

Rebuttal Testimony
of
Janis Freetly
Senior Financial Analyst

Finance Department
Financial Analysis Division
Illinois Commerce Commission

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

Docket Nos. 14-0224 and 14-0225
(Consolidated)

September 4, 2014

Table of Contents

Witness Identification	1
Response to Ms. Gast.....	2
Response to Mr. Moul	8
DCF	11
CAPM	13
Risk Premium	15
Leverage Adjustment.....	16
Rate Case Expense	20
Reorganization of Integrys	21

1

Witness Identification

2 **Q. Please state your name and business address.**

3 A. My name is Janis Freetly. My business address is 527 East Capitol Avenue,
4 Springfield, Illinois 62701.

5 **Q. Did you previously testify in this proceeding?**

6 A. Yes, I filed direct testimony, ICC Staff Exhibit 3.0.

7 **Q. What is the purpose of your testimony in this proceeding?**

8 A. The purpose of my testimony is to respond to rebuttal testimony of North Shore
9 Gas Company (“North Shore”) and Peoples Gas Light and Coke Company
10 (“Peoples Gas”) (collectively, “the Companies”) witnesses Lisa J. Gast (NS-PGL
11 Exhibit 18.0.) and Paul R. Moul (NS-PGL Exhibit 19.0.).

12 **Q. Please summarize your conclusions.**

13 A. The overall cost of capital is 6.23% for North Shore and 6.59% for Peoples Gas.
14 These estimates incorporate my revised recommended cost of common equity of
15 9.00% for both companies. The 9.00% was derived by taking the average of my
16 8.71% revised DCF results, explained further below, and my 9.27% CAPM
17 results. The overall costs of capital for the Companies are shown on Schedule
18 8.01.

19 **Response to Ms. Gast**

20 **Q. Do you accept the revised capital structures for the Companies presented**
21 **by Ms. Gast in her rebuttal testimony (NS-PGL 18.1P and 18.1N).**

22 A. Yes, since the revised capital structure proposed by the Companies makes no
23 difference to the overall cost of capital, I accept the revised capital structures
24 proposed by Ms. Gast, as shown in Schedule 8.01. The Companies' revisions of
25 North Shore's capital structure result in a higher short-term debt ratio, a lower
26 long-term debt ratio and a slightly higher common equity ratio. North Shore's
27 revised forecasted average 2015 capital structure contains 10.58% short-term
28 debt, 38.94% long-term debt, and 50.48% common equity. The Companies'
29 revisions of Peoples Gas' capital structure result in a lower proportion of short-
30 term debt, a higher proportion of long-term debt and a slightly lower common
31 equity ratio. Peoples Gas' revised forecasted average 2015 capital structure
32 contains 3.16% short-term debt, 46.51% long-term debt, and 50.33% common
33 equity.

34 **Q. Do you propose any changes to the cost of short-term debt?**

35 A. Yes. The Companies updated the forecasted 2015 short-term balances. Given
36 the Companies' proposed changes to the balance of short-term debt, I
37 recalculated the annual percentage cost of bank commitment fees. I divided
38 North Shore's \$108,000 in fees by the updated average 2015 balance of short-
39 term debt projected to be outstanding, \$21,678,000, to derive the cost of
40 commitment fees in percentage terms. Adding the resulting 50 basis points to

41 the 0.24% commercial paper yield produces a cost of short-term debt for North
42 Shore of 0.74% (0.24% + 0.50% = 0.74%). I divided Peoples Gas' \$396,000 in
43 fees by the updated average 2015 balance of short-term debt projected to be
44 outstanding, \$58,805,000, to derive the cost of commitment fees in percentage
45 terms. Adding the resulting 67 basis points to the 0.24% commercial paper yield
46 produces a cost of short-term debt for Peoples Gas of 0.91% (0.24% + 0.67% =
47 0.91%).

48 **Q. Ms. Gast argues that forecasted interest rates should be used for**
49 **estimating the Companies' cost of short-term debt and proposed 2014 and**
50 **2014 long-term debt issuances. (NS-PGL 18.0P, 3 and 4). Do you agree?**

51 A. No. Ms. Gast proposes that the Companies' cost of short-term debt and new
52 long-term debt issues be based on interest rate forecasts from Moody's
53 DataBuffet.com. (Id.) Ms. Gast revised the cost of short-term debt for both
54 Companies to reflect the current forecast from Moody's DataBuffet.com. (NS-
55 PGL Ex. 18.0, 3-4.). As shown on her table on page 3 of NS-PGL Ex. 18.0, use
56 of the updated forecast resulted in a 0.75% and 0.69% reduction to the cost of
57 short-term debt for North Shore and Peoples Gas, respectively. Similarly, Ms.
58 Gast revised the interest rate on the Series VV remarketing to reflect the actual
59 3.90% rate incurred in place of the original forecast of 5.05%. The 3.90% actual
60 rate is much closer to the 3.49% rate that I derived from the current yields on
61 municipal bonds. Thus, here is another example in which a forecast has proved
62 less accurate than the current interest rate as a predictor of future interest rates.

63 Academic research has shown that forecasters' predictions of future movements
64 of interest rates are inaccurate. Indeed, as one financial text states, "forecasting
65 interest rates is a perilous business. To their embarrassment, even the top
66 experts are frequently wrong in their forecasts."¹ Forecasts are frequently wrong
67 even in the direction, let alone the magnitude and timing, of future interest rate
68 changes. Security returns, including interest rates, closely approximate a type of
69 time series called a random walk,² making the current return the best estimate
70 going forward. For example, the November 1, 2013 Blue Chip forecasts Mr.
71 Moul cited (NS and PGL Ex. 3.12, 2) is already proving to be inaccurate. Blue
72 Chip forecasted increasing yields from the fourth quarter 2013 through the
73 second quarter of 2014. However, the actual yields have fallen over that time
74 period.³ Table 1 demonstrates that the Blue Chip forecasts Mr. Moul relied on
75 overstated the yields on both Treasury and Corporate bonds for the first and
76 second quarter of 2014.

¹ Frederic S. Mishkin, The Economics of Money, Banking, and Financial Markets, Fourth Edition, 1995, p. 134.

² Burton G. Malkiel, A Random Walk Down Wall Street, Fourth Edition, 1985, pp. 132 and 146.

³ The Actual Rate is the quarterly average rate derived from monthly yields at www.federalreserve.gov.

Table 1							
	10-Year T-bonds				30-Year T-bonds		
	Forecasted	Actual	Forecast		Forecasted	Actual	Forecast
	Rate	Rate	Error		Rate	Rate	Error
4Q 2013	2.70%	2.75%	0.05%		3.70%	3.79%	0.09%
1Q 2014	2.80%	2.76%	-0.04%		3.80%	3.68%	-0.12%
2Q 2014	2.90%	2.62%	-0.28%		3.90%	3.44%	-0.46%
	Aaa corporate bonds				Baa corporate bonds		
	Forecasted	Actual	Forecast		Forecasted	Actual	Forecast
	Rate	Rate	Error		Rate	Rate	Error
4Q 2013	4.50%	4.59%	0.09%		5.40%	5.36%	-0.04%
1Q 2014	4.60%	4.44%	-0.16%		5.50%	5.12%	-0.38%
2Q 2014	4.70%	4.22%	-0.48%		5.60%	4.82%	-0.78%

77

78

79

80

81

82

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

Table 2			
Source	Date of Forecast	Forecast Period	Forecasted Rate
Forecasts.org	8/21/2014	4th Quarter 2014	2.28%
FreddieMac	8/12/2014	4th Quarter 2014	2.60%
EconomicOutlookgroup.com	8/21/2014	4th Quarter 2014	3.50%
Survey of Professional Forecasters	8/15/2014	4th Quarter 2014	2.80%

83

84

85

As the table above shows, the selected forecasts for the fourth quarter of 2014 range from 2.28% to 3.50%.⁴ That a 1.22 percentage point spread exists among

⁴ The four 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.

86 even a small sampling of forecasts just a few months before the forecast period
87 demonstrates the difficulty in accurately predicting future movements of interest
88 rates. Moreover, the differences among forecasts lead to the further problem of
89 selecting a forecast, since it is unknown which of these disparate results will
90 ultimately be the closest to realized rates.

91 The simple fact is, no one can predict with certainty when interest rates will begin
92 to rise, the rate at which they will rise, how long they will rise before falling again,
93 the rate at which they will fall, or even whether they will rise before they fall
94 further. Therefore, the Commission should continue to use actual spot (current)
95 interest rates rather than forecasted interest rates to estimate the Companies'
96 cost of debt.

97 **Q. Ms. Gast suggests that using current interest rates assumes that the**
98 **current interest rates will continue to be available through the 2015 test**
99 **year. (NS-PGL Ex. 18.0, 7) Is that correct?**

100 A. No. I am not suggesting that interest rates will not change. In fact, I very much
101 expect interest rates to change. Unfortunately, no one can predict the direction,
102 magnitude, or timing of future interest rate changes. Rather, my argument is that
103 current interest rates have proven to be superior predictors of future interest
104 rates than professional forecasters.

105 **Q. Do you agree with the adjustments Ms. Gast made to the forecasted cost of**
106 **long-term debt for Peoples Gas?**

107 A. I do agree with Ms. Gast's use of the actual 3.90% interest rate for the Series VV
108 remarketing that was completed in July 2014. (NS-PGL Ex. 18.0, 4-5) I also
109 agree that the actual rate for the Series BBB bonds to be issued in the third
110 quarter of 2014 should be used when it becomes known, assuming that rate is
111 reasonable. (NS-PGL Ex. 18.0, 6) However, as explained previously, I do not
112 agree with Ms. Gast's use of interest rate forecasts for determining the projected
113 cost of debt for the Series WW remarketing and the Series CCC bonds.
114 Therefore, I revised the interest rate for the Series WW municipal bond to equal
115 the actual 3.90% interest rate the Company obtained on its other municipal bond,
116 Series VV. I maintained the 30-year Series CCC bonds' interest rate at the level
117 that I presented in my direct testimony. (ICC Staff Exhibit 3.0, 6-7)

118 **Q. Do you agree with the other updates that Ms. Gast made to Peoples Gas**
119 **forecasted long-term debt?**

120 A. Yes. Schedule 8.02 reflects the expected refinancing of the Series QQ and the
121 increase in the anticipated Series BBB issuance from \$150 million to \$200
122 million.

123 **Q. What is your recommended embedded cost of long-term debt for Peoples**
124 **Gas reflecting the updates that you accepted?**

125 A. The updates listed above do not change my 4.36% embedded cost of long-term
126 debt for Peoples Gas, as shown on Schedule 8.02P.

127 **Response to Mr. Moul**

128 **Q. Mr. Moul argues that your proposed cost of equity is “simply not**
129 **representative of the returns investors can earn on other investments of**
130 **comparable risk.” (NS-PGL Ex. 19.0, 2)**

131 A. His conclusion rests largely on a comparison to previously authorized returns for
132 other companies, in other jurisdictions, at other times representing other market
133 environments. Mr. Moul’s review of other authorized returns fails to specify
134 crucial factors that influenced the allowed returns in those proceedings. For
135 instance, Mr. Moul does not identify the relative risk, as exemplified by credit
136 rating or any other metric, of each of the utilities involved in those return
137 decisions. Nor does he identify the amount of common stock flotation cost
138 adjustment, if any, was included in each of those decisions. He also fails to
139 provide any context regarding the market environment in which those decisions
140 were made. Without such data, any evaluation of the return recommendations in
141 this proceeding via comparison to the returns authorized for other natural gas
142 utilities is useless because there is no basis on which to assess comparability. In
143 addition, it also introduces a circularity problem, since it would establish an
144 authorized rate of return on the basis of other authorized rates of return.

145 **Q. Mr. Moul further supports his conclusion that your cost of equity**
146 **significantly understates the investor-required rate of return on common**
147 **equity by noting that Value Line projects higher returns for the companies**

148 **in the Delivery Group than your analysis indicates. (NS-PGL Ex. 18.0, 4-5)**

149 **Please comment.**

150 A. First, the returns he cites are projected returns on book equity, which erroneously
151 implies that accounting returns on book equity are acceptable substitutes for
152 investor-required returns. However, investor-required returns are only loosely
153 related to accounting returns; they are certainly not interchangeable. For
154 example, the return on book value of common equity is entirely unaffected by
155 changes in the investor-required rate of return. That is, due to a decline in risk,
156 risk premiums, or the time value of money, investors would bid up the price of a
157 stock, thereby reducing the implied required rate of return, but the anticipated
158 return on book equity would not change. Therefore, projected returns on book
159 equity cannot be substituted for investor-required returns.

160 Second, earned returns include the effect of any unregulated operations of those
161 companies, which further reduces their usefulness as gauges of the investor-
162 required returns on lower risk utility operations.

163 **Q. Is there support for your 9.0% cost of common equity estimate being**
164 **representative of the return investors can earn on other investments of**
165 **comparable risk?**

166 A. Duff & Phelps regularly reviews fluctuations in global economic and financial
167 conditions to develop equity risk premium (“ERP”) recommendations.⁵ According
168 to Duff & Phelps, the U.S. equity risk premium is 5.0%. Duff & Phelps developed

⁵ Duff & Phelps, *Client Alert – Duff & Phelps Decreases U.S. Equity Risk Premium Recommendation to 5.0%*, Effective February 28, 2013, March 20, 2013.

169 its current ERP recommendation in conjunction with a “normalized” 20-year yield
170 on U.S. government bonds of 4.0% as the risk-free rate, implying a 9.0% “base”
171 U.S. cost of equity capital estimate at the end of February 2013.

172 American Appraisal publishes the Equity Risk Premium Quarterly.⁶ In its July
173 2014 report, the U.S. ERP (i.e., the ERP for the market as a whole) for the
174 second quarter of 2014 was determined to be 6.0% combined with the actual
175 risk-free rate as of April 2014, which is consistent with their conclusion for the
176 first quarter of 2014. The yield on 30-year U.S. Treasury bonds was 3.52% in
177 April 2014. Hence, according to American Appraisal, the implied U.S. cost of
178 equity capital is 9.52% (6.0% + 3.52%).

179 Aswath Damodaran, Professor of Finance at the Stern School of Business at
180 New York University, developed a forward-looking approach to calculating an
181 expected ERP based on current market data.⁷ He estimated that the implied
182 ERP equaled 5.38% at the end of June 2014. Adding the 5.38% ERP to the yield
183 on 30-year Treasury bonds in June 2014 of 3.42%, results in an implied cost of
184 equity capital of 8.80% for the market as a whole.

185 Hence, these cost of equity estimates for the market as a whole, which is riskier
186 than gas distribution utilities, indicate that if anything, my 9.0% cost of equity
187 recommendation is not too low and further demonstrates that Mr. Moul’s 10.25%
188 cost of equity estimate is far too high.

⁶ American Appraisal, Equity Risk Premium Quarterly, July 2014

⁷ Id.

189

DCF

190 **Q. Please respond to Mr. Moul's claims that stock prices measured over**
191 **longer time periods provide a more objective basis for a rate of return**
192 **recommendation that applies to a future test year. (NS-PGL Ex. 19.0, 6-7)**
193 **Please comment.**

194 A. While I do not agree with Mr. Moul's position that stock prices measured over a
195 longer time period are superior for measuring the investor-required rate of return
196 on common equity, in order to reduce issues in this proceeding, I will adopt his 6-
197 month average dividend yield of 3.89%.

198 **Q. Mr. Moul claims that you incorrectly calculated the DCF growth rate for UIL**
199 **Holdings. (NS-PGL Ex. 19.0, 7) Please respond.**

200 A. Mr. Moul is wrong. As shown on Attachment A to this testimony, VL forecasts no
201 change expected in the dividends per share for UIL Holdings. UIL Holdings has
202 consistently paid \$1.73 per share since 1997 and Value Line forecasts that it will
203 continue to pay \$1.73 per share through the 2016 – 2018 period. Hence, I
204 properly interpreted "Nil" to mean no growth in dividends per share and reflected
205 that as 0% to derive the growth rate for UIL Holdings.

206 **Q. Mr. Moul has a problem with the blended growth rate from the Value Line**
207 **forecasts that he presented in NS and PGL Ex. 3.8 because you included**
208 **non-earnings growth rate forecasts. Please respond.**

209 A. In order to reduce the issues in this case, I agree to exclude the Value Line
210 projected growth rates for book value per share, cash flow per share and percent
211 retained to common equity. However, the Value Line projected growth in
212 dividends per share (“dps”) should not be ignored. As Mr. Moul indicated, the
213 Delivery Group average Value Line projected growth rates of earnings per share
214 (“eps”) is higher than the Delivery Group average Value Line projected growth
215 rates of dps.

216 However, as Mr. Moul testified, DCF theory holds that dividend growth will equal
217 earnings growth when the payout ratio is constant. (NS-PGL Ex. 19.0, 8) He
218 then indicates that Value Line projects declining dividend payout ratios for the
219 Delivery Group. (Id, 10) This explains why the Value Line expected growth in
220 eps exceeds the expected growth in dps. If the lower payout ratio persists, long-
221 term dividend growth will eventually converge to the level of earnings growth.
222 This is because long-term dividend growth is directly related to the earnings
223 retention ratio:

224 Long-Term Dividend Growth = Rate of Return on New Investment x Earnings
225 Retention Rate

226 Nonetheless, this higher long term earnings growth cannot be achieved without
227 slowing near term dividend growth. Because the DCF is a dividend discount
228 model rather than an earnings discount model, ignoring the slowing in the growth
229 of dividends that is necessary to achieve an increase in the earnings retention

230 rate, leads to an upwardly biased estimate of the investor-required rate of return
231 on common equity.⁸

232 **Q. What is your revised growth rate estimate?**

233 A. Using the data presented by Mr. Moul on NS and PGL Ex. 3.8, I first calculated
234 the average Value Line growth projection by averaging the growth in eps and dps
235 only. I then computed the average of the growth rates from I/B/E/S First Call,
236 Zacks, Morningstar and the average Value Line growth projection. The resulting
237 growth rate estimate is 4.82%.

238 **Q. What is your revised DCF estimate of the investor-required rate of return?**

239 A. Adding the 4.82% growth rate to Mr. Moul's 3.89% dividend yield results in a
240 8.71% DCF cost of common equity estimate.

241 **CAPM**

242 **Q. Mr. Moul suggests that the estimation of the risk-free rate should be based**
243 **on forecasts rather than spot yields. (NS-PGL Ex. 19.0, 11-12) Is he**
244 **correct?**

245 A. No. Interest rates are constantly adjusting, and accurately forecasting the
246 movements of interest rates is problematic, as I discussed previously. In
247 contrast, the current U.S. Treasury yields I used to estimate the risk-free rate
248 reflect all relevant, available information, including investor expectations
249 regarding future interest rates. Consequently, investor appraisals of the value of

⁸ Earnings growth can be a useful proxy for dividend growth; however, the substitution of proxies for the phenomenon to be measured (e.g., dividend growth) increases measurement error.

250 forecasts are also reflected in current interest rates. Therefore, if investors
251 believe that the Blue Chip Financial Forecasts (“BCFF”) forecasts are valuable,
252 that belief would be reflected in current market interest rates. Likewise, if
253 investors believe that the BCFF forecasts are not valuable, that belief would be
254 reflected in current market interest rates. In summary, if one uses current market
255 interest rates in a risk premium analysis, speculation of whether investor
256 expectations of future interest rates equals those from a particular forecast
257 reporting service, such as BCFF, is unnecessary. Thus, the Commission should
258 continue to rely on current, observable market interest rates rather than the
259 projected rates that Mr. Moul used in his analysis.

260 **Q. Mr. Moul recommends the sole use of Value Line betas and criticizes your**
261 **CAPM analysis because the regression betas and the adjusted Zacks betas**
262 **you used could not have been relied on by investors. (NS-PGL Ex. 19.0, 13.)**
263 **Please comment.**

264 A. The betas Mr. Moul and I employed are estimates of the unobservable true beta,
265 which measures investors’ expectations of the quantity of non-diversifiable risk
266 inherent in a security. Consequently, which beta estimates are more accurate is
267 unknown. Thus, the Value Line methodology is not inherently superior to Staff’s
268 methodology. In fact, different beta estimation methodologies can produce
269 different betas when those methodologies employ different samples of stock
270 return data. Thus, just as Mr. Moul and I used multiple models to determine the
271 cost of equity, I used multiple approaches to estimate beta.

272 The validity of Staff's beta estimation methodology is not a function of whether
273 investors rely upon Staff's beta estimates. Rather, the validity of the
274 methodology is a function of its ability to explain stock price behavior. The
275 methodology I used to calculate the regression beta for my sample, which Staff
276 has regularly used and the Commission has consistently approved,⁹ employs the
277 same monthly frequency of stock price data as the widely accepted Merrill Lynch
278 methodology. Further, Mr. Moul's argument to exclude Staff calculated betas
279 and rely upon only Value Line betas was rejected multiple times by the
280 Commission, including the Companies' 2009 rate case. In that proceeding, the
281 Commission adopted Staff's multiple-source approach to estimating beta, stating:

282 We agree that, in the same way we rely on multiple models
283 to determine the cost of equity, Staff's well-considered use of
284 multiple beta sources is beneficial to reduce measurement
285 error from any individual estimate. Moreover, we find that
286 Staff's beta estimate appropriately weights the beta
287 estimates from those three sources. Thus, we adopt Staff's
288 beta estimate of 0.59. (Order, Docket Nos. 09-0166/09-0167
289 (Cons.), January 21, 2010, 126-127.)

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

292 Risk Premium

293 **Q. Mr. Moul defends his risk premium model by stating that his use of a very**
294 **broad range of earned returns that were experienced historically should**

⁹ Order, Docket No. 02-0837, October 17, 2003, 37-38; Order, Docket Nos. 02-0798/03-0008/03-0009 (Cons.), October 22, 2003, 85; Order, Docket No. 00-0340, February 15, 2001, 25; Order, Docket No. 03-0403, April 13, 2004, 42; and Order, Docket Nos. 06-0070/06-0071/06-0072 (Cons.), November 21, 2006, 145.

295 **allay any concerns that earned returns obtained from historical data would**
296 **not represent investor return requirements for the future. (NS-PGL Ex. 19.0,**
297 **14) Please respond.**

298 A. Mr. Moul's methodology for determining a reasonable common equity risk
299 premium for his Delivery Group is flawed. Contrary to Mr. Moul's argument, the
300 past pattern of earned returns is not useful in predicting future returns because
301 the true mean of the market risk premium, if it exists, is not observable. Because
302 the true mean cannot be observed, the selection of a measurement period will
303 necessarily be arbitrary and will dictate the magnitude of the resulting risk
304 premium, as Mr. Moul's testimony indicates. For example, had Mr. Moul used
305 the 1966-2012 measurement period, his average equity risk premium estimate
306 would have been 2.31% instead of 5.41%. This illustrates that his approach is
307 unquestionably, and incurably, subject to manipulation and would only produce
308 the "correct" risk premium by sheer chance, at best.

309 **Leverage Adjustment**

310 **Q. Mr. Moul states that "leverage differs depending on whether it is calculated**
311 **using market-based data or book values." (NS-PGL Ex. 19.0, 15) Do you**
312 **agree?**

313 A. Absolutely not. Simply put, a company can have only one level of risk at any
314 point in time. To argue otherwise is to say an investment in a company can be
315 simultaneously more or less risky than itself, which is obviously untrue.

316 **Q. Mr. Moul testifies that “it is indisputable that there is more financial risk**
317 **associated with a 53.72% common equity ratio than there is with a 60.55%**
318 **common equity ratio.” (NS-PGL Ex. 19.0, 17) Is that statement correct?**

319 A. That statement is only correct if one is using the same scale to make both
320 measurements, for example, when comparing a company or a certain group of
321 companies with a 53.72% book value common equity ratio to a *different* company
322 or group of companies with a 60.55% book value common equity ratio, the
323 company or group of companies with the lower common equity ratio probably has
324 more financial risk. However, comparing the 53.72% book value equity ratio of a
325 certain group of companies to the concurrent 60.55% market value equity ratio
326 *for that same group of companies* does not signify different intrinsic levels of
327 financial risk in that group. The investment in that portfolio of companies does
328 not become riskier simply by viewing it from a different perspective.

329 **Q. Is Mr. Moul correct in stating that “in order to apply a measurement of a**
330 **return measured based on a firm’s market-value capitalization compared to**
331 **a book-value capitalization, the measurement must be adjusted before it is**
332 **applied to the firm’s capitalization measured based on book value”?** (NS-
333 **PGL Ex. 19.0, 17)**

334 A. No. His argument is effectively an espousal of fair-value rate making. By Mr.
335 Moul’s reasoning, if an investor foolishly pays more for a utility stock than is
336 warranted given her required return and the expected earnings, the Commission

337 would then be required to increase the authorized return in order to ensure that
338 the foolish investor still earns her investor-required return.

339 To illustrate, consider a company that includes two business segments of equal
340 book value and equal risk – a regulated gas delivery company that is expected to
341 earn exactly the investor-required return and an unregulated segment that is
342 expected to earn more than the investor-required return. Investors (i.e., the
343 market) would value the gas delivery segment equal to its book value because,
344 at that price, investors would expect to earn exactly the return they require.
345 However, investors would be willing to pay more than book value for the
346 unregulated segment because of its higher-than-required earnings. Thus, the
347 market value of the company as a whole would be bid up beyond its book value
348 until the expected return equals the required return. Mr. Moul’s argument
349 suggests that the authorized return on rate base for the regulated gas delivery
350 segment should be increased *beyond* the required return due to the excess
351 expected earnings in the unregulated segment, which would, in turn, create
352 excess earnings in the regulated gas delivery segment, pushing the market value
353 higher still in a never-ending upward spiral.

354 **Q. Why is it appropriate for the Commission to apply a market value derived**
355 **cost of equity to the book value of common equity, even if the Companies’**
356 **market value differs from its book value? (NS-PGL Ex. 19.0, 15)**

357 A. Book value represents the funds a company receives from investors through
358 security issuances on the primary market (i.e., transactions directly between a

359 company and its investors) and reinvestment of earnings. Book value does not
360 adjust to reflect changing investor assessments of the level or riskiness of future
361 cash flow; it only measures how much money the company has invested in
362 assets that serve its customers.

363 In contrast, the market value is the price investors are willing to pay each other
364 for a security on the secondary market. That is, market value is set by
365 transactions between investors rather than transactions between the company
366 and its investors; therefore the market value of a company's securities has no
367 direct bearing on the amount of funding the company has to invest in assets.

368 Cost of common equity analysis uses market value data because market data
369 continuously adjusts to reflect investor return requirements as they are
370 continuously re-evaluated.

371 The market value of a stock would grow to exceed its book value only if investors
372 expected to earn a return above their required return.¹⁰ If that is the case, the
373 market value will adjust upward until the expected return once again matches the
374 required return. Thus, the market value always reflects the investor-required
375 return, regardless of the book value. That is why it is appropriate, indeed
376 necessary, to use a market-based cost of common equity for regulatory rate
377 setting. Similarly, book value always represents the funds available to the
378 company to invest in assets serving its customers, regardless of the market
379 value. That is why it is appropriate and necessary to use a book value rate base

¹⁰ 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.

380 for regulatory rate setting. The application of the market required return to the
381 book value rate base simply takes the return investors demand to earn from a
382 dollar invested in the common equity of a company, given the amount of risk in
383 the common equity of the company and the current price of risk, and applies it to
384 the number of common equity dollars invested in the rate base of the
385 Companies.

386 **Q. Mr. Moul states that your “position that a cost of equity derived from**
387 **market-valued capitalizations may be applied to a book-value capitalization**
388 **is just like saying zero degrees Celsius equals zero degrees Fahrenheit.”**
389 **(NS-PGL Ex. 19.0, 17) Is that correct?**

390 A. No. My position is that the intrinsic risk level of a given company does not
391 change simply because the manner in which that risk is measured has changed.
392 Thus, contrary to Mr. Moul’s assertion, my position is actually like saying
393 measuring temperature on two different scales does not change the temperature.
394 That is, despite different measurement scales, 32 degrees Fahrenheit equals
395 zero degrees Celsius.

396 **Rate Case Expense**

397 **Q. What documents did you review with regard to the rate case expense**
398 **associated with the testimony of Mr. Moul?**

399 A. I reviewed the Companies’ Schedule C-10, which were updated in the rebuttal
400 testimony of Sharon Moy. (NS-PGL Ex. 21.3N and 21.3P) In addition, I examined

401 the Companies' responses to Staff Data Requests¹¹ that included invoices for the
402 rate case expense associated with Mr. Moul's testimony, which were also
403 presented as attachments to Ms. Moy's rebuttal testimony (NS-PGL Ex. 21.19
404 and 21.20).

405 **Q. Do you propose an adjustment to the rate case expense associated with**
406 **Mr. Moul's testimony?**

407 A. No, I am not proposing an adjustment.

408 **Reorganization of Integrys**

409 **Q. Has the merger announcement affected your estimate of the rate of return**
410 **on rate base?**

411 A. Based on the information provided by the Companies in this proceeding, there is
412 no need to adjust my recommended rate of return on rate base due to Wisconsin
413 Energy Corporations' proposed acquisition of Integrys. At this time, it is unknown
414 if the reorganization will occur and if so, how the reorganization will affect the
415 Companies' rate of return. Should information become known that would
416 materially change the rate of return on rate base, although I am not an attorney, I
417 understand the Commission has the authority to investigate the Companies'
418 rates under Article 9, and to condition its approval of the reorganization on a
419 revised rate of return on rate base should the merger impact that set in this
420 proceeding.

¹¹ Specifically, I reviewed the Companies' responses to Staff DRs PGL DGK 4.01, Attach 03, NS DGK 13.03, PGL DGK 13.03, NS DGK 13.14 4th SUPP_Attach 01, PGL DGK 13.14 4th SUPP_Attach 01, NS DGK 27.03_Attach 01, and PGL DGK 27.03_Attach 01.

421 **Q. Does this conclude your prepared rebuttal testimony?**

422 A. Yes, it does.

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>
Long-term Debt	\$79,784,000	38.94%	4.13%	1.61%
Short-term Debt	\$21,678,000	10.58%	0.74%	0.08%
Common Equity	<u>\$103,435,000</u>	<u>50.48%</u>	9.00%	<u>4.54%</u>
Total Capital	\$204,897,000	100.00%		
Weighted Average Cost of Capital				6.23%

The Peoples Gas Light and Coke Company

	<u>Amount</u>	<u>Percent of Total Capital</u>	<u>Cost</u>	<u>Weighted Cost</u>
Long-term Debt	\$864,589,000	46.51%	4.36%	2.03%
Short-term Debt	\$58,805,000	3.16%	0.91%	0.03%
Common Equity	<u>\$935,610,000</u>	<u>50.33%</u>	9.00%	<u>4.53%</u>
Total Capital	\$1,859,004,000	100.00%		
Weighted Average Cost of Capital				6.59%

The Peoples Gas Light and Coke Company

Embedded Cost of Long-Term Debt

Net Proceeds Method
Test Year Ending December 31, 2015

Line No.	Debt Issue Type, Coupon Rate	Date Issued	Maturity Date	Date Reacquired	Principal Amount at Issuance	New and Retired		Thirteen Month Average		Carrying Value	Coupon Interest Expense	Amortization of Debt Discount or (Premium) (4)	Amortization of Debt Expense (4)	Total Expense	Line No.
						Time Weighted Face Amount Outstanding	Unamortized Discount or (Premium)	Unamortized Debt Expense (Gain)	[I]=[F-G+H]						
Test Year Ending December 31, 2015 (1)															
1	First and Refunding Mortgage Bonds:														1
2															2
3	Series RR	4.30%	(2) 06/01/05	06/01/35	-	50,000,000	50,000,000	-	690,000	49,310,000	2,150,000	-	35,000	2,185,000	3
4	Series TT	8.00%	11/03/08	11/01/18	-	5,000,000	5,000,000	-	21,000	4,979,000	400,000	-	6,000	406,000	4
5	Series UU	4.63%	09/30/09	09/01/19	-	75,000,000	75,000,000	-	324,000	74,676,000	3,473,000	-	78,000	3,551,000	5
6	Series WW	2.625%	(2) 10/05/10	02/01/33	08/01/15	50,000,000	29,167,000	-	304,000	28,863,000	766,000	-	16,000	782,000	6
7	Series XX	2.21%	11/01/11	11/01/16	-	50,000,000	50,000,000	-	149,000	49,851,000	1,105,000	-	112,000	1,217,000	7
8	Series YY	3.98%	12/04/12	12/01/42	-	100,000,000	100,000,000	-	893,000	99,107,000	3,980,000	-	33,000	4,013,000	8
9	Series ZZ	4.00%	04/18/13	02/01/33	-	50,000,000	50,000,000	-	695,000	49,305,000	2,000,000	-	40,000	2,040,000	9
10	Series AAA	3.96%	08/01/13	08/01/43	-	220,000,000	220,000,000	-	1,674,000	218,326,000	8,712,000	-	60,000	8,772,000	10
11	Series VV remarketing	3.90%	(2) 07/01/14	03/01/30	-	50,000,000	50,000,000	-	866,000	49,134,000	1,950,000	-	59,000	2,009,000	11
12	Series BBB	4.66%	10/01/14	10/01/44	-	200,000,000	200,000,000	-	1,423,000	198,577,000	9,320,000	-	49,000	9,369,000	12
13	Series WW remarketing	3.90%	(2) 08/01/15	02/01/33	-	50,000,000	20,833,000	-	342,000	20,491,000	812,000	-	22,000	834,000	13
14	Series CCC	4.66%	10/01/15	10/01/45	-	150,000,000	37,500,000	-	303,000	37,197,000	1,748,000	-	12,000	1,760,000	14
15	Future Issuance Fee	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	-	n/a	n/a	n/a	n/a	15
16	Sub-Total					1,050,000,000	887,500,000	-	7,684,000	879,816,000	36,416,000	-	522,000	36,938,000	16
17	Less: Amortization of Losses on Reacquired Bonds:														17
18	Series X	6.875%	(2) 03/01/85	02/01/33	03/14/03	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	18
19	Series KK	5.000%	(2) 02/06/03	02/01/33	04/18/13	-	-	-	2,581,000	(7) (2,581,000)	-	-	147,000	(7) 147,000	19
20	Series Y	7.50%	(2) 03/01/85	02/01/33	04/03/00	-	-	-	-	-	-	-	-	-	20
21	Series GG	Variable Rate	(2) 03/01/00	02/01/33	03/27/03	-	-	-	-	-	-	-	-	-	21
22	Series LL	3.75%	(2) 02/20/03	02/01/33	10/04/10	-	-	-	-	-	-	-	-	-	22
23	Series WW	2.625%	(2) 10/05/10	02/01/33	08/01/15	-	-	-	2,349,000	(8) (2,349,000)	-	-	135,000	(8) 135,000	23
24	Series Z	7.50%	(2) 03/01/85	03/01/15	04/03/00	-	-	-	-	-	-	-	-	-	24
25	Series HH	4.75%	(2) 03/01/00	03/01/30	08/18/10	-	-	-	-	-	-	-	-	-	25
26	Series VV	4.75%	(2) 03/01/00	03/01/30	08/18/10	-	-	-	2,005,000	(9) (2,005,000)	-	-	137,000	(7)(9) 137,000	26
27	Series AA	10.25%	(2) 03/01/85	06/01/35	08/01/95	-	-	-	-	-	-	-	-	-	27
28	Series FF	6.10%	(2) 06/01/95	06/01/35	06/02/05	-	-	-	2,020,000	(10) (2,020,000)	-	-	101,000	(10) 101,000	28
29	Series BB	8.10%	(2) 05/01/90	10/01/37	05/01/00	-	-	-	-	-	-	-	-	-	29
30	Series II	Variable Rate	(2) 03/01/00	10/01/37	11/12/03	-	-	-	-	-	-	-	-	-	30
31	Series JJ 36%	Variable Rate	(2) 03/01/00	10/01/37	10/14/03	-	-	-	-	-	-	-	-	-	31
32	Series OO	Variable Rate	(2) 10/09/03	10/01/37	08/18/11	-	-	-	1,879,000	(11) (1,879,000)	-	-	84,000	(11) 84,000	32
33	Series BB	8.10%	(2) 05/01/90	10/01/37	05/01/00	-	-	-	-	-	-	-	-	-	33
34	Series JJ 64%	Variable Rate	(2) 03/01/00	10/01/37	10/14/03	-	-	-	-	-	-	-	-	-	34
35	Series EE	Variable Rate	(2) 12/01/93	10/01/37	10/14/03	-	-	-	-	-	-	-	-	-	35
36	Series PP	Variable Rate	(2) 10/09/03	10/01/37	04/17/08	-	-	-	1,440,000	(12) (1,440,000)	-	-	65,000	(12) 65,000	36
37	Series DD	5.75%	(2) 12/01/93	11/01/38	12/01/03	-	-	-	1,628,000	(1,628,000)	-	-	70,000	70,000	37
38	Series QQ	4.88%	11/25/03	11/01/38	10/01/14	-	-	-	1,325,000	(1,325,000)	-	-	57,000	57,000	38
38	Sub-Total					-	-	-	15,227,000	(15,227,000)	-	-	796,000	796,000	38
39	Total					\$ 1,050,000,000	\$ 887,500,000	\$ -	\$ 22,911,000	\$ 864,589,000	\$ 36,416,000	\$ -	\$ 1,318,000	\$ 37,734,000	39
40	Embedded Cost of Long-Term Debt (M / I)													4.36%	(13) 40

- Notes: (1) Based on zero months of actual data and 12 months of forecasted data.
(2) Tax-exempt bonds.
(3) Total costs amortized based on life of the debt.
(4) Annualized amounts were created using the 12/31/11 amortization amounts multiplied by 12 months.
(5) Amount based on life of the debt.
(6) Fee paid for Docket 12-0285 not yet applied to a bond issuance.
(7) Refinancing Series combined (X and KK). Lines 18 and 19.
(8) Refinancing Series combined (Y, GG, LL, and WW). Lines 20 through 23.
(9) Refinancing Series combined (Z, HH, and VV). Lines 24 through 26.
(10) Refinancing Series combined (AA and FF). Lines 27 and 28.
(11) Refinancing Series combined (BB, JJ 36% and OO). Lines 29 through 32.
(12) Refinancing Series combined (BB, JJ 64%, EE, and PP). Lines 33 through 36.
(13) Proposed embedded cost of debt requested in this filing.

UIL HOLDINGS NYSE-UIL

RECENT PRICE **40.04** P/E RATIO **17.9** (Trailing: 18.0) RELATIVE P/E RATIO **1.02** DIV'D YLD **4.3%** VALUE LINE **3.8**

TIMELINESS **2** Raised 7/19/13
 SAFETY **2** Raised 2/29/08
 TECHNICAL **3** Lowered 8/16/13
 BETA .75 (1.00 = Market)

2016-18 PROJECTIONS

Price	Gain	Ann'l Total
High 45	(+10%)	7%
Low 35	(-15%)	1%

Insider Decisions

S	O	N	D	J	F	M	A	M
0	0	1	1	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0	1

Institutional Decisions

3Q2012	4Q2012	1Q2013
70	72	86
74	69	59
29562	31172	32005

LEGENDS

- 0.81 x Dividends p sh divided by Interest Rate
- Relative Price Strength
- 67% Div 7/06
- Options: Yes
- Shaded areas indicate recessions

% TOT. RETURN 7/13

THIS STOCK	VLARITH. INDEX
1 yr. 15.5	36.4
3 yr. 75.2	63.6
5 yr. 74.3	92.7

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	© VALUE LINE PUB. LLC	16-18
30.64	29.34	29.01	37.54	46.15	47.55	40.39	45.87	49.88	34.03	39.23	37.69	29.91	19.75	31.01	29.22	30.90	31.95	Revenues per sh	36.25
5.40	5.34	4.67	5.53	6.61	5.89	4.69	4.37	4.13	4.65	5.48	5.93	5.09	3.65	5.33	5.65	5.45	5.65	"Cash Flow" per sh	5.85
1.96	1.80	2.23	2.56	2.53	1.85	1.24	1.54	1.30	1.86	1.87	1.89	1.94	1.99	1.95	2.02	2.20	2.40	Earnings per sh ^A	2.55
1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	Div'd Decl'd per sh ^B	1.73
1.44	1.63	1.48	2.31	2.01	2.41	2.19	2.04	2.25	3.09	9.92	8.57	4.12	4.03	6.48	5.67	5.10	5.10	Cap'l Spending per sh	5.00
18.94	19.05	19.55	20.42	21.25	20.28	20.65	22.84	22.39	18.53	18.55	18.85	19.15	21.31	21.61	21.95	22.55	24.90	Book Value per sh ^C	28.45
23.18	23.39	23.44	23.46	23.53	23.79	23.86	24.01	24.32	24.86	25.03	25.17	29.98	50.51	50.65	50.87	51.00	51.00	Common Shs Outst'g ^E	51.00
10.1	16.3	12.6	10.8	11.5	15.0	18.0	18.7	23.5	18.7	18.4	16.7	12.7	14.0	16.5	17.4	17.4	17.4	Avg Ann'l P/E Ratio	16.0
58	85	72	70	59	82	1.03	.99	1.25	1.01	.98	1.01	.85	.89	1.04	1.11	1.11	1.11	Relative P/E Ratio	1.05
8.8%	5.9%	6.2%	6.2%	5.9%	6.2%	7.7%	6.0%	5.7%	5.0%	5.0%	5.5%	7.0%	6.2%	5.4%	4.9%	4.9%	4.9%	Avg Ann'l Div'd Yield	4.2%

CAPITAL STRUCTURE as of 6/30/13
 Total Debt \$1789 mill. Due in 5 Yrs. \$346.0 mill.
 LT Debt \$1598 mill. LT Interest \$75.0 mill.
 (LT interest earned: 3.0x)
 Leases, Uncapitalized: Ann. rentals \$4.6 mill.

Pension Assets-12/12 \$625 mill. **Oblig.** \$951 mill.

Pfd Stock None

Common Stock 50,712,507 shs. as of 8/1/13

MARKET CAP: \$2.0 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2010	2011	2012
% Change Retail Sales (KWH)	+4.4	-2.8	-2.6
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	6.3	6.4	7.1
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	-1	Nil	+2

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	-5.0%	-8.5%	5.5%
"Cash Flow"	-2.0%	.5%	3.0%
Earnings	-1.5%	3.5%	4.0%
Dividends	--	--	Nil
Book Value	.5%	2.0%	4.5%

QUARTERLY REVENUES (\$ mill.)

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	220.3	207.1	236.3	334.0	997.7
2011	561.1	314.0	321.4	373.9	1570.4
2012	458.3	283.5	323.8	420.9	1486.5
2013	548.0	319.1	320	387.9	1575
2014	570	310	350	400	1630

EARNINGS PER SHARE ^A

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	.53	.48	.63	.35	1.99
2011	1.02	.28	.24	.41	1.95
2012	.92	.23	.31	.56	2.02
2013	1.01	.35	.30	.54	2.20
2014	1.05	.30	.40	.65	2.40

QUARTERLY DIVIDENDS PAID ^B

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	.432	.432	.432	.432	1.73
2010	.432	.432	.432	.432	1.73
2011	.432	.432	.432	.432	1.73
2012	.432	.432	.432	.432	1.73
2013	.432	.432	.432	.432	1.73

BUSINESS: UIL Holdings, through its subsidiaries, operates as one of the largest regulated utility companies in Connecticut. Business consists of electric distribution/transmission operations of The United Illuminating Company and natural gas transportation/distribution operations of The Southern Connecticut Gas Company, The Connecticut Natural Gas Company, and The Berkshire

UIL Holdings performed well in the second quarter. The Connecticut-based utility reported earnings of \$0.35 a share in the period, versus \$0.23 in the comparable year-ago quarter. Improvement was driven by more-favorable weather patterns, a larger base for the transmission rate base, and the impact of natural gas conversions. We are maintaining our 2013 earnings estimate at \$2.20 a share, representing year-over-year growth of 9%.

Regulators issued a draft decision in United Illuminating's rate case. On July 30th, the Connecticut Public Utilities Regulatory Authority (PURA) released its draft decision for UI's pending electric rate case. The draft order, which could be subject to change before the final order is issued in mid-August, recommends a \$21.1 million rate increase in year one, and a \$15.9 million increase in year two. It's based on a 9.15% return on equity and 50% equity ratio. Indeed, we view the draft order as somewhat of a disappointment, given that UI's original request called for increases of \$65 million in year one, and \$26 million in year two, based on a 10.25% return on equity and 50% equity

ratio. While we were optimistic that regulatory conditions had been improving in the state, the unfavorable draft order once again proves that Connecticut is among the more challenging environments for utilities. The order is expected to be finalized at PURA's meeting on August 14th (just as this Issue was going to press).

The gas utilities will continue to be a key focus area. Through the end of the second quarter, UIL had converted 7,749 households to gas, putting it well ahead of its year-end target of 12,200 conversions. Management further indicated it added a little over 1,300 in July, upping the total to about 9,000. Its 2014 conversion target stands at 15,315, and it expects 55,000 over the 2014-2016 time frame.

The stock has been raised a notch for Timeliness to 2 (Above Average). In our view, these shares remain an attractive holding for investors seeking to add a low-risk income play to their portfolios. UIL holds above-average scores for Safety (2) and Financial Strength (B++). Its 4.3% yield ranks favorably compared to the utility industry's 3.8% mean.

Michael Ratty August 23, 2013

(A) EPS basic. Excl. nonrecur. gains (losses): '00, '04, '03, (26¢); '04, \$2.14; '06, (\$5.07); '10, (47¢). Next egs. report due early Nov. (B) Div'ds historically paid in early March, June, Sept., and Dec. ■ Div'd reinvest. plan avail. (C) Incl. deferred charges. In '12: \$380.1 mill. or \$7.47/sh. (D) Rate base: orig. cost. Rate allowed on common equity in '09: 8.75%. Earned on average common equity in '12: 9.3%. Regul. Clim.: Below Average. (E) In millions. Adjusted for stock dividend.

Company's Financial Strength B++
Stock's Price Stability 95
Price Growth Persistence 65
Earnings Predictability 90

To subscribe call 1-800-833-0046.