

REBUTTAL TESTIMONY
of
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Finance Department
Financial Analysis Division
Illinois Commerce Commission

Proposed General Increase In Rates For Delivery Service
North Shore Gas Company and The Peoples Gas Light and Coke Company

Docket Nos. 12-0511 and 12-0512
(Consolidated)

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1

WITNESS IDENTIFICATION

2 **Q1. Please state your name.**

3 A1. My name is Michael McNally.

4 **Q2. Are you the same Michael McNally who provided direct testimony in this**
5 **proceeding?**

6 A2. Yes.

7 **Q3. Please state the purpose of your rebuttal testimony in this proceeding.**

8 A3. The purpose of my testimony is to respond to the rebuttal testimony of North
9 Shore Gas Company (“North Shore”) and Peoples Gas Light and Coke Company
10 (“Peoples Gas”) (collectively, “the Companies”) witnesses Lisa J. Gast (NS-PGL
11 Ex. 23.0) and Paul R. Moul (NS-PGL Ex. 24.0).¹

12

RESPONSE TO MS. GAST

13

Term for New Long-Term Debt

14 **Q4. Ms. Gast indicates that it was “not appropriate” for Staff to assume a 10-**
15 **year term for the Companies’ proposed 2013 long-term debt issuances.²**
16 **Can you explain why you assumed a 10-year term?**

17 A4. Yes. I assumed a 10-year issuance because that is what Ms. Gast presented in
18 the D-3 Schedule that she sponsored in her direct testimony, which the

¹ My decision not to respond to any specific argument contained in the testimonies of Mr. Moul or Mr. Fetter should not be construed as my agreement with that argument.

² NS-PGL Ex. 23.0, pp. 2, 4-5.

19 Companies also confirmed in their responses to Staff data requests MGM 3.02
20 and 3.03, provided on November 9, 2012, as my analysis was being finalized.³
21 Specifically, she indicated that the term for North Shore's 2013 issuance would
22 be from May 1, 2013 through May 1, 2023, while Peoples Gas's 2013 issuance
23 would be September 1, 2013 through September 1, 2023, which would be 10-
24 year terms for each.⁴ Ms. Gast's rebuttal testimony is the first time the proposal
25 to issue 30-year debt was introduced.

26 **Q5. Given that they now propose using a 30-year term for their 2013 long-term**
27 **debt issuances, have you changed your long-term debt schedules for the**
28 **Companies accordingly?**

29 A5. Yes. Although the Companies made it abundantly clear, up until their rebuttal
30 testimony, that they intended to issue 10-year debt, for the purposes of limiting
31 the issues in this proceeding, I will accept their change to a 30-year term that Ms.
32 Gast proposes in her rebuttal testimony. Thus, I changed the interest rate for the
33 2013 issuances from 2.75% to 4.20%. Citigroup's "Bond Market Roundup"
34 indicates that the most recent yields on new 30-year issuances are 4.02% for
35 A-rated utilities and 4.42% for BBB-rated utilities.⁵ Therefore, for a 30-year term,
36 4.20% represents a reasonable estimate for the new 2013 issues, given the
37 Companies' A- ratings.

³ See Attachments A and B.

⁴ NS Ex. 2.3; PGL Ex. 2.3. While those dates are consistent with those presented in her direct testimony, the associated interest rates are not. Her testimony indicated a forecasted interest rate for both Peoples Gas's and North Shore's respective 2013 debt issuances of 4.95%, but North Shore's D-3 Schedule indicated the interest rate on its issuance would be 4.75%. NS Ex. 2.0, p. 8; PGL Ex. 2.0, p. 8.

⁵ Citi Research, "Bond Market Roundup: Strategy," January 4, 2013, p. 17.

38 **Q6. What effect does that change have on the Companies' cost of long-term**
39 **debt?**

40 A6. Revising the interest rates for the forecasted debt issuances to a 30-year rate
41 increased the cost of long-term debt from 4.01% to 4.63% for North Shore and
42 from 4.32% to 4.47% for Peoples Gas, as shown on Schedule 15.02N and
43 15.02P, respectively.⁶ Consequently, my overall cost of capital increased from
44 6.39% to 6.65% for North Shore and from 6.53% to 6.60% for Peoples Gas, as
45 shown in Schedule 15.01.

46 **Spot Rates Versus Forecasted Interest Rates**

47 **Q7. Ms. Gast argues for the use of forecasted interest rates for the Companies'**
48 **cost of short-term debt and proposed 2013 long-term debt issuances.⁷ Do**
49 **you agree?**

50 A7. No. Ms. Gast proposes basing the Companies' cost of short-term debt and new
51 long-term debt issues on interest rate forecasts from Moody's DataBuffet.com.⁸
52 However, accurately forecasting interest rates is problematic.

53 Academic research has shown that forecasters' predictions of future movements
54 of interest rates are inaccurate. Indeed, as one financial text states, "forecasting
55 interest rates is a perilous business. To their embarrassment, even the top
56 experts are frequently wrong in their forecasts."⁹ Forecasts are frequently wrong

⁶ The 4.64% cost of long-term debt shown on Schedule 15.02N reflects a 1 basis point increase due to the addition of expenses related to interest rate swaps discussed later in this testimony. Without that additional amendment, the cost of long-term debt for North Shore would be 4.63%.

⁷ NS-PGL Ex. 23.0, pp. 7-10.

⁸ NS-PGL Ex. 23.0, pp. 9-10.

⁹ Frederic S. Mishkin, The Economics of Money, Banking, and Financial Markets, fourth edition, 1995, p. 134.

57 even in the direction, let alone the magnitude and timing, of future interest rate
58 changes. Security returns, including interest rates, closely approximate a type of
59 time series called a random walk,¹⁰ making the current return the best estimate
60 going forward. For example, the April 1, 2012 Blue Chip forecasts Mr. Moul
61 cited¹¹ is already proving to be inaccurate. Comparing the prediction accuracy of
62 the April 1, 2012 Blue Chip forecasts to the March 30, 2012 10-year Treasury
63 Note spot rate shows that the Blue Chip forecast error (i.e., forecast relative to
64 the actual quarterly average) is higher than that of the spot rate, as shown in
65 Table 1 below.

Table 1
10-year Treasury Notes

	4/1/12 Blue Chip Forecast			3/30/12 Spot Rate		
	Actual Rate ¹²	Forecasted Rate	Forecast Error	Actual Rate	Forecasted Rate ¹³	Forecast Error
2Q 2012	1.83%	2.20%	0.37%	1.83%	2.23%	0.40%
3Q 2012	1.64%	2.30%	0.66%	1.64%	2.23%	0.59%
4Q 2012	1.71%	2.50%	0.79%	1.71%	2.23%	0.52%

66 Further evidence of the problems with attempting to predict interest rates is the
67 difference in the forecasts provided by the many sources available. If forecasting
68 could be done with a reasonable degree of accuracy, there would be little
69 divergence among the various sources. That is not the case. This is illustrated
70 by the various forecasted rates for the 10-year Treasury note in Table 2 below.

¹⁰ Burton G. Malkiel, *A Random Walk Down Wall Street*, Fourth Edition, 1985, pp. 132 and 146.

¹¹ NS Ex. 3.0, p. 32; PGL Ex. 3.0, p. 32.

¹² Quarterly average rate, federalreserve.gov/econresdata/statisticsdata.htm.

¹³ www.federalreserve.gov/econresdata/statisticsdata.htm.

Table 2

<u>Source</u>	<u>Date of Forecast</u>	<u>Forecast Period</u>	<u>Forecasted Rate</u>
Moody's DataBuffet.com ¹⁴	11/5/2012	2 nd Quarter 2013	2.20%
Blue Chip Financial Forecasts ¹⁵	12/1/2012	2 nd Quarter 2013	1.90%
Forecasts.org ¹⁶	1/8/2013	2 nd Quarter 2013	2.40%
FreddieMac ¹⁷	12/2012	2 nd Quarter 2013	1.80%
EconomicOutlookgroup.com ¹⁸	1/8/2013	2 nd Quarter 2013	2.90%
Survey of Professional Forecasters ¹⁹	11/9/2012	2 nd Quarter 2013	1.89%

71 As the table above shows, the selected forecasts for the second quarter of 2013
72 range from 1.80% to 2.90%.²⁰ That a 61% variance exists among even a small
73 sampling of forecasts just a few months in advance of the forecast period
74 demonstrates the difficulty in accurately predicting future movements of interest
75 rates. Moreover, the differences among forecasts lead to the further problem of
76 selecting a forecast, since it is unknown which of these disparate results will
77 ultimately be the closest to realized rates.

78 Further, the Companies now seek to recover costs related to swaps entered into
79 in 2002 to hedge against a rise in interest rates. Interest rates then fell. If
80 forecasting could be done with a reasonable degree of accuracy, the Companies
81 would certainly not have entered into swaps on which they would ultimately incur
82 losses, which they now seek to recover from rate payers. Similarly, in 2011

¹⁴ NS-PGL Ex. 23.0 WP-1.

¹⁵ NS-PGL Ex. 24.0 WP-3.

¹⁶ www.forecasts.org, January 8, 2013.

¹⁷ Freddie Mac, December 2012 Economic and Housing Market Outlook, www.freddiemac.com, December 2012, p. 3.

¹⁸ www.economicoutlookgroup.com, Key Economic Forecasts, January 8, 2013, p. 1.

¹⁹ Federal Reserve Bank of Philadelphia, *Fourth Quarter 2012 Survey of Professional Forecasters*, www.phil.frb.org, November 9, 2012.

²⁰ The six sources cited represent the most easily obtainable sources Staff was able to access in the limited time available. There are likely numerous other sources for such forecasts. Thus, the range of potential forecasts from all available sources would likely be even larger.

83 Peoples Gas forecasted an interest rate of 2.9% for a 5-year debt issuance just
84 three weeks before it was priced at 2.21%.²¹ The simple fact is, no one can
85 predict with certainty when interest rates will begin to rise, the rate at which they
86 will rise, how long they will rise before falling again, the rate at which they will fall,
87 or even whether they will rise before they fall further. Therefore, the Commission
88 should continue to use actual spot interest rates rather than forecasted interest
89 rates to estimate the Companies' cost of debt.

90 **Q8. Ms. Gast suggests that your use of the most recent spot rate assumes that**
91 **the interest rate environment will continue unchanged from that point**
92 **through the test year.²² Is that correct?**

93 A8. No. I am not suggesting the interest rate environment and the resulting interest
94 rates will not change. In fact, I would very much expect interest rates to change.
95 Unfortunately, no one can predict the direction, magnitude, or timing of those
96 future interest rate changes. Rather, my argument is that spot data present
97 fewer problems and have a better track record predicting future interest rates
98 than forecasts.

99 **Q9. On page 23 of your direct testimony, you cited "EIA, Global Insight, and**
100 **Survey forecasts of inflation and real GDP growth expectations" in**
101 **concluding that the US Treasury bond yield more closely approximates the**
102 **long-term risk-free rate. Do those forecasts represent current expectations**
103 **or projections of what expectations might be in the future?**

104 A9. The EIA, Global Insight, and Survey forecasts represent current expectations. It
105 appears that my use of the phrase "forecasts of inflation and real GDP growth

²¹ See Attachments C and D.

²² NS-PGL Ex. 23.0, p. 7.

106 expectations” may be confusing. For clarity, the word “expectations” should be
107 stricken.

108 **Interest Rate Swap Expenses**

109 **Q10. Based on the information Ms. Gast provided in her rebuttal testimony, do**
110 **you now believe the Companies have demonstrated that entering the**
111 **swaps was reasonable?**

112 A10. Although she provided some additional information and further explanation
113 regarding the swaps in her rebuttal testimony, I am still not fully satisfied with the
114 explanation she provided as to why it was necessary to enter into swaps
115 generally or why the specific swaps they entered were reasonable.
116 Nevertheless, since those adjustments do not affect the overall cost of capital for
117 either company, I accept the addition of expenses related to the interest rate
118 swaps related to issues N-2 and NN-2 for the purpose of limiting the issues in
119 this proceeding.

120 However, I recommend the Commission order the Companies to file a notification
121 with Staff prior to entry into any such swaps in the future. The notification should
122 include the research and analysis (including supporting documentation) they
123 relied upon to conclude that entering such a swap would be reasonable
124 including, but not limited to, interest rates available, details of the transaction, a
125 discussion of the potential results of entering the swap, and an explanation of
126 how those results, whether gain or loss, would be passed on to rate payers.

127

RESPONSE TO MR. MOUL

128 **Q11. Please evaluate Mr. Moul's rebuttal testimony.**

129 A11. Mr. Moul's rebuttal testimony contains nothing to change my opinion of the
130 Companies' costs of common equity. Mr. Moul criticizes several parts of my cost
131 of equity analysis, which are addressed later in this testimony. However, as I
132 noted in my direct testimony, the difference between our cost of common equity
133 recommendations is primarily due to Mr. Moul's adjustments to those models, or
134 the results thereof, and his inclusion of a risk premium model. Both the
135 adjustments he applied and the use of a risk premium model are theoretically
136 unsound and, accordingly, have been repeatedly rejected in prior proceedings.
137 When those factors are removed, the average of the results of Mr. Moul's CAPM
138 and DCF analyses for the Delivery Group and those of my CAPM and DCF
139 analyses differ by a mere 22 basis points, with his results being lower than mine.

140 **Q12. Mr. Moul argues that your required return on common equity ("ROE")**
141 **results are "simply not representative of the returns investors can earn on**
142 **other investments of comparable risk."²³ Please comment.**

143 A12. His conclusion rests largely on a comparison to previously authorized returns for
144 other companies, in other jurisdictions, at other times representing other market
145 environments. This approach has been fully discredited by Staff and rejected by
146 the Commission in numerous prior rate setting proceedings.

147 Like those prior presentations, Mr. Moul's review of other authorized returns fails
148 to specify critical factors that influenced the allowed returns in those proceedings.

²³ NS-PGL Ex. 24.0, p. 2.

149 For instance, Mr. Moul does not identify the relative risk, as exemplified by credit
150 rating or any other metric, of each of the utilities involved in those return
151 decisions. Nor does he identify the amount of the common stock flotation cost
152 adjustment, if any, that was included in each of those decisions. He also fails to
153 provide any context regarding the market environment in which those decisions
154 were made. Without such data, any evaluation of the return recommendations in
155 this proceeding via comparison to the returns authorized in the cases Mr. Moul
156 cites is useless, since we have no basis on which to assess comparability.

157 Further, as Table 3 below reveals, interest rates are the lowest they have been in
158 over 20 years. Thus, contrary to Mr. Moul's implication, it should come as no
159 shock to investors and ratings analysts if the Commission were to adopt a cost of
160 common equity lower than those previously authorized.

Table 3

Yield on Moody's Baa-rated
Corporate Bonds²⁴

Year	Yield (%)
1990	10.36
1991	9.80
1992	8.98
1993	7.93
1994	8.63
1995	8.20
1996	8.05
1997	7.87
1998	7.22
1999	7.88
2000	8.37
2001	7.95
2002	7.80
2003	6.76

²⁴ Federal Reserve Board, H.15 Release, www.federalreserve.gov.

2004	6.39
2005	6.06
2006	6.48
2007	6.48
2008	7.44
2009	7.29
2010	6.04
2011	5.66
2012	4.94

161 **Q13. Mr. Moul further supports his conclusion that your ROE recommendation is**
162 **“woefully inadequate” by noting that Value Line projects higher returns for**
163 **the Delivery Group companies than you recommend.²⁵ Please comment.**

164 A13. First, as with interest rates, accurately predicting investor-required returns is very
165 difficult. No one can foresee the future. Indeed, it is difficult enough to estimate
166 the current investor-required return when actual data is available on which to
167 base such an analysis, as the high degree of contention on the subject during
168 rate cases demonstrates. To attempt to project what investors will demand at
169 some point in the future is pure speculation. Thus, the Commission should
170 continue to rely on the current investor-required return on common equity rather
171 than rely on a forecast.

172 Second, and more importantly, the returns he cites are projected returns on book
173 equity, which erroneously implies that accounting returns on book equity are
174 acceptable substitutes for investor-required returns. However, investor-required
175 returns are only loosely related to accounting returns; they are certainly not
176 interchangeable. For example, the return on book value of common equity is
177 entirely unaffected by changes in investor-required rate of return. That is, due to
178 a decline in risk, risk premiums, or the time value of money, investors would bid

²⁵ NS-PGL Ex. 24.0, pp. 4-5.

179 up the price of a stock, thereby reducing the implied required rate of return, but
180 the anticipated return on book equity would not change. Therefore, projected
181 returns on book equity cannot be substituted for investor-required returns.

182 **Q14. Mr. Moul also claims a comparison to his Combination Group's results**
183 **demonstrates that your recommended ROE is understated and criticizes**
184 **your analysis for not using that sample.²⁶ Please comment.**

185 A14. It was not necessary to employ his Combination Group, since Delivery Group is a
186 sufficiently large sample that represents the risk of the Companies well, as Mr.
187 Moul himself concluded. Moreover, the Combination Group is less like the
188 Companies in terms of operations than is the Delivery Group, as Mr. Moul noted
189 in his direct testimony. Further, the Combination Group's BBB+ average
190 Moody's credit rating indicates higher risk than the Companies, which both have
191 an A- Moody's credit rating. In contrast, the Delivery Group shares the
192 Companies' A- Moody's credit rating. Consistent with the difference in credit
193 ratings, the Combination Group has a higher beta, indicating a higher degree of
194 risk than the Delivery Group. That higher beta produces a CAPM result 40 basis
195 points higher than that of the Delivery Group. Thus, it is not reasonable to
196 conclude that the difference between the results of the Combination Group and
197 those of the Delivery Group renders those of the Delivery Group invalid.

²⁶ NS-PGL Ex. 24.0, pp. 5 and 9.

198

DCF Methodology

199 **Q15. Mr. Moul states that you employ a “lower of approach” in selecting a DCF**
200 **model “to produce a lower DCF result.” Is he correct?**

201 A15. Obviously not, as my use of a constant growth DCF in this proceeding produced
202 a higher result than if I had used a non-constant growth DCF. As I explained in
203 my direct testimony in the 2009 proceeding:²⁷

204 To estimate the long-term growth expectations for the third, steady-
205 state stage, I utilized the implied 20-year forward U.S. Treasury rate
206 in ten years, which reflects current expectations of the long-term
207 overall economic growth during the steady-state growth stage of my
208 non-constant DCF model. An implied 20-year forward U.S.
209 Treasury rate in ten years of 4.59% was derived from the 10- and
210 30-year U.S. Treasury rates as of May 14, 2009 using the following
211 formula:

212 Where ${}_{20}f_{10} = [(1+{}_{30}r_0)^{30} / (1+{}_{10}r_0)^{10}]^{1/20} - 1$
213 ${}_{20}f_{10}$ = the implied 20-year forward U.S. Treasury rate in ten
214 years;
215 ${}_{30}r_0$ = the current 30-year U.S. Treasury rate; and
216 ${}_{10}r_0$ = the current 10-year U.S. Treasury rate

217 That same approach would have produced a long-term growth rate of
218 3.35% as of the date of my analysis in this proceeding. That is
219 considerably lower than the utility sample average 4.83% constant growth
220 rate used in my DCF analysis. Thus, if I were seeking to produce a lower
221 DCF result, as Mr. Moul suggests, I would not have employed a constant
222 growth DCF in this proceeding.

²⁷ Docket Nos. 09-0166/09-0167 (Cons.), Staff Ex. 7.0, pp. 6-7.

223 **Q16. Mr. Moul claims to verify his conclusion that your DCF results are**
224 **insufficient by comparing your DCF result to that of the 28 utilities included**
225 **in your S&P 500 market return estimate, which averaged 9.73%.²⁸ Please**
226 **comment.**

227 A16. Mr. Moul has presented nothing to suggest that that 28-company sample reflects
228 the same risk as the Delivery Group. Only 23 of those companies even have gas
229 distribution segments, and when asked, Mr. Moul stated that he did not know
230 what proportion of those companies' operations their gas distribution segments
231 represent.²⁹ Moreover, those companies include both distribution-only and
232 generation-owning electric utilities. Electric utilities, particularly those with
233 generation assets, tend to be of higher risk than gas distribution utilities, and
234 those with merchant (i.e., competitive) electric generation are significantly riskier
235 still. Nevertheless, even if that sample was comparable in risk to the Delivery
236 Group, Mr. Moul has presented nothing to demonstrate that the growth rates
237 used in that analysis are sustainable. Thus, this comparison does not support
238 his conclusion.

²⁸ NS-PGL Ex. 24.0, p. 10.

²⁹ Companies response to Staff DR MGM 6.07.

239

Spot Data

240 **Q17. Mr. Moul claims that the use of price data as of a single date “is subject to**
241 **the vagaries of the market,” “is dependent upon the time when the analyst**
242 **decides to prepare his/her study,” and “introduces the potential for**
243 **gamesmanship into the rate of return.”³⁰ Please comment.**

244 A17. The market value of common stock equals the cumulative value of the expected
245 stream of future dividends after each is discounted by the investor-required rate
246 of return. Every day new information becomes available and investors rethink
247 their projections of future cash flows, the risk level of the company, and the price
248 of risk. Thus, only most recently available stock price will reflect all information
249 that is available and relevant to the market. As to the “vagaries” of the market, I
250 employed a sample to minimize the effects of any potential “inefficiencies” in
251 stock prices, as estimates for a sample as a whole are subject to less
252 measurement error than individual company estimates. Mr. Moul claims that my
253 use of spot market data is dependent upon the time when I decided to prepare
254 my study and introduces the potential for gamesmanship. However, such a
255 stratagem would require the selection of an analysis date with prior knowledge of
256 the outcome. But that cannot be done with the most recently available data, as
257 there is only one set of most recently available data at a given time, and it cannot
258 be known before the fact. Indeed, that is a great benefit of using the most
259 recently available data. In fact, the gamesmanship to which Mr. Moul refers can
260 only be carried out through the use of outdated historical data, which Mr. Moul
261 employs. Unlike Mr. Moul, I used the most recent information available at the
262 time of my analysis. I chose the November 9, 2012 date for my analysis to

³⁰ NS-PGL Ex. 24.0, pp. 6-8.

263 provide the most up-to-date estimate possible while still allowing me enough time
264 to complete my analysis and testimony by the November 20th deadline. The date
265 was chosen without knowledge of, or regard to, the final outcome.

266 **Q18. Mr. Moul claims that your use of the most recent spot data is historical.**³¹

267 **Please comment.**

268 A18. I used the most recent information available at the time of my analysis. The
269 information could not have been more current at that time. While technically any
270 mathematical calculation of the cost of common equity is rendered “historical” as
271 soon as a new stock price is established, which can be within seconds, for
272 practical purposes a cost of equity based on the most recently available data at
273 the time the analysis is performed *is* current. Mr. Moul’s criticism could only be
274 addressed through continuous updates to analyses throughout the course of a
275 proceeding, which is not only impractical, but impossible. Significantly, his
276 criticism does not support the treatment of all data, regardless of how outdated,
277 as equally relevant. Clearly, not all data is equally relevant. Even if technically
278 historical, the most recent spot price available at the time an analysis is
279 performed will always be more timely than a prior historical average and is, thus,
280 preferable. As I explained in my direct testimony, an analysis using the most
281 current data reflects all information that is available and relevant to the market at
282 the time of that analysis, while analyses using older data reflect information that
283 the market no longer considers relevant, a fact Mr. Moul has acknowledged.³²
284 Therefore, use of a historical average requires the analyst to subjectively
285 determine what data is no longer relevant, needlessly and inappropriately
286 replacing the collective judgment of all investors with his own. Moreover, Mr.

³¹ NS-PGL Ex. 24.0, p. 8.

³² Docket Nos. 11-0280/11-0281 (Cons.), NS-PGL Ex. 19.0, pp. 13-14.

287 Moul's use of historical data includes the added flaw of inappropriately mixing
288 and matching data from different points in time.

289 **Q19. Mr. Moul claims that use of spot data is more arbitrary than the use of a**
290 **recent historical average.³³ Is he correct?**

291 A19. No. Obviously, the use of a historical average requires the selection of both a
292 beginning date and an end date. For a spot rate, the beginning and ending date
293 are one and the same. Clearly, selecting two dates cannot be less arbitrary than
294 selecting one. Regardless, as noted above, my analysis was performed using
295 the most recent data available as of that date, the selection of which was largely
296 dictated by the case schedule, which was, of course, dictated by the initial filing
297 date selected by the Companies.

298 **Q20. Mr. Moul notes that stock prices changed since the November 9th date of**
299 **your analysis and claims the difference “highlights the serious limitations**
300 **of the use of spot prices.”³⁴ Do you agree?**

301 A20. No. The fact that stock prices changed merely demonstrates that market prices
302 are dynamic and that investors are constantly re-evaluating their expectations. In
303 fact, contrary to Mr. Moul's conclusion, the fact that prices are dynamic highlights
304 the shortcomings of his use of historical averages, as the stock prices he used,
305 which were up to 6 months old at the time of his analysis, obviously could not
306 reflect all relevant information available at that time or capture the then-current
307 investor expectations. As noted above, Mr. Moul's use of historical average
308 prices does not allow market changes to be fully reflected in the cost of common

³³ NS-PGL Ex. 24.0, p. 7.

³⁴ NS-PGL Ex. 24.0, p. 8.

309 equity, but merely allows him to substitute his perspective for that of investors,
310 which are reflected in current stock prices.

311 **Q21. Mr. Moul claims that you failed to address the concerns the Commission**
312 **noted in the Companies' 2009 rate case regarding spot data.³⁵ Why did you**
313 **continue to use a spot price despite the Commission's concerns?**

314 A21. I used spot data because it is the theoretically correct data to use, as I explained
315 in my direct testimony.³⁶ In addition, despite voicing concerns regarding spot
316 data in the Companies' 2009 rate case, the Commission adopted the use of spot
317 data at least three times in that case, including a capital asset pricing model
318 ("CAPM") analysis and a discounted cash flow ("DCF") analysis used to
319 determine the cost of common equity.³⁷ In fact, the Commission has
320 appropriately adopted costs of capital based on the most recent spot data much
321 more frequently than it has relied on outdated historical data. Indeed, the
322 Commission, itself, has noted that use of spot data is a practice the Commission
323 has traditionally relied upon and, in fact, is reluctant to deviate from.³⁸

324 Nevertheless, in anticipation of Mr. Moul's objection, I repeated my analysis
325 every day for a week to demonstrate that my proposed cost of common equity
326 does not reflect anomalous data. The results are shown in the table below:

³⁵ NS-PGL Ex. 24.0, pp. 7-8.

³⁶ ICC Staff Ex. 14.0, pp. 16-17.

³⁷ Order, Docket Nos. 09-0166/0167 (Cons.), January 21, 2010, pp. 126-127.

³⁸ Order, Docket Nos. 07-0241/07-0242 (Cons.), February 5, 2008, p. 92.

Table 4

Date	DCF	CAPM	Average
11-5-12	9.19%	9.04%	9.12%
11-6-12	9.19%	9.06%	9.13%
11-7-12	9.31%	9.03%	9.17%
11-8-12	9.33%	9.00%	9.17%
11-9-12	9.32%	8.99%	9.16%

327 The results of those five analyses are all within five basis points of one another,
328 which is hardly a dramatic shift that should cause the Commission to abandon a
329 traditional practice from which it is reluctant to deviate (i.e., reliance on spot date
330 analyses). During that period, not only did prices change, but ex-dividend dates
331 passed,³⁹ growth rates changed, betas changed, interest rates changed, and
332 overall market sentiment changed. Mr. Moul's use of historical averages
333 erroneously suggests that those changes should not be fully reflected in the cost
334 of common equity.

335 **Risk Premium/CAPM Methodology**

336 **Q22. Mr. Moul suggests that the estimation of the risk-free rate should be based**
337 **on forecasts rather than spot yields.⁴⁰ Is he correct?**

338 A22. No. Interest rates are constantly adjusting, and accurately forecasting the
339 movements of interest rates is problematic, as I discussed previously. In
340 contrast, the current U.S. Treasury yields I used to estimate the risk-free rate
341 reflect all relevant, available information, including investor expectations
342 regarding future interest rates. Consequently, investor appraisals of the value of
343 forecasts are also reflected in current interest rates. Therefore, if investors

³⁹ An ex-dividend date is the date, on or after which, the right to a declared dividend payment belongs to the seller of a share of stock. Thus, on the ex-dividend date, the stock would drop in price by the amount of the expected dividend, all else equal.

⁴⁰ NS-PGL Ex. 24.0, pp. 10-11.

344 believe that the *Blue Chip Financial Forecasts* (“BCFF”) forecasts are valuable,
345 that belief would be reflected in current market interest rates. Likewise, if
346 investors believe that the *BCFF* forecasts are not valuable, that belief would be
347 reflected in current market interest rates. In summary, if one uses current market
348 interest rates in a risk premium analysis, speculation of whether investor
349 expectations of future interest rates equals those from a particular forecast
350 reporting service, such as *BCFF*, is unnecessary. Thus, the Commission should
351 continue to rely on current, observable market interest rates rather than the
352 projected rates that Mr. Moul used in his risk premium analysis.

353 **Q23. Mr. Moul criticizes your CAPM analysis because the regression betas you**
354 **used have not been shown to “have any bearing on investor expected**
355 **returns” and recommends, instead, the sole use of Value Line betas.⁴¹**
356 **Please comment.**

357 A23. The betas Mr. Moul and I employed are estimates of the unobservable true beta,
358 which measures investors’ expectations of the quantity of non-diversifiable risk
359 inherent in a security. Consequently, which beta estimates are more accurate is
360 unknown. Thus, the Value Line methodology is not inherently superior to Staff’s
361 methodology. In fact, different beta estimation methodologies can produce
362 different betas when those methodologies employ different samples of stock
363 return data. Thus, just as Mr. Moul and I used multiple models to determine the
364 cost of equity, I used multiple approaches to estimate beta.

365 The validity of Staff’s beta estimation methodology is not a function of whether
366 investors rely upon Staff’s beta estimates. Rather, the validity of the

⁴¹ NS-PGL Ex. 24.0, p. 20.

367 methodology is a function of its ability to explain stock price behavior. The
368 methodology I used to calculate the regression beta for my sample, which Staff
369 has regularly used and the Commission has consistently approved,⁴² employs
370 the same monthly frequency of stock price data as the widely accepted Merrill
371 Lynch methodology. Further, Mr. Moul's argument to exclude Staff calculated
372 betas and rely upon only Value Line betas was rejected multiple times by the
373 Commission, including the Companies' 2009 rate case. In that proceeding, the
374 Commission adopted Staff's multiple-source approach to estimating beta, stating:

375 We agree that, in the same way we rely on multiple models to
376 determine the cost equity, Staff's well-considered use of multiple
377 beta sources is beneficial to reduce measurement error from any
378 individual estimate. Moreover, we find that Staff's beta estimate
379 appropriately weights the beta estimates from those three sources.
380 Thus, we adopt Staff's beta estimate of 0.59.⁴³

381 The beta estimate I used in my CAPM analysis in this proceeding was calculated
382 in the same manner as the beta adopted in that proceeding.

⁴² Order, Docket No. 02-0837, October 17, 2003, pp. 37-38; Order, Docket Nos. 02-0798/03-0008/03-0009 (Cons.), October 22, 2003, p. 85; Order, Docket No. 00-0340, February 15, 2001, p. 25; Order, Docket No. 03-0403, April 13, 2004, p. 42; and Order, Docket Nos. 06-0070/06-0071/06-0072 (Cons.), November 21, 2006, p.145.

⁴³ Order, Docket Nos. 09-0166/09-0167 (Cons.), January 21, 2010, pp. 126-127.

383

Leverage Adjustment

384 **Q24. Mr. Moul states that “leverage differs depending on whether it is calculated**
385 **using market-based data or book values.”⁴⁴ Do you agree?**

386 A24. Absolutely not. Simply put, a company can have only one level of risk at any
387 point in time. To argue otherwise is to say an investment in a company can be
388 simultaneously more and less risky than itself, which is obviously untrue.

389 **Q25. Mr. Moul says that “it is indisputable that there is more financial risk**
390 **associated with a 53.83% common equity ratio than there is with a 62.16%**
391 **common equity ratio.”⁴⁵ Is that statement correct?**

392 A25. Only if one is using the same scale to make both measurements. However, if
393 one is comparing the 53.83% book value equity ratio of a certain group of
394 companies to the concurrent 62.16% market value equity ratio *for that same*
395 *group of companies*, the intrinsic level of financial risk remains the same. Again,
396 a company (or a group of companies, in this case) can have only one level of risk
397 at any point in time. The investment in that portfolio of companies does not
398 become riskier, simply by viewing it from a different perspective. Similarly, a
399 change in the market value of a company to something greater than book value
400 does not change the amount of money invested in assets serving that company's
401 rate payers.

⁴⁴ NS-PGL Ex. 24.0, p. 14.

⁴⁵ NS-PGL Ex. 24.0, p. 16.

402 **Q26. Is Mr. Moul correct in stating that “in order to apply a measurement of a**
403 **return measured based on a firm’s market-value capitalization compared to**
404 **a book-value capitalization, the measurement must be adjusted before it is**
405 **applied to the firm’s capitalization measured based on book value”?**⁴⁶

406 A26. No. His argument is effectively an espousal of fair-value rate making. By Mr.
407 Moul’s reasoning, if an investor foolishly pays more for a utility stock than is
408 warranted given his required return and the expected earnings, the Commission
409 would then be required to increase the authorized return in order to ensure that
410 the foolish investor still earns his investor-required return.

411 To illustrate, consider a company that includes two business segments of equal
412 book value and equal risk – a regulated gas delivery company that is expected to
413 earn exactly the investor-required return and an unregulated segment that is
414 expected to earn more than the investor-required return. Investors (i.e., the
415 market) would value the gas delivery segment equal to its book value because,
416 at that price, investors would expect to earn exactly the return they require.
417 However, investors would be willing to pay more than book value for the
418 unregulated segment because of its higher-than-required earnings. Thus, the
419 market value of the company as a whole would be bid up beyond its book value
420 until the expected return equals the required return. Mr. Moul’s argument
421 suggests that the authorized return on rate base for the regulated gas delivery
422 segment should be increased *beyond* the required return due to the excess
423 expected earnings of the unregulated segment, which would, in turn, create
424 excess earnings in the regulated gas delivery segment, pushing the market value
425 higher still in a never-ending upward spiral.

⁴⁶ NS-PGL Ex. 24.0, p. 16.

426 **Q27. Why is it appropriate for the Commission to apply a cost of equity derived**
427 **from market price of the Gas Group's common equity to the Companies'**
428 **book value of common equity, even if a company's market value differs**
429 **from its book value?**

430 A27. Book value represents the funds a company receives from investors through
431 security issuances on the primary market (i.e., transactions directly between a
432 company and its investors). Book value does not adjust to reflect changing
433 investor assessments; it only reveals how much money the company has to
434 invest in assets to serve its customers.

435 In contrast, the market price is the price investors are willing to pay each other for
436 a security on the secondary market. That is, market prices are set by
437 transactions between investors rather than transactions between the company
438 and its investors; therefore, the market value of a company's securities has no
439 bearing on the amount of funding the company has to invest in assets. Cost of
440 common equity analysis uses market price data because market data
441 continuously adjusts to reflect investor return requirements as they are
442 continuously re-evaluated.

443 The market value of a stock would grow to exceed its book value only if investors
444 expected to earn a return above their required return.⁴⁷ If that is the case, the
445 market price will adjust upward until the expected return once again matches the
446 required return. Thus, the market price always reflects the investor-required
447 return, regardless of the book value. That is why it is appropriate, indeed
448 necessary, to use a market-based cost of common equity for regulatory rate

⁴⁷ Obviously, neither an expectation of higher than required earnings nor a reduction to the investor-required rate of return justifies a higher authorized rate of return.

449 setting. Similarly, book value always represents the funds available to the
450 company to invest in assets serving its customers, regardless of the market
451 value. That is why it is appropriate and necessary to use a book value rate base
452 for regulatory rate setting. The application of the market required return to the
453 book value rate base simply takes the return investors demand to earn from a
454 dollar invested in the common equity of a company, given the amount of risk in
455 the common equity of that company and the current price of risk, and applies it to
456 the number of common equity dollars invested in the rate base of the
457 Companies.

458 **Q28. Mr. Moul states that your “position that a cost of equity derived from**
459 **market-valued capitalizations may be applied to a book-value capitalization**
460 **is just like saying zero degrees Celsius equals zero degrees Fahrenheit.”⁴⁸**
461 **Is that correct?**

462 A28. No. My position is that the intrinsic risk level of a given company does not
463 change simply because the manner in which that risk is measured has changed.
464 Thus, contrary to Mr. Moul's assertion, my position is actually like saying
465 measuring temperature on two different scales does not change the temperature.
466 That is, despite different measurement scales, 32° Fahrenheit equals 0° Celsius.

⁴⁸ NS-PGL Ex. 24.0, p. 16.

467

Size Adjustment

468 **Q29. Mr. Moul addresses the Wong article you cited in your direct testimony.⁴⁹**

469 **Does his response refute your conclusions regarding that article?**

470 A29. Not at all. Mr. Moul selects two statements from the Wong article and concludes
471 that they do not invalidate his size adjustment. However, those statements were
472 merely observations, among many, that the author found noteworthy. Those
473 statements do not represent the author's ultimate conclusion regarding the
474 applicability of the size adjustment to utilities. In fact, those observations are
475 irrelevant to the conclusion of the article. What invalidates his size adjustment is
476 the study's finding that there was no statistical pattern relating the size of the
477 utilities studied and magnitude of their returns. Indeed, the Wong article could
478 not be more clear with its findings:

479 The objective of this study is to examine if the size effect exists in
480 the utility industry. After controlling for equity values, there is some
481 weak evidence that firm size is a missing factor from the CAPM for
482 the industrial but not for the utility stocks. This implies that although
483 the size phenomenon has been strongly documented for the
484 industriales, the findings suggest that there is no need to adjust for
485 the firm size in utility rate regulations.⁵⁰

486 **Q30. Mr. Moul claims that he relies on a Fama and French article as the basis for**
487 **his size adjustment.⁵¹ Does that article contain anything to change your**
488 **assessment of the size adjustment?**

489 A30. No. The Fama and French article he cites suffers from all the same
490 shortcomings I noted in my direct testimony with respect to the Ibbotson data Mr.

⁴⁹ NS-PGL Ex. 24.0, pp. 16-17.

⁵⁰ Wong, "Utility Stocks and the Size Effect: an Empirical Analysis," *Journal of the Midwest Finance Association*, 1993, p. 98.

⁵¹ NS-PGL Ex. 24.0, p. 17.

491 Moul relied upon for his size adjustment. For example, it does not provide any
492 evidence to demonstrate that the size premium suggested by the Ibbotson data
493 is warranted for utilities. Similar to the Ibbotson data, the Fama and French
494 study is based on all non-financial firms in the intersection of NYSE, AMEX, and
495 NASDAQ. Their study made no attempt to segment the data by industry.

496 **Effect of Riders on the Utilities' Operating Risk**

497 **Q31. Mr. Moul claims that your proposed 10-basis point adjustment for the**
498 **Companies' Uncollectible Expense Adjustment Rider ("Rider UEA") is not**
499 **necessary, since that rider has been in place and hence there has been no**
500 **change in risk since the Companies' last rate case.⁵² Is he correct?**

501 A31. No. That Rider UEA has been in effect is not relevant. Contrary to Mr. Moul's
502 claim, no additional change in risk is necessary to warrant the adjustment.
503 Indeed, an additional reduction in risk would warrant a larger adjustment. That is
504 because the adjustment is not intended to accommodate a one-time change in
505 risk of the Companies, as Mr. Moul claims. Rather, the purpose of the
506 adjustment is to reflect the fact that the Companies have, and will continue to
507 have, in place a risk-reducing factor. Thus, a 10 basis point downward
508 adjustment is appropriate in this proceeding, for the same reasons the
509 Commission found it appropriate in the Companies' last rate case.

⁵² NS-PGL Ex. 24.0, pp. 17-18.

510 **Q32. Mr. Moul argues bad debt trackers for the companies in the Delivery Group**
511 **render your Rider UEA adjustment unwarranted. Do you agree?**

512 A32. No. Mr. Moul does not provide any data regarding the percentage of the
513 revenues affected by bad debt trackers for the sample companies that have
514 them. Many utilities have other operations or operate in multiple states that
515 provide no bad debt recovery mechanisms. For example, while Mr. Moul lists
516 Atmos Energy (“Atmos”) among the sample companies that benefit from bad
517 debt trackers, Atmos also has gas supply operations in Iowa, Missouri,
518 Louisiana, Mississippi, and Georgia, which currently do not offer bad debt
519 recovery mechanisms.⁵³ In addition, Atmos has other business segments
520 including pipeline and energy market services that are not likely to benefit from
521 bad debt trackers. Thus, we do not know the magnitude of the influence bad
522 debt trackers have on the risk of the sample companies that have them, but
523 clearly it is less for some of them than it is for the Companies. Moreover, by Mr.
524 Moul’s own findings, approximately 40% of the Delivery Group companies have
525 no bad debt trackers at all. Therefore, it is clear that the Delivery Group
526 companies do not enjoy the risk-reducing effects of bad debt recovery
527 mechanisms to the extent that the Companies do and, thus, a downward
528 adjustment to the Companies’ authorized rate of return on common equity is still
529 necessary.

⁵³ www.atmosenergy.com; NS-PGL Ex. 24.2, pp. 15-16.

530 **Q33. Mr. Moul now argues that a 10-basis point upward adjustment is warranted**
531 **due to the possibility that Rider VBA may be rejected by the Appellate**
532 **Court.⁵⁴ Do you agree?**

533 A33. No. Mr. Moul's proposal is premature on three counts. First, it assumes that
534 Rider VBA, which apparently both the Commission and the Companies believe is
535 valid, will be ruled invalid. Thus, his proposal would institute a very certain
536 increase in rates based on a very uncertain legal outcome. Second, even if
537 Rider VBA is eventually overturned, no one knows when that might occur. Thus,
538 his proposal would produce higher rates beginning in July of this year, based on
539 a ruling that may be not be made for quite some time after that. Third, his
540 proposal assumes the Companies' request for straight fixed variable rates,
541 should Rider VBA be overturned, will be rejected by the Commission. This
542 proposal would largely mitigate the effects on the Companies' risk if Rider VBA is
543 ultimately overturned. The Companies must believe this to be a reasonable
544 proposal or they presumably would not have presented it. Thus, to assume it will
545 be rejected is premature.

546 **Q34. Does this conclude your rebuttal testimony?**

547 A34. Yes, it does.

⁵⁴ NS-PGL Ex. 24.0, pp. 18-19

Weighted Average Cost of Capital

North Shore Gas Company

	<u>Amount</u>	<u>Percent of Total Capital</u>	<u>Cost</u>	<u>Weighted Cost</u>
Short-Term Debt	\$ 14,001,000	7.35%	1.80%	0.13%
Long-Term Debt	\$ 80,674,215	42.33%	4.64%	1.96%
Common Equity	<u>\$ 95,892,000</u>	<u>50.32%</u>	9.06%	<u>4.56%</u>
Total Capital	\$ 190,567,215	100.00%		
Weighted Average Cost of Capital				6.65%

The Peoples Gas Light & Coke Company

	<u>Amount</u>	<u>Percent of Total Capital</u>	<u>Cost</u>	<u>Weighted Cost</u>
Short-Term Debt	\$ 83,752,042	5.96%	1.26%	0.08%
Long-Term Debt	\$ 613,327,352	43.61%	4.47%	1.95%
Common Equity	<u>\$ 709,151,167</u>	<u>50.43%</u>	9.06%	<u>4.57%</u>
Total Capital	\$ 1,406,230,561	100.00%		
Weighted Average Cost of Capital				6.60%

ICC Docket No. 12-0511
North Shore Gas Company's Response to
Staff Data Requests MGM 3.01-3.06
Dated: October 19, 2012

REQUEST NO. MGM 3.02:

For the proposed bond issuance in 2013 noted on North Shore's Schedule D-3, please provide the following (with updates provided when the Company's expectations change or the bonds are issued):

- a) The expected term of the debt;
- b) The type of debt expected to be issued (i.e. variable or fixed rate);
- c) The expected interest rate (if variable, provide the method for calculating the rate); and
- d) A detailed explanation and all supporting documentation for how the interest rate was determined.

Please update the Company's response when its expectations change or the bonds are issued.

RESPONSE:

- a. 10 years
- b. Fixed rate
- c. Please see the response to Staff data request MGM 1.12
- d. Please see the response to staff data request MGM 1.12

ICC Docket No. 12-0512
The Peoples Gas Light and Coke Company's Response to
Staff Data Requests MGM 3.01-3.06
Dated: October 19, 2012

REQUEST NO. MGM 3.03:

For the proposed bond issuances in 2012 and 2013 noted on page 1 of Peoples Gas's Schedule D-3, please provide the following:

- a) The expected term of the debt;
- b) The type of debt expected to be issued (i.e. variable or fixed rate);
- c) The expected interest rate (if variable, provide the method for calculating the rate); and
- d) A detailed explanation and all supporting documentation for how the interest rate was estimated.

Please update the Company's response when its expectations change or the bonds are issued.

RESPONSE:

- a. 2012 – 30 years, 2013 – 10 years
- b. Fixed rate
- c. 2012 – 3.98%, 2013 – please see the response to Staff data request MGM 2.03
- d. 2012 – please see PGL MGM 3.03 Attach 01 CONFIDENTIAL.pdf, 2013 – please see response to Staff data request MGM 2.03

ICC Docket No. 11-0281
The Peoples Gas Light and Coke Company's Response to
Staff Data Requests SK 2.01-2.12
Dated: April 14, 2011

REQUEST NO. SK 2.07:

For Peoples Gas' proposed bond issuance in 2011, please provide the Company's current expectation for the following with updates provided when the Company's expectations change or the bonds are issued:

- a) The term of the debt;
- b) The type of debt to be issued (i.e. variable or fixed rate); and
- c) The interest rate. If variable, provide the method for calculating the rate.

RESPONSE:

The Company is currently forecasting to issue 10 year debt at a fixed rate of 4.75%

MAY UPDATE:

The Company is currently forecasting to issue 5 year debt at a fixed rate of 2.9%.

JUNE UPDATE:

The Company is currently forecasting to issue 5 year debt at a fixed rate of 2.9%.

SUPPLEMENTAL RESPONSE:

The Company is currently forecasting to price a 5 year debt issue at a fixed rate of 2.9% in August 2011 and receive proceeds in November 2011. Interest will begin accruing in November 2011.

2nd SUPPLEMENTAL RESPONSE:

On August 9, 2011, the Company priced a 5-year debt issue at a fixed rate of 2.21% and will receive the proceeds from this transaction on November 1, 2011. Interest will also begin accruing on November 1, 2011.

From: @ Dodds, Brian
Sent: Tuesday, July 19, 2011 4:33 PM
To: Lannon, Michael; Feeley, John; Luckey, Nicole; Kahle, Daniel; Kight-Garlich, Sheena; @ Lusson, Karen; @ Efron, David; @ Borovik, Michael; @ Dale, Janice; @ Satter, Susan; @ Rubin, Scott J.; @ Dismukes, David; @ Randall, Erica; @ Munsch, Kristin; @ Soderna, Julie; @ Thomas, Chris; @ Redd-Hicks, Christie; @ Stewart, Gretchen; @ Catlin, Thomas; @ Morgan, Lafayette; drankin@lrklaw.com; @ Robertson, Eric; @ Robertson, Ryan; @ Wier, Jonathan; @ Anderson, Neil; @ Lipinski, Judy; @ Townsend, Christopher; @ Skey, Christopher; @ Strong, Michael; @ Parisi, Vincent; @ White, Matthew; @ Condon, Susan; rjolly@cityofchicago.org; @ Reddick, Conrad
Cc: @ Klyasheff, Mary; @ Kyto, David J; @ Moy, Sharon; @ Hengtgen, John; Colleen Sipiorski; @ Jackson, Bradley D.; @ Hurley, Edward; @ Eidukas, Theodore; @ Ratnaswamy, John; @ Scarsella, Carla; @ Good, Julia H; @ Dodds, Brian
Subject: Docket No. 11-0281 PGL Response to Staff SK Second Set (7)
Attachments: PGL SK 2.07 JUNE UPDATE SUPP.pdf

Docket Nos. 12-0511/12-0512
(Consolidated)
ICC Staff Exhibit 15.0
Attachment D

Good Afternoon,

Subject to The Peoples Gas Light and Coke Company's General Objections to Staff Data Requests previously served, attached please find the Supplemental Data Request Response PGL SK 2.07 JUNE UPDATE SUPP on behalf of The Peoples Gas Light and Coke Company in reference to Staff Data Requests received on April 14, 2011.

Brian Dodds
Project Assistant
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