission was rejected by the Nagel paper because it had a higher forecast error than the more simplified version." (CUB Ex. 1.0 at 5) While the parties seem to agree that in the Nagel Paper raw or unadjusted betas were used in the CAPM, other than Mr. Thomas' statement, there is no indication that adjusted betas were excluded from the Nagel Paper due to forecast error. There is simply no support in the record for what appears to be an assumption by Mr. Thomas and CUB that a simplified version of the CAPM, where all betas equal 1.0, would have a lower forecast error than the traditional CAPM if adjusted betas had been used. Based upon its review of the record, the Commission is inclined to agree with Staff that logically, if anything, the fact that the Nagel Paper found using a simplified CAPM, where the beta of all stocks is set equal to 1.0, is superior to the use of unadjusted betas would tend to support using adjusted rather than unadjusted betas.
>
> In summary, the Commission does not believe that the Nagel Paper, as discussed in the record of this proceeding, undermines the usefulness of the CAPM in establishing the market required rate of return in utility rate cases. In fact, as discussed above, the Commission believes the Nagel Paper tends to support the long-standing proposition to which the Commission has subscribed: that the use of adjusted betas in the CAPM is preferable to the use of unadjusted betas.

The Commission concluded that the Nagel paper supports the conclusion that adjusted betas are preferable to unadjusted betas. However, as Mr. Thomas specifically demonstrated, in this case, for the companies in Dr. Makholm's sample of comparable utilities, the beta adjustment methodology actually results in less accurate beta estimates which cannot be relied upon by the Commission. When this evidence is viewed in concert with the findings of Nagel, et, al., it is clear that the Commission cannot rely upon the CAPM model as a determinant of Nicor's ROE. CUB Ex. 1.0 at 18.

Furthermore, Dr. Nagel and his co-authors are not the first to identify problems with the CAPM. In fact, there is a long history of research into the problems inherent in the CAPM. Ravi Jagannathan and Iwan Meier discussed a number of theoretical problems with the CAPM in their 2002 article "Do We Need CAPM for Capital Budgeting:"

> The CAPM as a model has been seriously challenged in the academic literature…. [S]ince the critique by Fama and French (1992) there is consensus in the academic literature that the CAPM as taught in MBA classes is not a good model – it provides a very unreliable estimate of the cost of capital…. [T]here is overwhelming evidence in the academic literature that business schools have been teaching a model that may not be of much value when it comes to estimating the cost of capital for a project.

CUB Ex. 1.0 at 16.

Accordingly, CUB requests that the Proposed Order be modified as set forth below:

<u>EXCEPTION #5:</u>

> **a. Capital Asset Pricing Model**
>
> First, we consider Mr. Thomas' recommendation that the CAPM should not be used as a primary tool to estimate cost of equity. According to Mr. Thomas, it should only be used to check the reasonableness of the DCF model. He contends that CAPM has such bias in its calculations that it is unreasonable to rely on it

to estimate cost of equity. The Commission notes it has considered this argument previously in several recent rate cases. As was the case in those recent rate cases, Mr. Thomas' recommendation relies heavily on the Nagel Paper, which is discussed in the parties' testimony and briefs. However, Mr. Thomas has also presented a new detail empirical analysis specific to this case. The Commission finds this analysis compelling.

Mr. Thomas argues that the version of CAPM used by the Commission was rejected in the Nagel Paper, as, it had a higher forecast error than the more simplified version. ~~The Commission, however, finds the rebuttal testimony of Staff (Staff Exhibit 19.0 at 16-19) regarding CAPM and beta to be very convincing. Thus,~~ Mr. Thomas' has also demonstrated, through a detailed empirical analysis of the companies in Dr. Makholm's sample of comparable natural gas and electric utilities, that for the companies in the sample group, the mean reversion adjustment that the Commission has traditionally relied on introduces larger error into the CAPM, produces less accurate results, and therefore unnecessarily increases the cost of equity. CUB Ex. 1.0 at 9. No party has disputed the results of this analysis. Although the Commission~~,~~ ~~which~~ has previously rejected CUB's arguments regarding CAPM and beta, in this instance the new evidence presented by Mr. Thomas is compelling. Therefore, the Commission believes that ~~and does not believe that~~ the record in this proceeding supports a finding that the Nagel paper does undermine~~s~~ the usefulness of CAPM in setting market required returns on equity in utility cases.

~~Among the analyses presented by Staff, allegedly in response to Nicor's preference for the use of published betas, was a CAPM analysis using only published betas, which included "raw" or "unadjusted" betas. In this analysis, the beta estimate used was the average of the four published raw beta estimates (Reuters, Scottrade, Yahoo!, Zacks) and one published adjusted beta estimate (Value Line). This approach resulted in an average published beta of 0.67. Apparently, because the Commission has traditionally relied upon adjusted beta estimates, Staff also presented a CAPM analysis, in which, it adjusted the raw or unadjusted published beta estimates from Reuters, Scottrade, Yahoo!, and Zacks before combining them with the beta adjusted estimate for Value Line.~~

~~While CUB maintains that the CAPM is not a reliable model, and that any CAPM results relying on adjusted betas should~~

~~be rejected, CUB stated that Staff's methodology of averaging adjusted and unadjusted betas is not an unreasonable approach. If the Commission rejects CUB's position, and determines that the CAPM should be used to determine Nicor's ROE, CUB urges the Commission to make clear that significant questions exist about the beta adjustment methodology and, either reject its use in the CAPM, or adopt Staff's methodology of averaging adjusted and unadjusted beta estimates.~~

~~The recommendation made by CUB and suggested Staff that unadjusted betas should be used in the CAPM is are rejected. The record does not support the proposition that unadjusted betas are superior to adjusted betas. To the contrary, the evidence shows that betas, including betas of utilities, do, in fact follow the revision to the mean proposition and the use of unadjusted betas would tend to produce biased results. Additionally, the Commission does not find Nicor's objections to the adjusted regression betas contained in Staff's direct testimony to be persuasive. While it is correct that the DCF model requires the use of an observable input, market price, in the estimate of the cost of common equity, there is no such requirement for the beta input in the CAPM. Nicor identified no actual flaw in the calculations underlying Staff's adjusted regression betas and the Commission finds that they constitute a reasonable proxy for systematic risk in the CAPM.~~

~~For purposes of establishing Nicor's ROE in this proceeding, the Commission finds that two of Staff's CAPM analyses are reasonable and deserve consideration. The analysis in Staff's direct testimony, (utilizing Value Line and regression betas) which produced an ROE estimate of 11.56%, and the analysis which relied upon "all" adjusted published betas, which produced an ROE estimate of 11.39%, are found to be reasonable. Additionally, the Commission finds that the CAPM analysis presented by Nicor, which produced an ROE estimate of 11.93%, is also reasonable and should be considered when estimating the cost of common equity.~~

Should the Commission reject Mr. Thomas' suggestion that the CAPM is an inappropriate model for use in setting Nicor's ROE, at a minimum; it should recognize the problems with the use of adjusted betas in applying the CAPM.

The record is clear that the beta adjustment methodology is simply inappropriate for use in setting rates for regulated utilities. No party has contradicted the specific evidence presented by Mr. Thomas regarding the appropriateness of the beta adjustment methodology for the companies in the sample group. CUB Init. Br. at 22. Thus, the Commission cannot accept this adjustment.

Mr. Thomas' analysis tested the validity of the CAPM under a variety of assumptions. CUB Ex 1.0 at 10. The breadth of this analysis demonstrates that the mean reversion adjustment produces less reliable results under a range of conceivable assumptions. Generally, this analysis supports the conclusion in the academic literature that the beta adjustment methodology is inappropriate for regulated utility companies. Specifically, it demonstrates that for the utilities in Dr. Makholm's sample of comparable utilities the mean reversion adjustment produces beta estimates that are less accurate than raw, or unadjusted, betas. This means that the mean reversion adjustment actually increases the inaccuracy of the CAPM, for the sample companies. CUB Ex. 1.0 at 13. The literature, supported by Mr. Thomas' study, demonstrates that the Commission's traditional assumption, that utility company betas tend to revert to the market beta, is inappropriate and overstates the beta parameter. CUB Ex. 1.0 at 9. This assumption introduces forecast error into the CAPM calculation should be recognized in applying the CAPM.

ALTERNATIVE EXCEPTION #5:

> First, we consider Mr. Thomas' recommendation that the CAPM should not be used as a primary tool to estimate cost of equity. According to Mr. Thomas, it should only be used to check the reasonableness of the DCF model. He contends that CAPM has such bias in its calculations that it is unreasonable to rely on it to estimate cost of equity. The Commission notes it has considered this argument previously in several recent rate cases. As was the case in those recent rate cases, Mr. Thomas' recommendation relies

heavily on the Nagel Paper, which is discussed in the parties' testimony and briefs. However, Mr. Thomas has also presented a new detail empirical analysis specific to this case. The Commission finds this analysis compelling.

Mr. Thomas argues that the version of CAPM used by the Commission was rejected in the Nagel Paper, as, it had a higher forecast error than the more simplified version. While ~~T~~the Commission~~, however,~~ finds the rebuttal testimony of Staff (Staff Exhibit 19.0 at 16-19) regarding CAPM~~ and beta ~~to be ~~very~~ convincing.~~ Thus,~~ Mr. Thomas has also demonstrated, through a detailed empirical analysis of the companies in Dr. Makholm's sample of comparable natural gas and electric utilities, that for the companies in the sample group, the mean reversion adjustment that the Commission has traditionally relied on introduces larger error into the CAPM, produces less accurate results, and therefore unnecessarily increases the cost of equity. CUB Ex. 1.0 at 9. No party has disputed the results of this analysis. Although the Commission~~, which~~ has previously rejected CUB's arguments regarding CAPM and beta, in this instance the new evidence presented by Mr. Thomas is compelling. Therefore, the Commission believes that ~~and does not believe that~~ while the record does not support abandoning the CAPM, it clearly supports the use of raw, or unadjusted beta parameters in the CAPM. ~~the record in this proceeding supports a finding that the Nagel paper undermines the usefulness of CAPM in setting market required returns on equity in utility cases.~~

Among the analyses presented by Staff, allegedly in response to Nicor's preference for the use of published betas, was a CAPM analysis using only published betas, which included "raw" or "unadjusted" betas. In this analysis, the beta estimate used was the average of the four published raw beta estimates (Reuters, Scottrade, Yahoo!, Zacks) and one published adjusted beta estimate (Value Line). This approach resulted in an average published beta of 0.67. Apparently, because the Commission has traditionally relied upon adjusted beta estimates, Staff also presented a CAPM analysis, in which, it adjusted the raw or unadjusted published beta estimates from Reuters, Scottrade, Yahoo!, and Zacks before combining them with the beta adjusted estimate for Value Line.

While CUB maintains that the CAPM is not a reliable model, and that any CAPM results relying on adjusted betas should be rejected, CUB stated that Staff's methodology of averaging adjusted and unadjusted betas is not an unreasonable approach. If the Commission rejects CUB's position, and determines that the CAPM should be used to determine Nicor's ROE, CUB urges the Commission to make clear that significant questions exist about the beta adjustment methodology and, either reject its use in the CAPM, or adopt Staff's methodology of averaging adjusted and unadjusted beta estimates.

The recommendation made by CUB and suggested by Staff that unadjusted betas should be used in the CAPM is accepted~~rejected~~. The record ~~does not~~ clearly supports the proposition that unadjusted betas are superior to adjusted betas. T~~o the contrary, t~~he evidence shows that betas, including betas of utilities, do~~, in fact~~ not follow the revision to the mean proposition and the use of ~~un~~adjusted betas would tend to produce biased results. ~~Additionally, the Commission does not find Nicor's objections to the adjusted regression betas contained in Staff's direct testimony to be persuasive. While it is correct that the DCF model requires the use of an observable input, market price, in the estimate of the cost of common equity, there is no such requirement for the beta input in the CAPM. Nicor identified no actual flaw in the calculations underlying Staff's adjusted regression betas and the Commission finds that they constitute a reasonable proxy for systematic risk in the CAPM.~~

For purposes of establishing Nicor's ROE in this proceeding, the Commission finds that ~~two of~~ Staff's CAPM ~~analyses are reasonable and deserve consideration. The analysis in Staff's direct testimony, (utilizing Value Line and regression betas) which produced an ROE estimate of 11.56%, and the~~ analysis which relied upon "all" ~~adjusted~~ published betas, which produced an ROE estimate of 10.60 ~~11.39~~%~~, are found to be~~ is reasonable. ~~Additionally, the Commission finds that the CAPM analysis presented by Nicor, which produced an ROE estimate of 11.93%, is also reasonable and should be considered when estimating the cost of common equity.~~

The Proposed Order errs by allowing Nicor to keep most of the value of Rider VBA.

The record is clear that Rider VBA minimizes shareholder risk due to future reductions in customer demand caused by weather, and declining per customer usage. By tracking revenues on a per customer basis, this Rider also limits revenue volatility and provides revenue stability. These accrue directly to the Nicor's common equity shareholders, who are exposed to more cash flow risk than debt holders because public utility debt holders are paid first out of the Company's earnings. The remaining earnings accrue to shareholders through growth from retained earnings and cash flows from dividends. Because Rider VBA provides revenue stability, the value of this stability accrues directly to equity shareholders. CUB Ex. 1.0 at 32-33.

The Commission has previously agreed with a similar assessment in addressing a rider proposed by Peoples Gas that is much like Nicor's proposed Rider VBA:

> The Commission finds that Rider VBA will lessen the Utilities' risk associated with their cash flow. Moreover, we agree with Staff's recommendation that there should be a downward adjustment to the cost of common equity to account for the reduced risk associated with the accepted riders. Staff Ex. 10.0 at 23. …
>
> Overall, we find the record to support a downward adjustment, and in the absence of an exact calculation we find it reasonable to reduce the return on common equity by ten (10) basis points for the duration of the pilot program.

ICC Docket No. 07-0242, Final Order at 99 (truncated) ("Peoples Order"). The actual value of these riders to Nicor's investors is much greater than the 10 basis points approved by the Commission in the Peoples Order. In fact, the impact that Riders CUA, UEA, and VBA would have had on Nicor's return would have been to increase Nicor's total ROE by between 96 and 391 basis points, with an average impact of 242 basis points. CUB Ex. 1.0 at 34. The PO fails to recognize the value of Rider VBA to Nicor and its associated reduction in operating risk and recommends adjusting Nicor's ROE by only 6.5 basis points -- an amount even smaller than the Commission has accepted in previous cases.

In order to recognize the significant value of Rider VBA, the Commission must adopt Mr. Thomas' reasonable, yet extremely conservative adjustment, to estimate the impact that rider will have on future net income. Mr. Thomas' adjustment recognizes the value as at slightly less than 25% of the impact had Nicor's proposal been in place during the previous decade. CUB Ex. 1.0 at 34-6.

EXCEPTION #6:

> For the reasons explained later in this Order, the Commission will be adopting Rider VBA. The Commission is convinced that adopting this Rider will reduce Nicor's risk for many of the reasons identified by Staff and CUB. As the record of this proceeding clearly demonstrates; however, quantifying the impact of the reduced risk is a difficult undertaking. Nevertheless, the Commission believes that CUB has ~~overstated~~ appropriately estimated the impact of Rider VBA on Nicor's operations. ~~Instead, the Commission believes that, of the proposals in the record, Staff's quantification is the most reasonable.~~ Thus, in determining Nicor's authorized return on common equity in this proceeding, we conclude that it necessary and appropriate to deduct ~~6.5~~ 25 basis points to reflect the reduction in Nicor's risk resulting from the approval of Rider VBA.

The Overall Authorized return on common equity and rate of return sections should be modified to be consistent with the conclusions discussed above

EXCEPTION #7:

f. Authorized Return on Common Equity

> Based upon all of the foregoing discussion and conclusions, the Commission finds that Nicor's cost of common equity is ~~10.17%~~ 8.90%. The table below demonstrates the derivation of the authorized return on common equity for Nicor.

Party	DCF	~~CAPM~~
Staff	9.25%	~~11.56%~~
~~Staff~~	-	~~11.39%~~
~~Nicor Gas~~	-	~~11.93%~~

CUB	9.455%	-
Average	9.35%	~~11.63%~~
~~Midpoint~~	~~10.49%~~	
Relative Risk Adjustment	0.25%	
Risk Reduction for Rider Adoption	~~0.065%~~ 0.25%	
Authorized ROE	~~10.17~~ 8.90%	

g. Authorized Rate of Return on Rate Base

Taking into consideration the Commission's conclusions regarding capital structure, cost of short-term debt, cost of long-term debt, cost of preferred stock, and cost of common equity, the Commission finds that Nicor should be authorized to earn a ~~7.54~~ 6.98% rate of return on original cost rate base for its natural gas operations. The table below shows the development of that authorized rate of return:

Source of Capital	Amount	Proportion	Cost	Weighted Cost
Short-term debt	$ 257,571,734	18.32%	2.50%	0.46%
Long-term debt	495,195,694	35.22%	6.80%	2.40%
Preferred stock	1,386,144	0.10%	4.77%	0.00%
Common equity	651,818,845	46.36%	~~10.17~~ 8.90%	~~4.71~~ 4.13%
Total	$ 1,405,972,417	100.00%		~~7.57~~ 6.98%

ALTERNATIVE EXCEPTION #7 (with the CAPM):

f. Authorized Return on Common Equity

Based upon all of the foregoing discussion and conclusions, the Commission finds that Nicor's cost of common equity is ~~10.11~~ 9.475%. The table below demonstrates the derivation of the authorized return on common equity for Nicor.

Party	DCF	CAPM
Staff	9.25%	~~11.56%~~
Staff	-	~~11.39~~

		10.60%
~~Nicor Gas~~	-	~~11.93%~~
CUB	9.455%	-
Average	9.35%	~~11.63%~~ 10.60%
Midpoint	~~10.49~~ 9.975%	
Relative Risk Adjustment	0.25%	
Risk Reduction for Rider Adoption	~~0.065~~ 0.25%	
Authorized ROE	~~10.17~~ 9.475%	

g. Authorized Rate of Return on Rate Base

Taking into consideration the Commission's conclusions regarding capital structure, cost of short-term debt, cost of long-term debt, cost of preferred stock, and cost of common equity, the Commission finds that Nicor should be authorized to earn a 7.~~54~~25% rate of return on original cost rate base for its natural gas operations. The table below shows the development of that authorized rate of return:

Source of Capital	Amount	Proportion	Cost	Weighted Cost
Short-term debt	$ 257,571,734	18.32%	2.50%	0.46%
Long-term debt	495,195,694	35.22%	6.80%	2.40%
Preferred stock	1,386,144	0.10%	4.77%	0.00%
Common equity	651,818,845	46.36%	~~10.17~~ 9.475%	~~4.71~~ 4.39%
Total	$ 1,405,972,417	100.00%		~~7.57~~ 7.25%

VIII. RATE DESIGN

CUB adopts the positions, arguments and exceptions presented in the Brief on Exceptions of the Illinois Attorney General with respect to Section VIII.

XII. NEW RIDERS

CUB adopts the positions, arguments and exceptions presented in the Brief on Exceptions of the Illinois Attorney General with respect to Section XII.

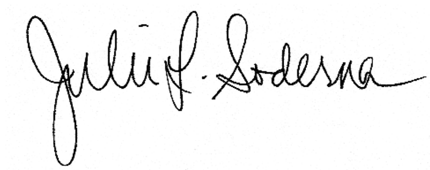
XVII. CONCLUSION

For the reasons discussed above, CUB respectfully requests that the Proposed Order be modified as set forth herein.

Respectfully submitted,

CITIZENS UTILITY BOARD

Dated: February 25, 2009



Julie L. Soderna
Director of Litigation
CITIZENS UTILITY BOARD
309 W. Washington, Ste. 800
Chicago, IL 60606
(312) 263-4282 x112
(312) 263-4329 fax
jsoderna@citizensutilityboard.org