

BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of
Corning Natural Gas Corporation
Case 16-G-0369
October 2016

Prepared Testimony of:

Staff Finance Panel

Abdul Qadir
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Office of Accounting, Audits and
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State of New York
Department of Public Service
Three Empire State Plaza
Albany, New York 12223-1350

1 Q. Please state your names and business address.

2 A. Our names are Abdul Qadir and Patrick
3 Piscitelli. We are employed by the New York
4 State Department of Public Service (Department).
5 Our business address is Three Empire State
6 Plaza, Albany, New York 12223.

7 Q. Mr. Qadir what is your position at the
8 Department?

9 A. I am a Senior Utility Financial Analyst in the
10 Office of Accounting, Audits and Finance.

11 Q. Please describe your educational background and
12 professional experience.

13 A. I graduated from the University at Albany in
14 2004 and received a Bachelor of Science degree
15 with honors in Marketing and Finance. In 2007 I
16 earned a Master's degree in Economics with a
17 concentration in Finance and International Trade
18 from the University at Albany. Prior to joining
19 the Department, I worked in the banking
20 industry, primarily as a loan officer. I joined
21 the Department in March 2012.

22 Q. Please briefly describe your responsibilities
23 with the Department.

24 A. My responsibilities as a Senior Utility

1 Financial Analyst include analyzing a company's
2 financial condition, capital structures,
3 financing mechanisms, risks, costs of debt and
4 equity, diversification, and the competitive
5 position of utilities operating in New York
6 State. My responsibilities also include
7 analyzing financial petitions, performing rate
8 of return analysis and other special projects.

9 Q. Have you previously testified before the New
10 York State Public Service Commission
11 (Commission)?

12 A. Yes. I have testified in the United Water New
13 York rate case, Case 13-W-0295, New York State
14 Electric & Gas Corporation (NYSEG) and Rochester
15 Gas & Electric Corporation (RG&E) rate cases,
16 Cases 15-E-0283, 15-G-0284, 15-E-0285 and 15-G-
17 0286 and the recent Keyspan Gas East Corporation
18 d/b/a National Grid (KEDLI) and The Brooklyn
19 Union Gas Company d/b/a National Grid NY (KEDNY)
20 rate cases, Cases 16-G-0058 and 16-G-0059.

21 Q. Mr. Piscitelli, what is your position with the
22 Department?

23 A. I am employed as a Principal Utility Financial
24 Analyst in the Office of Accounting, Audits, and

1 Finance.

2 Q. Please describe your educational background and
3 professional experience.

4 A. My educational and professional experience is
5 summarized in pages 1 and 2 of
6 Exhibit __ (FP-1).

7 Q. Please briefly describe your current
8 responsibilities with the Department.

9 A. My responsibilities include analyzing the
10 financial condition, capital structure,
11 financing mechanisms, risk, cost of debt, cost
12 of equity, diversification, and relative cost
13 position/competitive position of utilities
14 operating in New York State.

15 Q. Have you previously testified before the
16 Commission?

17 A. Yes, I have 36 years of experience testifying on
18 various regulatory issues. Most recently, I
19 have testified in the Matter of a Three-Year
20 Rate Proposal for Electric Rates and Charges
21 Submitted by the Long Island Power Authority and
22 Service Provider, PSEG Long Island LLC, Matter
23 Number 15-00262 and in rate proceedings for
24 Niagara Mohawk Power Corporation d/b/a National

1 Grid, Cases 08-G-0609 and 10-E-0500, St.
2 Lawrence Gas Company, Case 15-G-0382 and the
3 recent KEDLI and KEDNY rate cases, Cases 16-G-
4 0058 and 16-G-0059.

5

6

DESCRIPTION OF EXHIBITS

7 Q. Are you sponsoring any exhibits?

8 A. Yes. We are sponsoring 23 exhibits.

9 Exhibit __ (FP-1) contains the educational and
10 professional experience of Patrick Piscitelli,
11 Exhibit __ (FP-2) contains the Interrogatory
12 Responses (IR) supporting Staff Testimony;
13 Exhibit __ (FP-3), Summary of Staff's
14 Recommended Rate of Return and weighted average
15 cost of capital; Exhibit __ (FP-4) contains
16 Standard & Poor's article, "U.S. Regulated
17 Utilities on Stable Trajectory Amid Moderate
18 Economic Growth"; Exhibit __ (FP-5) contains
19 Moody's Investors Service article, "Credit-
20 Supportive Regulatory Environment Drives Stable
21 Outlook"; Exhibit __ (FP-6) contains the
22 Regulatory Research Associates (RRA): "State
23 Regulatory Evaluations" article;
24 Exhibit __ (FP-7) contains Corning Holding

1 Company's December 31st capital Structure;
2 Exhibit __ (FP-8) is the term sheet for
3 Corning's outstanding bank loans;
4 Exhibit __ (FP-9) contains Edison Electric
5 Institute January 2013 Survey;
6 Exhibit __ (FP-10) contains Summary of Staff
7 recommended ROE; Exhibit __ (FP-11) contains
8 Universe of Gas utilities; Exhibit __ (FP-12)
9 contains Universe of Electric utilities;
10 Exhibit __ (FP-13) contains Staff's proxy group
11 of companies; Exhibit __ (FP-14) contains the
12 Discounted Cash Flow Calculation for Staff's
13 Proxy Group; Exhibit __ (FP-15) contains
14 information for Three-Month Average Stock
15 Prices; Exhibit __ (FP-16) contains "U.S.
16 Utility Index Hits Record In Flight to Safety
17 After Brexit" article; Exhibit __ (FP-17)
18 contains the "Blue Chip Economic Indicators"
19 published on October 10, 2016;
20 Exhibit __ (FP-18) contains the 3 month average
21 of the market risk using Merrill Lynch's
22 Quantitative Profiles; Exhibit __ (FP-19)
23 contains bond yields in April 2012 versus today;
24 Exhibit __ (FP-20) contains the Proxy group

1 Regulated Revenues; Exhibit __ (FP-21) contains
2 the Value Line Investment Survey and Quality
3 Control Procedures; Exhibit __ (FP-22) contains
4 the EIA, Energy Outlook, for August 2016; and
5 Exhibit __ (FP-23) contains Corning's Moody's
6 and S&P financial ratios.

7

8

SCOPE OF TESTIMONY

9 Q. What is the purpose of your testimony in this
10 proceeding?

11 A. The purpose of our testimony is to establish the
12 fair rate of return (ROR) that will be used to
13 determine the revenue requirement for Corning
14 Natural Gas Corporation (Corning or the Company)
15 for the Rate Year ending May 31, 2018.

16 Estimating the ROR requires an estimation of the
17 proper capital structure and the cost rates of
18 the individual cost components used to finance
19 the Company's earnings base. Our testimony will
20 also respond to issues raised in the testimony
21 of Company witness Bulkley.

22 Q. Does your testimony rely on IRs provided by the
23 Company?

24 A. Yes. These IRs are included in

1 Exhibit __ (FP-2).

2

3

SUMMARY OF TESTIMONY

4 Q. Please summarize your testimony and how it
5 varies from the Company's request.

6 A. We recommend an overall after-tax rate of return
7 of 5.53%, as opposed to the Company's request of
8 a 7.81% overall after-tax return. On a pre-tax
9 basis, our recommended overall rate of return is
10 7.53% compared to the Company's request of
11 10.97%. Our pro forma cost of capital can be
12 seen in Exhibit __ (FP-3). The difference is
13 primarily due to a reduction in the cost of debt
14 to 3.11% from the Company's estimate cost of
15 3.71%, our use of an 8.2% return on equity (ROE)
16 and a 48% equity ratio as opposed to the
17 Company's use of a 10.2% ROE and 50.03% equity
18 ratio. Our 3.11% cost of debt estimate differs
19 from the Company's debt cost estimate because of
20 two factors. First, Staff reduced the level of
21 the Company's short-term debt due to Staff's
22 estimate of Corning's capital requirements.
23 Since the interest rate of the Company's short
24 term debt is below the cost of its bank loans,

1 our first adjustment increases the weighted
2 average Rate Year cost of debt. Second, Staff
3 reduced the interest rate of the bank loans to
4 reflect current market conditions. Our second
5 adjustment decreased the Rate Year cost of debt.
6 Our 48% equity ratio reflects the capital
7 structure of a proxy group of companies adjusted
8 to compensate for Corning's risk
9 characteristics. Staff's ROE recommendation was
10 determined using two different equity-costing
11 methods, each weighted consistent with how the
12 Commission has weighted them in prior litigated
13 cases. The Company's 10.2% ROE request is based
14 upon Company witness Bulkley's testimony and the
15 50.03% equity ratio represents the Company's
16 estimate of its Rate Year equity ratio.

17 Q. What is the revenue requirement impact of your
18 adjustments to the Company's requested rate of
19 return?

20 A. In terms of revenue requirement, the difference
21 in the pre-tax ROR between Department staff
22 (Staff) and the Company is approximately \$1.3
23 million.

24

1 FAIR RATE OF RETURN

2 Q. Describe what is encompassed by the term revenue
3 requirement?

4 A. In the context of Commission rate proceedings,
5 the revenue requirement is the dollar amount
6 required by a company to provide service during
7 the Rate Year. It is the amount that will allow
8 the company to recover all of its reasonably
9 expected operating costs, including taxes and
10 depreciation. In addition, the revenue
11 requirement includes a fair return that will
12 allow the utility the opportunity to recover the
13 cost of funds supplied to it by investors. The
14 funds provided by the investors are needed in
15 order for the company to finance its long-term
16 utility assets and working capital requirements,
17 which in the rate-setting context are referred
18 to as its rate base.

19 Q. What is a fair rate of return for a regulated
20 utility?

21 A. A fair rate of return for a regulated utility is
22 one that enables the company to provide safe and
23 adequate service to its customers, while at the
24 same time assuring the utility continuing

1 support in the capital markets for both its
2 long-term debt and common equity securities at
3 terms that are reasonable given the company's
4 risk. Generally speaking a fair rate of return
5 allows the utility company to recover its
6 incurred cost of long-term debt financing while
7 providing its common equity investors the
8 opportunity to earn a return that is comparable
9 to the return available with investments of
10 similar risk.

11 Q. What are the sources of capital for a utility?

12 A. Typically, there are four sources of capital.
13 The two primary sources are long-term debt and
14 common equity. Preferred stock can also be
15 employed by utilities although generally in much
16 smaller proportions than either long-term debt
17 or common equity. Lastly, customer deposits,
18 while a very small component, are generally
19 reflected in a company's capitalization because
20 they are a relatively permanent and stable
21 source of capital employed by utilities.
22 Investors in debt securities enter into
23 contractual obligations with the utility and
24 receive relatively fixed income streams. Common

1 equity investment is non-contractual and equity
2 investors may share in, but are not guaranteed,
3 a portion of the utility's residual earnings.
4 Since the Commission utilizes a fully forecast
5 Rate Year to determine revenue requirements, it
6 is important that the Rate Year capitalization
7 reflects the utility's projected capital
8 requirements and is consistent with the goal of
9 achieving the optimal cost of capital,
10 particularly as it relates to the use of
11 leverage.

12 Q. Please discuss the estimation of a utility's
13 overall rate of return.

14 A. A utility's overall rate of return represents
15 the weighted cost of capital used by the utility
16 to finance the assets providing regulated
17 utility service. The determination of a
18 utility's rate of return requires an estimate of
19 the company's projected capital structure and
20 the cost rates associated with each component.
21 The ratemaking process should provide a utility
22 with a reasonable opportunity to earn a fair
23 return on utility investments that is comparable
24 to the return available on investments of

1 similar risk.

2 Q. How are the cost rates of the components of the
3 capital structure typically calculated?

4 A. The cost rates associated with a company's long-
5 term debt and customer deposits are relatively
6 straightforward to determine. The costs of
7 existing long-term debt instruments can be
8 readily calculated by examining their
9 contractual terms; i.e., the interest payments
10 on the long-term debt and the amortization of
11 issuance costs. The costs of any new long-term
12 debt instruments, however, require estimation.
13 The cost rate for customer deposits is simply a
14 matter of applying the cost rate that is
15 currently prescribed by the Commission. Staff
16 will go into more depth about the appropriate
17 capital structure and cost rate of the long-term
18 debt component and the determination of the
19 overall rate of return later in this testimony.
20 The cost of common equity, however, is neither
21 contractual nor generically prescribed by the
22 Commission. Its calculation is further
23 complicated by the fact that it cannot be
24 directly observed, and instead must be

1 estimated.

2 Q. Is the cost of common equity typically more
3 expensive than the cost of debt for a utility?

4 A. While under certain exceptional circumstances
5 the cost of debt may exceed a utility's cost of
6 equity, a utility's cost of equity is nearly
7 always greater than its cost of debt. This
8 occurs since equity investors earn a return only
9 after the payment of all other expenses,
10 including the contractual debt service payments.
11 As such, equity investors run a significantly
12 greater risk that their achieved returns will
13 not equal their expectations. It is also
14 important to note that equity returns are
15 profits and in a company's revenue requirement
16 profits are taxed as income at the corporate
17 level. This is an added cost to ratepayers that
18 adds to the expense of the equity return because
19 the revenue requirement needs to be grossed up
20 to ensure the company has the revenue to pay
21 these income taxes.

22 Q. How do investors' assess the overall risk of a
23 company?

24 A. Investors' assess the risk of a company by

1 evaluating its business and financial risk
2 profile.

3 Q. Please explain the concept of business risk and
4 financial risk and how it is typically assessed.

5 A. Business risk refers to the chance a company's
6 cash flows are not enough to cover its operating
7 expenses like cost of gas sold, property taxes,
8 or wages/benefits. Business risk is independent
9 of the amount of debt a company owes. Financial
10 risk refers to the chance a company's cash flows
11 are not enough to pay its creditors and fulfill
12 its other financial responsibilities. The level
13 of financial risk, therefore, relates less to
14 the company's actual operations and more to the
15 amount of debt it incurs to finance those
16 operations. The greater the proportion of a
17 company's financing needs that are fulfilled
18 with debt, the more likely it is to default on
19 its financial obligations. Hence, taking on
20 higher levels of debt, or financial liability,
21 increases a company's level of financial risk.
22 In general, a utility's monopoly position
23 combined with the various risk reducing
24 attributes inherent in the regulatory process

1 significantly reduce its business risk compared
2 to that of a typical competitive company, and
3 also allow it to assume substantially higher
4 levels of financial risk in achieving the same
5 debt ratings.

6 In New York, the Commission has implemented
7 various ratemaking measures that reduce the
8 uncertainty of earnings. For instance, the use
9 of revenue decoupling mechanisms on sales
10 greatly reduces revenue uncertainty.

11 Additionally, the use of fully-forecasted test
12 years and deferral and reconciliation mechanisms
13 on a variety of significant operation expenses
14 further diminish the business risk of our
15 utilities.

16 Q. Do the major credit rating agencies assess both
17 the business and financial risk of the companies
18 they rate?

19 A. Yes, both Standard & Poor's, or S&P, and Moody's
20 Investors Service, or Moody's, routinely assess
21 the level of business risk in tandem with the
22 financial risk profiles of debt issuers whenever
23 credit ratings are reviewed and/or assigned.

24 Q. What is S&P's assessment regarding the risk

1 profiles of utilities in general?

2 A. S&P assesses the relative strength of a
3 company's business position and assigns it one
4 of six distinct business risk profiles, or
5 categories. In ascending order of risk, the six
6 business risk categories range from "Excellent,"
7 for companies with relatively very little
8 business risk, to "Vulnerable" for companies
9 with extremely high levels of business risk.
10 Similarly, its assessment of financial risk
11 utilizes six distinct financial risk profiles
12 that range from "Minimal," for companies with
13 little to no debt on their balance sheets, to
14 "Highly Leveraged" for companies financed very
15 aggressively with debt. Nearly all regulated
16 utilities and holding companies that are heavily
17 utility-focused fall in the top two business
18 risk categories, "Excellent" and "Strong."
19 According to a recent S&P report entitled "U.S.
20 Regulated Utilities on Stable Trajectory Amid
21 Moderate Economic Growth," Exhibit __ (FP-4),
22 71% of utility business risk profiles are in the
23 "Excellent" category. In this article, S&P
24 explains that it sees only a modest influence on

1 utilities' creditworthiness from economic
2 fluctuations due to "the essential nature of the
3 services that they provide, the rate-regulated
4 character of the business, and the generally
5 supportive posture of regulators toward cost
6 recovery for incremental capital investments."
7 As a result, S&P claims that "most ratings
8 should remain relatively stable even if economic
9 conditions worsen in the near term."

10 Q. What is Moody's assessment regarding the risk
11 profiles of utilities in general?

12 A. Over the past three years, Moody's upgraded most
13 of the U.S. investor-owned utilities, and many
14 of their holding companies, due to the recent
15 improvement of the U.S. regulatory environment.
16 According to a recent Moody's report entitled,
17 "Credit-Supportive Regulatory Environment Drives
18 Stable Outlook", Exhibit __ (FP-5), Moody's
19 states that "...the credit-supportive regulatory
20 environment is the main reason for our stable
21 outlook." In addition to discussing the
22 relatively stable and predictable revenue and
23 cash flows associated with utilities, Moody's
24 explains that "...cash flow from operations (CFO)

1 to debt will hold steady at about 21%, on
2 average for the industry, over the next 12 to 18
3 months."

4 Q. Has the Company commented on the regulatory
5 treatment of utilities subject to New York
6 regulation?

7 A. Yes. On page 80 of her testimony, Company
8 witness Bulkley concludes that the regulatory
9 treatment of utilities in New York State "is
10 generally comparable with other jurisdictions".
11 In addition, on page 84, lines 19 through 20 she
12 states that New York regulation is "generally
13 consistent with those of her proxy group of
14 companies."

15 Q. How does an investor evaluate if a state's
16 regulatory environment is comparable to other
17 regulatory jurisdictions?

18 A. Investors evaluate various regulatory
19 jurisdictions based upon the opportunity
20 provided by the regulatory framework for a
21 utility to recover its prudently incurred cost
22 of providing service. Included in those costs
23 are the estimation and recovery of capital
24 costs. When a regulatory environment can be

1 viewed as being generally comparable to other
2 jurisdictions that essentially means that
3 investors view equal numbers of jurisdictions
4 having less favorable cost recovery as having
5 more favorable cost recovery. As a result,
6 investors view the cost recovery as "neutral"
7 versus other regulatory climates.

8 Q. In your opinion, should a regulatory climate
9 strive to be average, or neutral, versus other
10 jurisdictions?

11 A. Yes. A neutral regulatory climate provides the
12 proper balance between the needs of investors
13 and ratepayers. As such, it should be expected
14 to provide a regulatory framework that will
15 enable reasonable access to the financial
16 markets at the lowest cost of service.

17 Q. Have you examined an independent source to
18 evaluate New York State regulation?

19 A. Yes. As shown in Exhibit __ (FP-6), in its
20 latest "State Regulatory Evaluations,"
21 Regulatory Research Associates (RRA) ranks New
22 York 'Average' (A2) from its rating choices of
23 'Above Average', 'Average' and 'Below Average'.
24 The '2' rating indicates that New York's ranking

1 is in the middle of the 'Average' rank which
2 ranges from '1' at the high end to '3' on the
3 low end. New York ratemaking includes a fully
4 forecasted test year, revenue decoupling
5 mechanisms, full pass through of commodity
6 costs, true-ups of some short term debt and many
7 reconciliations of uncontrollable costs. Many
8 other states do not have these mechanisms in
9 place, which adds substantial risk to their
10 utilities ability to achieve their allowed
11 return on equity.

12 Q. On page 73 of her testimony Ms. Bulkley states
13 that New York regulation has been establishing
14 ROEs below those of other jurisdictions. Have
15 you evaluated Ms. Bulkley's statement?

16 A. No, we have not. As previously stated,
17 investors evaluate the fairness of a regulatory
18 jurisdiction based upon an assessment of the
19 overall cost recovery framework and the
20 regulators' fairness in establishing cost
21 levels. Focusing in on the one cost component
22 of ROE does not measure the full breadth of
23 investors' assessment of the fairness of a
24 regulatory jurisdiction. That is, even if Ms.

1 Bulkley is correct in her assertion that New
2 York allowed ROEs are below those of other
3 jurisdictions, investors consider ROE as only
4 one component of their comprehensive risk
5 evaluation in their regulatory risk evaluation.
6 As demonstrated both by Ms. Bulkley and in our
7 testimony, the ROEs authorized in New York
8 combined with our ratemaking process have
9 resulted in an investor assessment of very fair
10 regulation in New York State.

11

12

CAPITAL STRUCTURE

13 Q. What capital structure is Corning proposing for
14 the Rate Year?

15 A. The Company is proposing to use its projected
16 stand-alone Rate Year capital structure to
17 establish its overall rate of return. Corning
18 is projecting a Rate Year capital structure of
19 about \$66.4 million that includes a common
20 equity ratio of 50.03%, a short-term debt ratio
21 of 11.58%, a long-term debt ratio of 38.03%, and
22 a customer deposit ratio of 0.36%.

23 Q. Do you agree with Corning's estimated level of
24 Rate Year capitalization?

1 A. No, we do not. As previously discussed, among
2 other things, an appropriate capital structure
3 should represent the capital provided by
4 investors necessary to finance a company's long-
5 term utility assets and working capital
6 requirements. This is referred to as its rate
7 base. Corning's projected capital structure,
8 however, is not suitable as it exceeds the
9 Company's forecasted rate base by nearly \$7.7
10 million.

11 Q. How has Staff estimated the Corning's overall
12 level of capitalization?

13 A. Staff has estimated Corning's overall level of
14 capitalization by matching the Rate Year capital
15 structure to Staff's recommended Rate Year rate
16 base of \$54,775,387.

17 Q. Once the overall level of capital is established
18 what are the various methods that can be used to
19 establish a utility's ratemaking capital
20 structure?

21 A. Generally speaking, there are three methods that
22 an analyst can use in establishing the
23 appropriate capital structure for setting rates
24 for a utility. The first and most straight-

1 forward method is to use the utility's actual
2 stand-alone capital structure. However, in
3 instances when the stand-alone capital structure
4 is inappropriate, the ultimate parent company's
5 capital structure can be used to develop an
6 appropriate ratemaking capital structure or a
7 hypothetical capital structure may be derived.

8 Q. Please describe Corning's corporate structure.

9 A. Corning is a subsidiary of Corning Gas Holding
10 Company (Holding). Holding is also the parent
11 of Pike Electric and Gas, or Pike,
12 Leatherstocking Gas, Corning Appliance Company,
13 and Corning Pipeline LLC, or Pipeline. Both
14 Pike and Leatherstocking are regulated
15 utilities, while Corning Appliance merely exists
16 as a corporate entity, as it does not have any
17 assets or liabilities. Pipeline is a non-
18 regulated subsidiary whose assets constitute
19 only about 0.5% of Holding's total assets. As a
20 result, about 99.5% of Holding's assets are
21 regulated by utility commissions.

22 Q. When would it be appropriate to use a stand-
23 alone capital structure to establish the rate of
24 return?

1 A. The stand-alone capital structure may be used if
2 the subsidiary is adequately ring-fenced from
3 its parent and affiliates and is viewed by
4 investors as a separate financial and legal
5 entity. In such instances, the stand-alone
6 capital structure should still be scrutinized to
7 assure that it represents reasonable financing
8 practices, that it allows the company reasonable
9 access to the financial markets, and that it
10 results in the lowest cost of capital.

11 Q. What is ring-fencing?

12 A. Ring-fencing is defined as legally separating
13 assets, or liabilities, in a subsidiary to
14 protect them from creditors and is intended to
15 insulate assets in a subsidiary from the risks
16 and liabilities of the holding company and the
17 other subsidiaries in a holding company.

18 Q. Is Corning ring-fenced from its parent and
19 affiliates?

20 A. No, it is not. As illustrated in IR DPS-265,
21 Corning has little ring-fencing in place.

22 Q. Under what circumstances is it necessary to use
23 the ultimate parent company's capital structure
24 in order to derive the appropriate rate making

1 capital structure?

2 A. Generally speaking, in those instances in which

3 a utility subsidiary does not have adequate

4 ring-fencing in place it is necessary to derive

5 the appropriate rate making capital structure.

6 The primary purpose of this approach is to

7 ascertain whether the stand-alone capital

8 structure advocated by the utility reflects

9 rational financing policies by the parent

10 company, and whether the common equity component

11 reflects actual common equity at the parent

12 level. With respect to rational financing

13 policies, the proposed utility stand-alone

14 capital structure would not be appropriate in

15 instances in which a holding company parent has

16 financed riskier competitive non-utility

17 operations with less equity (and hence more

18 debt) than would be required for these ventures

19 to achieve the risk/return profile of the

20 utility operations. If this occurs, the

21 competitive subsidiaries' capital should be

22 removed from the consolidated capital structure

23 in a manner that is reflective of their higher

24 unregulated business risk. Finally, the rate

1 making capitalization that is derived in this
2 manner must still be examined to assure it
3 results in the lowest long-run cost of capital
4 for the utility subsidiary.

5 Q. What is the capital structure for Corning's
6 parent, Holding?

7 A. As shown in Exhibit __ (FP-7), at December 31,
8 2015 the Holding's capital structure consisted
9 of a common equity ratio of 53.4% and a long-
10 term debt ratio of 46.6%.

11 Q. You have previously stated that sometimes a
12 hypothetical capital structure is necessary in
13 establishing the cost of capital. What do you
14 mean by a hypothetical capital structure?

15 A. A hypothetical capital structure refers to
16 imputing, for ratemaking purposes, a capital
17 structure that differs from the capital
18 structure reported on a utility or its parent's
19 financial statements.

20 Q. When should a hypothetical capital structure be
21 used?

22 A. A hypothetical capital structure should be used
23 when the subsidiary or the parent's capital
24 structure does not reflect reasonable financing

1 policies that result in the lowest long-run
2 utility cost of capital.

3 Q. How does the Commission generally determine the
4 appropriate ratemaking capital structure?

5 A. The Commission generally follows the
6 recommendations contained the Recommended
7 Decision in the Generic Financing Proceeding
8 (Case 91-M-0509). The Recommended Decision
9 determined that the overall cost to ratepayers,
10 as measured by the pre-tax rate of return, was
11 minimized at either a "BBB" or "A" bond rating.
12 As such, the Commission generally supports
13 utility equity ratios that, when practical,
14 provide utilities the opportunity to achieve and
15 maintain a bond rating within the "BBB" to "A"
16 range.

17 Q. Are Corning's debt obligations rated by credit
18 rating agencies such as S&P or Moody's?

19 A. No.

20 Q. How does the Company currently obtain debt
21 financing?

22 A. As illustrated in response to IR DPS-260,
23 Corning currently obtains all of its debt
24 financing through bank loan agreements with

1 Manufacturers and Traders Trust Company, or M&T
2 Bank.

3 Q. Please summarize the company's borrowing
4 agreements with M&T Bank.

5 A. Corning's existing bank loans are self-
6 amortizing and expose the Company to significant
7 interest rate and refinancing risk. For
8 example, the loan structure that is currently in
9 effect with M&T is self-amortizing over a seven
10 year period and contains provisions for a
11 balloon payment at the end of year five. As the
12 loans amortize, the Company must refinance the
13 principal repayments and is subject to
14 significant refinancing risk. This is
15 particularly problematic for a utility such as
16 Corning, since the depreciable lives of its
17 assets are much longer than the amortization
18 periods of its loans. In addition, Corning is
19 subject to significant interest rate risk as the
20 interest rates on its loans are reset quarterly
21 based upon spreads above the London Interbank
22 Borrowing Offer Rate, or LIBOR. The calculation
23 of the spreads above the one month LIBOR rates
24 are shown in Exhibit __ (FP-8).

- 1 Q. Do utilities typically finance their long-term
2 assets with bank loans?
- 3 A. No, they do not. Most utilities issue fixed-
4 rate, interest-only long-term debt obligations
5 with maturities of between ten and thirty years.
6 Utilities typically only use bank loans to
7 finance construction or other short-term needs
8 and obtain their long-term financing in the
9 capital markets. Doing so allows companies to
10 fix the interest rates of their debt obligations
11 and to choose maturities that better match the
12 longer depreciable lives of their assets.
- 13 Q. Given these favorable attributes, has Corning
14 aggressively attempted to obtain financing in
15 the capital markets?
- 16 A. No. In response to IR DPS-270 the Company
17 states that it has had contacts and/or meetings
18 with only two investment firms; Janney
19 Montgomery Scott LLC and Security Mutual. In
20 addition, the Company had phone conversations
21 with two insurance companies and a variety of
22 banks. Despite Staff's request, Corning did not
23 produce any correspondence between itself and/or
24 its parent and any potential lenders.

1 Q. According to the Company, why has it relied on
2 bank loans instead of seeking fixed-rate,
3 longer-term financing in the capital markets?

4 A. The company has informed Staff that its
5 relatively small size prevents it from obtaining
6 alternative financing.

7 Q. Does the Panel agree with Corning's assessment?

8 A. We agree that Corning is smaller than a typical
9 utility, and as a result, its access to the
10 capital markets may be more limited than larger
11 utilities. Unfortunately, its response to IR
12 DPS-270 does not indicate a significant effort
13 by the Company to obtain alternative longer term
14 financing opportunities. Therefore, we
15 recommend that Corning actively pursue longer-
16 term capital market financing and, on a
17 quarterly basis, report to Staff on its efforts.

18 Q. You previously stated that the Company is
19 requesting a 50.03% equity ratio be used in
20 establishing the ROR. Did the Company witnesses
21 discuss why they believe that a 50.03% equity
22 ratio is appropriate?

23 A. There is no specific testimony supporting the
24 requested 50.03% equity ratio. However, on page

1 six of her pre-filed testimony, Company witness
2 Bulkley discusses the reasonableness of a 50%
3 common equity ratio by stating, "...the Company's
4 requested equity ratio of 50 percent is at the
5 low end of the range of the authorized
6 ratemaking equity ratios and actual equity
7 ratios of the companies in my proxy groups.
8 Therefore, I conclude the Company's requested
9 equity ratio is conservative."

10 Q. In other gas utility rate proceedings, has Ms.
11 Bulkley commented on gas company equity ratios?

12 A. Yes, on pages five through six of her pre-filed
13 testimony in Case 16-G-0257, National Fuel Gas
14 Distribution Company rate filing Ms. Bulkley
15 also found that "48% is on the low end of the
16 authorized ratemaking equity ratios...."

17 Q. Please discuss Ms. Bulkley's equity ratio
18 analysis used in determining a range of
19 reasonable utility equity ratios.

20 A. Company witness Bulkley uses a Combined Utility
21 proxy group and a Natural Gas proxy group (Proxy
22 Groups) in her analysis. In doing so, she
23 reviewed the common equity ratio averages of the
24 holding companies in her Proxy Groups, the

1 authorized capital structures of the operating
2 companies in her Proxy Groups and the actual
3 common equity ratios of the operating companies
4 in her Proxy Groups.

5 Q. What was her basis for determining the common
6 equity ratio averages for the companies in her
7 Proxy Groups?

8 A. On page 94 of her pre-filed testimony Company
9 witness Bulkley states that, "I have reviewed
10 the authorized capital structures of the
11 regulated utility operating companies in the
12 Combined Utility and Natural Gas Proxy Groups
13 for the period from 2011 through 2015. As shown
14 on Schedules AEB-13 and AEB-14, the mean annual
15 equity ratio of the proxy companies over that
16 period was 54.02 percent for the Combined
17 Utility Group and 56.27 percent for the Natural
18 Gas Proxy Group."

19 Q. Are these averages a good basis in determining a
20 common equity ratio for a regulated utility?

21 A. No. While she states she reviewed the
22 "authorized capital structures of the regulated
23 utility operating," the percentages on Schedules
24 AEB-13 and AEB-14 are actually those of the

1 holding company parents of the regulated
2 utilities. This is a significant distinction
3 because the majority of these holding companies
4 have significant investments in riskier, non-
5 regulated ventures and it is not surprising that
6 these risky non-regulated investments would be
7 capitalized with higher levels of common equity
8 relative to investments in only regulated
9 utilities.

10 Q. Company witness Bulkley next shows that the
11 average book common equity ratios for her Proxy
12 Groups operating companies are greater than
13 50.0%. Explain why using an average subsidiary
14 common equity ratio is not reasonable to use in
15 Corning's capitalization?

16 A. The capital structures for utility subsidiaries
17 of holding companies may not reflect either
18 rational capitalization policies, or actual
19 common equity employed, and therefore may not be
20 suitable for establishing a utility's rate of
21 return. The subsidiary common equity balance
22 may not, in fact, be financed by common equity
23 at the holding company level. Rather, some of
24 the utility common equity balance may instead be

- 1 proceeds from debt issued at the holding company
2 level and classified on the utility subsidiary's
3 books as common equity at the time the proceeds
4 were invested in the utility subsidiary. In
5 addition, the use of a subsidiary capital
6 structure is not appropriate for setting a
7 utility's rates in cases where a holding company
8 parent has financed riskier competitive non-
9 utility operations with less equity (and hence
10 more debt) than would be required for these
11 ventures to achieve the same credit rating as
12 the utility subsidiaries. Unless the utility
13 subsidiary's credit rating is insulated from
14 these risks, using the subsidiary capital
15 structure would effectively require ratepayers
16 of a lower-risk natural gas distribution company
17 to subsidize its parent's riskier investments.
- 18 Q. Company witness Bulkley lastly shows that the
19 average common equity ratio recently allowed is
20 50.98% for her Combined Utility Proxy Group and
21 52.42% for her Natural Gas Proxy Group. Are
22 these average ratios appropriate to use in
23 Corning's capitalization?
- 24 A. No. In other states, rate plans are often not

1 based on fully forecasted test years, as in New
2 York. This means that rates are set based on
3 historical costs, with no recognition of cost
4 escalations. In a survey prepared for the
5 Edison Electric Institute in January 2013,
6 *Alternative Regulation for Emerging Utility*
7 *Challenges: An Updated Survey Exhibit* __ (FP-9),
8 it is stated that 15 U.S. jurisdictions use
9 fully-forecasted forward test years, three
10 states use partially-forecasted test years, 14
11 use transitional/varying test years and 20 use
12 historical test years. In other states, fuel
13 costs are not always completely and quickly
14 passed through to customers. Pension and other
15 post-employment benefits are not always trued-
16 up, regardless of a large drop in the stock
17 market and the resulting large impact on pension
18 plan assets.

19 Q. How have you established the appropriate rate
20 making common equity ratio for Corning?

21 A. Since Corning is not ring-fenced from its
22 parent's or its affiliates Staff began its
23 analysis by examining Corning's parent's capital
24 structure.

1 Q. What is the capital structure for Corning's
2 parent, Holding?

3 A. As shown in Exhibit __ (FP-7), at December 31,
4 2015 Holding's capital structure consisted of a
5 common equity ratio of 53.4% and a long-term
6 debt ratio of 46.6%.

7 Q. Is it reasonable to establish a rate of return
8 for Corning using a 53.4% common equity ratio?

9 A. No. As previously stated, a utility's common
10 equity ratio and cost rates should reflect the
11 risk characteristics of a company and provide
12 adequate access to the capital markets at the
13 lowest overall long-term cost of capital.
14 Holding's 53.4% common equity ratio is excessive
15 for a utility with the risk characteristics of
16 Corning.

17 Q. On what basis did you determine that Holding's
18 common equity ratio is excessive for setting
19 Corning's rates?

20 A. We began our analysis by examining the median
21 common equity ratio of our proxy group.

22 Q. Please discuss your proxy group analysis.

23 A. As our testimony will subsequently discuss, we
24 have constructed a proxy group so as to provide

1 a reasonable representation of the risks
2 associated with an investment in Corning. This
3 was accomplished by adhering to a screening
4 process that included only companies that
5 reasonably represent the regulated business
6 risks of Corning.

7 Q. What is the proxy group's median common equity
8 ratio?

9 A. As we will elaborate later in our testimony, the
10 proxy group's median common equity ratio is
11 45.9%.

12 Q. Do you recommend a 45.9% common equity ratio for
13 Corning?

14 A. No. As we have discussed Corning's long-term
15 debt consists of bank loans that re-price on a
16 quarterly basis and amortize over a much shorter
17 period of time than a typical utility. Since
18 short-term interest rates are lower than their
19 longer term counterparts, this results in near
20 term savings to customers; but it also exposes
21 Corning to somewhat greater financial risk than
22 a typical utility. As such, we believe it is
23 reasonable to provide Corning with a modest
24 equity cushion above that of a typical utility

1 to provide an offset to this risk.

2 Q. What common equity ratio do you recommend for
3 Corning?

4 A. We recommend a common equity ratio of 48% for
5 Corning. We believe that authorizing the
6 Company a 48% common equity ratio adequately
7 recognizes Corning's modestly greater financial
8 risk above that of our proxy group of utilities
9 and that it represents a reasonable balance
10 between ameliorating this risks and the
11 associated cost to ratepayers of doing so.

12 Q. In Corning's previous rate proceeding what
13 common equity ratio was used to establish the
14 cost of capital?

15 A. In Case 11-G-0280 the parties stipulated to a
16 48% common equity ratio which the Commission
17 ultimately adopted.

18 Q. How will your recommended common equity ratio
19 impact Corning's Rate Year cost of debt?

20 A. A reduction in the common equity ratio component
21 from 50.03% to 48% will not impact the Company's
22 cost of debt as it will not impact the financial
23 terms of its bank agreements with M&T bank.

24 However, in view of the Company's current 48.0%

1 common equity ratio authorization, the company's
2 requested common equity ratio would require an
3 increase in rates to support a level of business
4 risk above Holding's investment in Corning with
5 no offsetting reduction in Corning's cost of
6 debt. As a result, the proxy group's 48% equity
7 ratio should be used to determine Corning's ROR.

8

9

COST RATES

10 Q. Your analysis requires an estimate of Corning's
11 Rate Year cost of debt and cost of equity.
12 Please explain how Corning derived its projected
13 3.71% cost of debt.

14 A. Corning's cost of debt is based upon the
15 interest rates required by its outstanding M&T
16 bank debt and its short-term borrowing
17 agreements with M&T bank. The 3.71% estimate is
18 based upon a weighted average of the Company's
19 forecasted short-term interest rate of 2.8% and
20 the Company's estimated interest rate interest
21 rate of 4.05% on its M&T bank loans.

22 Q. Have you reviewed Corning's estimated cost of
23 debt?

24 A. Yes, we propose two adjustments that impact the

1 Company's Rate Year cost of debt. First, as we
2 have previously discussed, we have reduced the
3 overall level of capital to match Staff's
4 estimated rate base of \$55,775,387. This
5 adjustment reduced the level of short-term debt
6 from \$7,681,749 to \$2,729,034. We have also
7 adjusted the 4.05% interest rate for its M&T
8 bank loan to reflect current market interest
9 rates.

10 Q. Does the Panel agree with Corning's estimated
11 cost of short-term debt?

12 A. Yes, we agree that the 2.8% short-term interest
13 rate should be used to calculate the Rate Year
14 cost of debt as it represents Corning's most
15 recent short-term debt interest rate.

16 Q. Please discuss your adjustment to the Company's
17 estimated interest rate of the M&T Bank loan.

18 A. As illustrated in Exhibit __ (FP-8), the M&T
19 bank loan rates are adjusted quarterly and are
20 based upon the existing one month LIBOR plus
21 interest spreads based upon the Company's ratio
22 of its funded debt divided by its earnings
23 before Interest, taxes, depreciation, and
24 amortization (EBITDA). The spread is determined

1 by the ratio of Corning's EBITDA divided by its
2 funded debt and is currently projected at 2.60%
3 above LIBOR. Based upon the October 14, 2016
4 one-month LIBOR rate of .54% the estimated
5 interest rate of the M&T bank debt is 3.14%.
6 Both the estimated short-term and the M&T Bank
7 interest rates should be updated as this
8 proceeding progresses.

9 Q. Do Corning's agreements with M&T Bank require
10 minimum ratios of funded Debt to EBITDA?

11 A. As demonstrated in the term sheet provided by
12 the Company in response to IR DPS-260 there are
13 no minimum ratio requirements of funded debt to
14 EBITDA in it agreement with M&T Bank. In
15 addition, Corning has subsequently stated to
16 Staff that no ratio requirements exist.

17 Q. What is Corning's estimated Rate Year cost of
18 debt?

19 A. Corning's current Rate Year cost of debt is
20 3.11%. Both the short-term and long-term rates
21 should be updated as this proceeding progresses.

22 Q. What is the second cost rate you recommend?

23 A. The second rate is the cost of common equity.

24 As we will demonstrate, Corning's 10.2% ROE

1 request is unreasonable and should be rejected.
2 We have developed a recommended 8.2% ROE for the
3 Rate Year ending May 31, 2018.

4

5 **SUMMARY OF RECOMMENDED COST OF EQUITY**

6 Q. Please summarize your analysis of the cost of
7 common equity for Corning.

8 A. Our common equity cost estimate for the Company
9 is based on applying a DCF analysis and CAPM
10 analysis to a proxy group of electric and
11 integrated electric and gas companies having a
12 credit rating from S&P of at least "BBB-" and a
13 credit rating of at least "Baa3" from Moody's.
14 The DCF applied to the proxy group results in a
15 mean ROE estimate of 8.1%. We averaged two
16 different CAPM analyses (traditional CAPM and
17 zero-beta CAPM) to produce an average CAPM ROE
18 of 8.4%. Applying weightings of two-thirds to
19 the DCF result and one-third to the CAPM result,
20 we arrive at an ROE of 8.2%. A summary of these
21 calculations can be found in Exhibit __ (FP-10).

22 Q. Please discuss prior Commission precedent in
23 estimating the ROE for an electric or
24 combination electric utility.

1 A. For over 19 years, the Commission has
2 consistently used the methodology of weighting
3 the DCF result as two-thirds of the total equity
4 cost and the CAPM result as one-third in
5 estimating a utility's ROE. In its Order
6 Setting Electric Rates, issued April 24, 2009,
7 in Case 08-E-0539, the Commission stated that,
8 among the reasons it accords a two-thirds
9 weighting to the DCF methodology, is that, "...the
10 DCF relies on readily available data to make
11 objective estimates of investors' return
12 requirements. While the DCF has one input of
13 primary controversy (growth), two CAPM inputs
14 (beta and the market risk premium) are dependent
15 on estimates which are contested and volatile."
16 A recent example includes Case 10-E-0362, Orange
17 & Rockland Utilities Inc. The Commission
18 utilizes a methodology that produces stronger
19 and more reliable results based on higher
20 quality data. The DCF and the CAPM are by far
21 the least flawed, and between the two, the DCF
22 is superior. For example, on page 14 of its
23 Order Setting Permanent Rates, Reconciling
24 Overpayments During Temporary Rate Period and

1 Establishing Disposition of Property Tax
2 Refunds, issued October 18, 2007, in Case 06-E-
3 1433, the Commission stated that, "...the method
4 offers the significant benefit of reliance on
5 readily available, objective data to measure an
6 indicator of real importance to investors."
7 Later, we will demonstrate the strengths and
8 reasonableness of our two-stage DCF methodology.
9 We will also show that our particular forward-
10 looking application of the CAPM continues to
11 produce a reasonable check on our DCF
12 methodology, and, as such, should continue to be
13 accorded a one-third weighting.

14

15

USE OF PROXY GROUP

16 Q. Why do you use a proxy group in your analyses to
17 estimate the Company's cost of equity?

18 A. We use of a proxy group to determine the cost of
19 equity for several reasons. First, the proxy
20 group is necessary because Corning's common
21 stock is very thinly traded. Often sales of
22 stocks that are thinly traded will result in the
23 market prices falling significantly, especially
24 if a large block of shares is sold at once.

1 When such a sale occurs the sale price may be
2 below the stock's true value. Likewise, an
3 attempt to purchase a thinly traded stock may
4 drive the price above its true value. As such,
5 at any point in time the sale price may not
6 match the true value of the stock and a direct
7 DCF analysis would not yield accurate results.
8 Equally important is that DCF and CAPM analyses
9 for an individual company rely on equity
10 analysts' estimates of growth and beta, and
11 those estimates could be biased or inaccurate at
12 times. By employing a sufficiently large proxy
13 group of similarly situated companies in our
14 analysis, we can largely minimize the
15 undesirable effects of bias, both upward and
16 downward, or inaccurate estimates for any one
17 company.

18 Q. Please describe how you selected your proxy
19 group?

20 A. The starting point for establishing the proxy
21 group is confirming that all of the companies in
22 the group are in the same specific industry
23 classification as the target company. This is
24 done in order to identify each company as a true

1 peer within that proxy group. Once the
2 appropriate group of peer companies is
3 established, careful consideration must be given
4 to determine the appropriate screening criteria
5 in order to obtain a group of companies that is
6 large enough without becoming unwieldy. Our
7 objective is to select a representative group of
8 companies whose risks closely match those of
9 Corning. A careful balance must be struck
10 between these two potentially conflicting goals.
11 While the objective is to select a group of
12 companies whose risks closely match those of the
13 company being examined, it is also large enough
14 in order that we may have sufficient confidence
15 in its results.

16 Q. Please describe how you selected your proxy
17 group.

18 A. Ideally, we would select a proxy group comprised
19 entirely of regulated gas utilities whose risk
20 profile represents, as closely as possible, the
21 risk characteristics of the individual company
22 being examined. However, given that the entire
23 Value Line Investment Survey (Value Line)
24 universe of gas utility companies consists of an

1 insufficient number of publicly traded gas
2 companies upon which to base our proxy group to
3 produce a reasonable result, we expanded our
4 proxy group to include electric utilities within
5 the Value Line universe that face similar risks
6 and of which investors have similar
7 expectations. Accordingly, we began with a
8 total of 11 natural gas companies. One company,
9 Piedmont Natural Gas Inc., was eliminated from
10 our proxy group due to its pending merger and
11 acquisition activity, three additional companies
12 were eliminated due to non-investment grade
13 credit ratings and the remaining companies were
14 not considered due to their insufficient
15 percentage of regulated revenue. Our universe
16 of gas utilities, Exhibit __ (FP-11),
17 illustrates our analysis of the natural gas
18 utility proxy group, which, of the eleven
19 companies in the Value Line Gas universe,
20 resulted in only three comparable natural gas
21 utility companies.

22 Q. Please explain how you augmented your group with
23 electric utilities.

24 A. As we already explained, due to the insufficient

1 size of a three-company natural gas utility
2 proxy group, we also selected a group of 27
3 companies from a "universe" of 41 companies
4 whose common stock is publicly-traded and deemed
5 to be "electric utilities" by Value Line. The
6 group of electric utilities contain in our
7 universe of companies is contained in
8 Exhibit __ (FP-12). We then applied the
9 following five selection criteria to the
10 companies in the universe: (1) currently have an
11 investment grade credit rating from Moody's and
12 S&P; (2) have regulated utility revenue that is
13 70% or greater of its total revenues, as
14 determined by each company's 2015 10-K filed
15 with the SEC; (3) currently pay dividends; (4)
16 have not been involved in a recent major
17 acquisition or merger; and (5) is currently
18 regulated by a public utility commission.

19 Q. Please elaborate on how you selected the 27
20 electric companies or combination electric and
21 gas companies in your proxy group.

22 A. We eliminated the following eight companies from
23 the electric utilities universe because they do
24 not derive at least 70% of their total revenues

- 1 from regulated operations: Allete, Inc.,
2 Dominion Resources, Inc., DTE Energy Co, Exelon
3 Corporation, NextEra Energy, Inc., Otter Tail
4 Corporation, Public Service Enterprise Group and
5 Vectren Corporation. We eliminated the
6 following five companies due to recent
7 acquisitions and mergers: Duke Energy
8 Corporation, Empire District Electric Company,
9 Great Plains Energy Incorporated, Southern
10 Company, and Westar Energy Incorporation.
11 Finally, we removed ITC Holdings Corp because it
12 is not a retail distributor of electricity or
13 natural gas, but is instead a wholesale electric
14 transmission holding company regulated by the
15 FERC. In total, 14 of the 41 companies covered
16 by Value Line were eliminated due to our
17 screening criteria. The remaining 27 utilities
18 that meet the proxy group screening requirements
19 are presented in Exhibit __ (FP-13).
- 20 Q. Why have you limited your proxy group to gas and
21 electric holding companies that derive at least
22 70% of their total revenue from regulated
23 operations?
- 24 A. We exclude such companies because of the high

1 likelihood that their business risk would be
2 much greater than that of a pure utility
3 operating company. Thus, it is reasonable to
4 use a threshold requiring 70% or greater
5 regulated revenues for inclusion in the proxy
6 group.

7 Q. Why are recent major acquisitions or mergers a
8 factor in determining the proxy group?

9 A. Historically, companies that are involved in a
10 recent major acquisition or merger have the
11 potential for distorted stock prices and hence
12 their individual cost of equity estimates may
13 similarly be misrepresentative.

14 Q. Please explain the other factors in the
15 selection of the gas utilities for your proxy
16 group.

17 A. The majority of the gas utility companies were
18 eliminated due to below (non-investment)
19 investment grade credit ratings by Moody's and
20 or S&P.

21 Q. What is the total number of utilities in your
22 proxy group?

23 A. We recommend using a proxy group totaling 30
24 companies, including 27 electric combination

1 utility companies and three natural gas
2 utilities as shown in Exhibit __ (FP-13). It
3 should be noted that the majority of Value
4 Line's universe of 41 electric combination
5 utility companies have both electric and gas
6 utility operations. Furthermore, our proxy
7 group only incorporated nine companies out of
8 the 27 electric combination company that are
9 strictly classified as electric only utilities.
10 In the end, our goal is to establish a proxy
11 group of utilities that is sufficient in size
12 and whose risk attributes are comparable to
13 Corning.

14

15

DISCOUNTED CASH FLOW METHODOLOGY

- 16 Q. Please describe your DCF methodology and its
17 results.
- 18 A. Staff's DCF model is a two-stage model, which
19 explicitly recognizes that investor's short-term
20 growth expectations do not necessarily equal
21 their long-term expectations. The first stage
22 uses analysts' near-term estimates to derive the
23 short-term growth rate, while the second stage
24 is based on a calculation of a sustainable

1 growth rate. The calculation of the DCF for the
2 proxy group is shown on pages 1-2 of
3 Exhibit __ (FP-14). It is important to note
4 that, while earnings drive companies' dividend
5 payout policies, the value of the companies'
6 common stock is equal to the present value of
7 all future dividends. This is because the
8 earnings that are retained will only have value
9 to the stockholder when they are paid as
10 dividends in the future. Underlying this
11 principle is the assumption in the capital
12 market theory that companies earn the same
13 return on retained earnings as the market
14 demands on their common stock. Also,
15 fundamental to the DCF methodology is the
16 sentiment that cash and or earnings held in the
17 future do not hold the same worth as cash or
18 earnings in present time. Due to the time
19 preference of customers to spend their cash
20 today rather than waiting and the effects of
21 inflation and productivity on upon future cash
22 flows, the DCF discounts the future expected
23 cash flows according to investor's return
24 requirements. The primary reason why the DCF

1 methodology continues to be the preferred
2 approach for determining a company's cost of
3 equity is that investors' immediate return
4 requirements, as observed in current stock
5 prices and recent dividends, are readily
6 quantifiable.

7 Q. How have you determined the companies'
8 historical stock prices?

9 A. Each company's stock price were determined using
10 the three-month average of the high and low
11 price for each month during for three-month
12 period ending September 2016. The stock prices
13 are shown on Exhibit __ (FP-15).

14 Q. What are the results of your proxy group's cost
15 of equity using the DCF methodology?

16 A. The mean ROE for the proxy group is 8.07% and
17 the median is 7.76%, as shown in
18 Exhibit __ (FP-14).

19 Q. Do the individual company results within the
20 proxy group appear reasonable?

21 A. Yes. The lowest ROE is 6.51% and the highest
22 ROE is 11.89% with 28 of the 30 (96.7%) values
23 within two standard deviations of the mean.
24 While most of the individual company results

1 appear reasonable, we do not recommend a cost of
2 equity based on any of the individual results
3 due to the potential for biased or inaccurate
4 estimates influencing the results.

5 Q. Do you have any concerns with external factors
6 that might be impacting the financial markets
7 and the DCF results?

8 A. Yes. There have been several significant
9 disruptions in the market recently that we
10 believe have affected Staff's ROE model results.
11 Specifically, Great Britain's decision to
12 withdraw from the European Union, the Federal
13 Reserve's "go slow" approach on raising interest
14 rates in recognition of the economy's continued
15 slow growth and the volatility in oil prices.
16 Investors have fled to less risky investments
17 including utility stocks. As shown in
18 Exhibit __ (FP-16) this has pushed the S&P 500
19 Utilities Index to a record high of 258.15 in
20 the month of June as reported in the following
21 article, "U.S. Utility Index Hits Record In
22 Flight to Safety After Brexit". The increased
23 demand for utility shares has increased the
24 market-to-book ratio (MBR) of Staff's proxy

1 group. At September 2011, the average MBR of
2 Staff's proxy group was about 1.3x compared to
3 1.95x as of September 2016.

4 Q. Did you find it appropriate to adjust Staff's
5 methodology in light of these externalities?

6 A. While we considered a number of alternatives, we
7 ultimately concluded the need to alter our
8 methodology in one particular aspect. Staff has
9 consistently advocated using the median DCF
10 value as it mitigates the undue influence of
11 potential outliers (very low and/or very high
12 results) skewing the recommendation. However,
13 very recently it appears to us that using the
14 median is suppressing the ROE below what the
15 "average" or "typical" investor in the proxy
16 group would require at this time. Also, as 28
17 of the 30 ROE results fall within two standard
18 deviations of the mean, these results are a good
19 distribution. In consideration of these
20 factors, we recommend using the mean DCF result
21 of 8.07% in the overall ROE calculation instead
22 of the median value of 7.76%.

23 Q. What alternatives or variations to Staff's
24 methodology have you looked at that you believe

1 merit consideration by the Commission?

2 A. We recommend four options for the Commission's
3 consideration. First, we believe that the
4 Commission could reasonably choose not to update
5 the ROE model from March 2016 due to recent
6 market distortions. This would eliminate the
7 impact on the DCF of recent stock price
8 performance. The rationale for such an approach
9 would be the consideration that current equity
10 return requirements may not necessarily be
11 representative of a long-term outlook for the
12 cost of money. In this case, adoption of such
13 an alternative would result in an ROE of 8.48%,
14 based on our proxy group using three-months of
15 market data ending March 2016. Second, the
16 Commission may wish to consider using six months
17 of market data to smooth/dampen the impact of
18 the most recent data. At this time, using the
19 mean ROE of Staff's proxy group and six-months
20 of market data ending September 2016 also
21 results in a 8.2% cost of equity. As with the
22 first option, this would implicitly recognize
23 that current market information might not be
24 indicative of long-term equity investor

1 expectations and smooths out the effect of
2 recent stock prices performance on the DCF.
3 This option would accomplish this by blending
4 the most recent three months of market data with
5 stock prices from an earlier time period thereby
6 diminishing somewhat, the impact of the recent
7 disturbances. Third, the Commission could
8 continue to use the results from the model with
9 no adjustments, including no change to the use
10 of the mean result in the DCF calculation. This
11 would result in an ROE of 7.98%, rounded to
12 8.0%, based on our proxy group using three-
13 months of market data ending September 2016.
14 However, the Commission could then select to
15 make a positive adjustment to the ROE, increase
16 the authorized common equity ratio and, increase
17 depreciation rates and/or accelerate regulatory
18 asset amortizations; all as needed with an eye
19 on preserving a given utility's financial
20 integrity. Calculating pro forma financial
21 metrics using S&P and Moody's guideline ratios
22 would be employed to assure that the ROE and
23 other financial parameters associated with
24 Staff's recommendations would be sufficient to

1 maintain a solid investment grade rating.
2 Finally, the Commission could adopt a construct
3 similar to what the Federal Energy Regulatory
4 Commission (FERC) has traditionally used in
5 determining its authorized ROEs. Specifically,
6 the FERC has had a long tradition of
7 establishing a DCF "range of reasonableness" to
8 delineate a range of results from the full range
9 of individual proxy group company DCF ROEs.
10 Similarly, the Commission could take our DCF
11 results and determine a reasonable range from
12 which to choose its DCF-specific ROE.

13 Q. For illustrative purposes only, can you explain
14 how such an approach might work using your DCF
15 results?

16 A. Using our DCF results as an example, the maximum
17 result is 11.89 and the minimum result is 6.51%,
18 with a midpoint of 9.2%. Thus, based upon these
19 parameters, a FERC-like "range of
20 reasonableness" would be between 7.85% and
21 10.55% (25th and 75th percentiles of the minimum
22 and maximum range, respectively). The
23 Commission could choose a DCF from this range to
24 utilize in conjunction with Staff's CAPM results

1 to arrive at an authorized ROE. Given the broad
2 discretion that this approach would afford the
3 Commission to establish the DCF portion of the
4 overall ROE this adaptation would clearly be a
5 significant deviation from the traditional
6 formulaic approach. Thus, in our view, if the
7 Commission were to consider such an approach, it
8 should employ a much tighter "range of
9 reasonableness" than the FERC methodology in
10 order to maintain a more stable and predictable
11 ROE framework, perhaps no more than 30 to 35
12 basis points on either side of the mean DCF
13 result.

14 Q. Turning back to the methodology you propose in
15 this case, please explain how does Staff
16 incorporate short-term and long-term dividends
17 into the two stage model?

18 A. Our analysis maintains the same approach the
19 Commission has employed for many years. The
20 calculation of the proxy group's dividend growth
21 as measured by the DCF methodology is displayed
22 in Exhibit __ (FP-14). In the first stage of
23 our DCF model, for the years 2016 through 2020,
24 we rely on Value Line analysts' estimate of the

1 dividend growth rate for each company in the
2 proxy group. In the second stage, for the year
3 2021 and beyond, a sustainable growth rate is
4 calculated for each company within the proxy
5 group based on its projected retention of
6 earnings and growth of its common stock. We
7 also include the expected growth from issuing
8 common equity above/below book value. The cost
9 of equity is then calculated by solving for the
10 discount rate necessary to set the net present
11 value (NPV) of the 200-year dividend stream for
12 each company equal to its current stock price.
13 As illustrated in Exhibit __ (FP-14), the proxy
14 group's average short-term growth rate is 5.29%
15 and its average sustainable growth rate is
16 4.72%.

17 Q. How did you check the reasonableness of your
18 long-run sustainable growth rate?

19 A. We compared the sustainable growth rate result
20 for the DCF of our proxy group to the most
21 recent long-range consensus growth rate estimate
22 of the nominal Gross Domestic Product (GDP). We
23 find it reasonable to expect a correlation
24 between the future dividend growth rate and the

1 overall economic growth rate in the economy as
2 measured by the growth rate in GDP. We do not
3 advocate a comparison with historical growth
4 rates, since historical periods are likely not
5 representative of the future.

6 Q. How does your estimated sustainable dividend
7 growth rate of in the DCF model compare with the
8 macroeconomic indicators of the overall economy?

9 A. Although, our proxy group's median sustainable
10 growth rate exceeds the most recent consensus
11 long-range growth estimate of nominal GDP, our
12 long-term growth rate is a considerably closer
13 match to the nominal GDP relative to Company
14 witness Bulkley's growth rate estimate. Using
15 the October 10, 2016, edition of Blue Chip
16 Economic Indicators, as illustrated in
17 Exhibit __ (FP-17), the consensus long-range
18 estimates for Nominal GDP growth is 4.10% for
19 the 2018-2022 time period as well as 4.10% for
20 the more distant 2023-2027 time period.
21 The 4.72% average sustainable growth rate of our
22 proxy group is somewhat robust in comparison to
23 the consensus long-run Blue Chip GDP growth
24 estimate of 4.1%, while the median sustainable

1 growth rate of our proxy group is a nearly
2 identical at 4.09%. In comparison to Company
3 witness Bulkley's long term growth rate of 5.36%
4 we believe our sustainable growth rate much more
5 closely matches the expectations of rational
6 investors.

7 Q. Why is the nominal GDP growth rate an
8 appropriate proxy for Staff's sustainable growth
9 rate?

10 A. The GDP growth rate can serve as a proxy since
11 it is reasonable for investors to expect their
12 future dividends to generally keep pace with
13 productivity gains and the changes to inflation
14 as measured by the economy as a whole.

15

16 **CAPITAL ASSET PRICING MODEL**

17 Q. Please briefly explain the CAPM theory.

18 A. The principle behind the CAPM theory is that
19 there is no premium, in terms of expected
20 return, for bearing risks that can be eliminated
21 through diversification. The CAPM model says
22 the expected return of a security or a portfolio
23 is equal to the rate on a risk-free security
24 plus a risk premium multiplied by the asset's

1 systematic risk. Systematic risk is a risk that
2 is common to all equity securities and cannot be
3 eliminated through diversification and is
4 measured by beta. Changes in interest rates,
5 recessions and wars are examples of systematic
6 risks.

7 Q. What assumptions is the CAPM based on?

8 A. The model is based on the assumptions that: (1)
9 the capital market is competitive and efficient;
10 (2) investors are risk-averse and demand higher
11 returns for higher risk; (3) market participants
12 can lend and borrow unlimited amounts under the
13 risk free rate of interest; and (4) investors
14 hold diversified portfolios and operate in
15 capital markets with no transaction costs,
16 taxes, or restrictions on financial
17 transactions.

18 Q. Please describe the calculation used in the
19 traditional CAPM.

20 A. The traditional CAPM formula is:

21 $K = R_f + \beta * (R_m - R_f)$ where:

22 K = investor's required return or equity cost of
23 capital;

24 R_f = risk-free rate;

1 β = beta;

2 R_m = market rate of return; and

3 $R_m - R_f$ = market risk premium.

4 Q. How does a firm's beta measure risk?

5 A. Beta is a measure of how closely correlated the
6 return for a particular stock is to the return
7 on the market as a whole. A beta of 1.0
8 indicates that the stock's return mirrors the
9 return of the market as a whole. Betas of less
10 than 1.0, which are typical for utility stocks,
11 indicate that the stocks are less volatile than
12 the market as a whole. Accordingly, the CAPM
13 informs investors they will only be compensated
14 for actual risk, as measured by beta. Thus, in
15 terms of estimating the return requirements of
16 utility investors, the CAPM results will express
17 the degree to which utility stocks are less
18 volatile relative to the general market.

19 Q. Please describe the methodology you used to
20 determine your CAPM results.

21 A. Consistent with the approach Staff has employed
22 and the Commission has adopted for many years,
23 we averaged the results of two forms of the CAPM
24 the traditional CAPM and the zero-beta CAPM.

1 Q. Why did you use two forms of the CAPM?

2 A. Prior research has revealed that the traditional
3 CAPM model can possibly underestimate the
4 required return when betas are below 1.0. The
5 zero-beta CAPM determines the cost of equity for
6 the proxy group by multiplying .75 times beta
7 times the risk premium and adding .25 times the
8 risk premium.

9 Q. How did you estimate the risk-free rate?

10 A. The risk-free rate was estimated by averaging
11 the ten-year and 30-year Treasury bond yields
12 for the recent three-month period, July 2016
13 through September 2016. The average for the
14 three-month period ending September 2016 was
15 1.92%.

16 Q. Why did you use a three-month average for the
17 risk-free rate calculation?

18 A. The Commission began employing three-month
19 average yields in 2009 Consolidated Edison
20 Company of New York Inc., Case 09-E-0428, so
21 that the three-month timeframe used in its CAPM
22 calculation would be consistent with the three-
23 month timeframe employed in its DCF analysis.

24 Q. Is the use of a three-month average appropriate?

- 1 A. Yes, we consider that the use of a three-month
2 average to be appropriate because it smooths out
3 any potential short-term volatility, while at
4 the same time maintaining a realistic
5 representation of investor's current
6 expectations.
- 7 Q. Why did you employ ten-year and 30-year Treasury
8 bond yields as the risk-free rate in your
9 calculation?
- 10 A. The blending of the yields on Treasury
11 securities with ten-year and 30-year maturities
12 is reasonable because it approximates the time
13 horizon of most investors. Utility investors
14 generally have both intermediate and long-term
15 investment horizons, so the use of both the ten-
16 year and 30-year Treasury securities is
17 appropriate. In the Order Establishing Rates
18 for Electric Service, Case 10-E-0362, the
19 Commission indicated its preference for
20 averaging the two Treasury yields. On page 75
21 of that Order, the Commission noted, "...using a
22 combination of treasury yields is consistent
23 with our practice and supported by the varying
24 nature of investor holding periods."

1 Q. How did you determine the beta for the CAPM?

2 A. We used the beta for each of the 30 companies in
3 our proxy as reported by Value Line and
4 calculated the median result of .70.

5 Q. How does Value Line calculate beta?

6 A. Beta is derived from a regression analysis of
7 the relationship between weekly percentage
8 changes in the price of a stock and weekly
9 percentage changes in the NYSE Index over a
10 period of five years. With shorter price
11 histories, a shorter time period is used, but
12 two years is the minimum. The five-year time
13 period used by Value Line is a sufficient time
14 frame to produce reliable estimates of stock
15 prices. Value Line also "smoothes" the "coarse
16 betas" to reflect the theory that betas have a
17 natural tendency to converge to 1.0.

18 Q. What are the disadvantages of using beta in the
19 CAPM methodology?

20 A. Although beta is useful in calculating stock
21 price variability and its relative risk to the
22 stock market's volatility, beta does necessarily
23 readily incorporate new information. In a
24 mature industry, like utility stocks, beta

1 measures stock price changes based on its
2 historical record. If a company's capital
3 structure weakens and or its management take on
4 substantial business risk, those new factors are
5 not measured by its prior beta calculations and
6 do not reflect its current or future risk as
7 measured by beta. Thus, its measurement of past
8 stock price movements are poor predictors of
9 future stock price changes. Another shortcoming
10 of beta is that sometimes there is a wide
11 disparity in its measurement by the various
12 firms who calculate it. The Commission has
13 relied upon Value Line's reported betas for more
14 than 20 years. Other firms, like Bloomberg,
15 apply shorter time periods, which can produce
16 notable variances in the beta results.

17 Q. Why did you use Merrill Lynch data for
18 calculating market risk premiums?

19 A. Our market risk premium (MRP) is derived from
20 Merrill Lynch's two forward-looking returns on
21 the market, a required return and an implied
22 return. The Commission has consistently applied
23 and implemented this market risk premium
24 methodology since 1996, in Case 95-G-1034. In

1 the Central Hudson Gas & Electric Corporation
2 Order and Opinion No. 96-28, on page 14 the
3 Commission approved the use of the Merrill Lynch
4 estimate. In its Opinion, the Commission
5 stated, "...the Judge's market return calculation
6 based on Merrill Lynch data is a reasonable
7 method of deriving a risk premium."

8 Q. Why are you using an average of the most recent
9 three months of Merrill Lynch's expected market
10 returns in your calculation?

11 A. We used expected market return estimates from
12 the most recent three months in order to be
13 consistent with the timeframes of the other data
14 as employed in our CAPM and DCF calculations.
15 By matching the timeframe upon which our risk-
16 free rate is calculated, we can achieve a more
17 representative estimate of the required MRP.

18 Q. Why didn't you rely on an ex-post (historical)
19 method to derive the appropriate MRP?

20 A. The application of the historical market risk
21 premium method is problematic because ex-post
22 MRP's are based on the faulty premise that past
23 performance is a valid proxy for expectations
24 regarding future results. In addition, the

1 historical approach is highly sensitive to the
2 actual time period selected to calculate the
3 premium.

4 Q. Has the Commission ever stated its preference
5 for relying on forward-looking MRP analyses as
6 opposed to ex-post analyses?

7 A. Yes. In Case 95-G-1034, on page 14, the
8 Commission stated that, "...the Judge's market
9 return calculation based on Merrill Lynch data
10 is a reasonable method of deriving a risk
11 premium; and it avoids the problem of stale data
12 in the Ibbotson estimate."

13 Q. How did you determine what MRP to use and what
14 was your result?

15 A. The MRP is the difference between the expected
16 market return and the rate on a risk-free
17 investment. In order to determine the expected
18 market return, we utilized the July, August and
19 September 2016 editions of Merrill Lynch's
20 Quantitative Profiles. As illustrated in
21 Exhibit __ (FP-18), the average of Merrill
22 Lynch's "Implied Return" and "Required Return"
23 methods is 10.75%. Given the risk-free rate of
24 1.92%, the MRP is 8.83%.

1 Q. What are the traditional CAPM results using your
2 stated inputs?

3 A. We determined the traditional CAPM result to be
4 8.1%, calculated as follows:
5 $1.92\% + [0.70 * (10.75\% - 1.92\%)] = 8.1\%$.

6 Q. Please describe the zero-beta CAPM.

7 A. The zero-beta CAPM is a two-factor version of
8 the standard CAPM. The zero-beta CAPM
9 determines the return on equity by adding two
10 factors to the risk-free rate: (1) a factor of
11 0.75%, multiplied by the average beta of the
12 proxy group and S&P 500 market risk premium; and
13 (2) a factor of 25% multiplied by S&P 500 market
14 risk premium. The zero-beta CAPM expression
15 takes the form:

$$16 \quad K = R_f + 0.75 * \beta * (R_m - R_f) + 0.25 * (R_m - R_f),$$

17 where all the variables are the same as that of
18 the standard CAPM, described above.

19 Q. What are the zero-beta CAPM results using your
20 stated inputs?

21 A. The zero-beta CAPM cost of equity is 8.76%. It
22 is calculated as follows:
23 $1.92\% + [.75 * .70 * (8.83\%)] + [.25 * (8.83\%)]$.

24 Q. What is the average for the traditional and

1 zero-beta CAPM calculations?

2 A. As illustrated in Exhibit __ (FP-10), the
3 average CAPM cost of equity is 8.43%.

4 Q. What is the ROE result using a 2/3 DCF and a 1/3
5 CAPM weightings.

6 A. Rounded to the nearest tenth of a percent, the
7 resulting ROE is 8.2%.

8 Q. Why is it reasonable to weight the DCF greater
9 than the CAPM in estimating the ROE?

10 A. The CAPM should be given less preference
11 relative to the DCF because the CAPM components
12 are less observable and are more dependent on
13 estimations. The inputs in the DCF model are
14 readily observable outside of the dividend
15 growth rates. The DCF application of fewer
16 subjective inputs relative to the CAPM provides
17 a more stable foundation, thus a lesser chance
18 of error in a ROE calculation. The strength of
19 the DCF model has been recognized by the
20 Commission by its 2/3 weighting in continuous
21 rate proceedings. While the CAPM presents a
22 conceptual framework that provides a reasonable
23 estimate of a firm's cost of equity, the CAPM's
24 weaknesses provide a less stable foundation in

1 the calculation of the return of equity. Given
2 some of the weaknesses of the CAPM discussed
3 previously in our testimony, the Commission
4 should continue to accord the CAPM methodology a
5 1/3 weighting.

6 Q. Why do you recommend the lesser (1/3) weighting
7 for the CAPM?

8 A. Over the past 19 years, Staff has advocated
9 giving the CAPM less weight in the overall ROE
10 calculation than the DCF. This has primarily
11 been due to the degree of subjectivity of the
12 MRP and fluctuations in beta. In addition,
13 there are wide ranging inputs. These include
14 such variables as growth rates, DCF inputs,
15 historical versus future estimates for market
16 returns, time periods for market returns, and
17 source for market returns. Differing sources
18 for each of these variables used in estimating
19 the MRP may result in large differences.

20

21

ROE RECOMMENDATION

22 Q. What cost of common equity did you calculate for
23 your proxy group?

24 A. Using a two-thirds weighting for the DCF result

1 of 8.07% and a one-third weighting for the CAPM
2 result of 8.43%, and rounding that result to the
3 nearest tenth of a percent, we determined our
4 proxy group's cost of equity to be 8.2%

5 Q. Would you please explain why your recommended
6 ROE of 8.2% differs from Corning's currently
7 authorized 9.0% ROE that was authorized, in the
8 context of a two year extension in October 2015,
9 of a three year rate plan that was approved in
10 April 2012 with an ROE of 9.5%?

11 A. There are several reasons why our recommended
12 ROE differs from the Company's currently
13 authorized ROE. First, the Company's currently
14 authorized ROE was established within the
15 context of a multi-year negotiated rate plan
16 which typically provides for a stay-out premium.
17 Further, it would be incorrect to view
18 individual components of the rate plans as
19 trade-offs between contested issues generally in
20 reaching settlements. Finally, and most
21 importantly, the ROE we recommend today reflects
22 the different underlying economic conditions
23 that exist today.

24 Q. Please discuss how economic conditions are

1 different today than when the Commission
2 approved the Company's previous rate plan?

3 A. While changes in interest rates may not
4 translate on a "one-for-one" basis to equity
5 cost rates, they do provide a general framework
6 as to the direction of equity return
7 requirements. As illustrated in
8 Exhibit __ (FP-19), when the Company's prior
9 joint proposals were filed in April 2012, market
10 conditions indicated that investors were
11 requiring yields of 4.40% for long-term "A"
12 rated utility debt and 3.18% for 30-year
13 Treasury securities. Currently, investors'
14 yield requirements for "A" rated utility debt
15 instruments are 81 basis points lower than April
16 2012 levels and 30-year Treasuries are yielding
17 83 basis points lower than in April 2012. In
18 addition, expected market equity returns have
19 fallen during this time period. This is
20 illustrated by the 2012 Merrill Lynch estimate
21 of a return on the overall market of 12.05% and
22 Merrill Lynch's current estimate of 10.75%.
23 This indicates an overall reduction in financing
24 rates and required returns since the 2012 time

1 period.

2 Q. Based on your analysis, and given the
3 Commission's approved ROEs in recent rate
4 proceedings, do you believe that an investor
5 would reasonably expect the Commission to
6 authorize the 10.20% ROE requested by the
7 Company in this proceeding?

8 A. No. Investors are well aware of the
9 Commission's preference for a formulaic approach
10 to the cost of common equity presented in our
11 analysis. In addition, investors are also aware
12 that recent authorized ROEs, when accounting for
13 stay-out premiums, are substantially closer to
14 our one-year 8.2% ROE recommendation than the
15 10.2% that the company is requesting.

16 Q. Do you recommend that your ROE estimate be
17 updated during the course of this proceeding?

18 A. While we recommend that the ROE estimate be
19 updated during this proceeding, any updates
20 should consider any changes to the underlying
21 financial market dynamics that exist today.
22 That is, updates should also consider if further
23 changes should be made to the analysis if
24 additional changes occur to the underlying

1 financial market conditions warrant them.

2

3

DISCUSSION OF CORNING'S ROE APPROACH

4 Q. Please summarize the approach followed by the
5 Company's ROE witness, Ann Bulkley.

6 A. Company Witness Bulkley implemented the DCF
7 model and the CAPM methodology in establishing
8 her recommended ROE range of 10.20% to 10.74%.
9 She also used two separate proxy groups, one
10 comprised of both electric utility holding
11 companies and natural gas distribution holding
12 companies, which she identified as her "Combined
13 Utility Proxy Group". Her second group used
14 only natural gas distribution holding companies
15 and is identified as the "Natural Gas Proxy
16 Group". She used earnings growth rates from
17 Zack's, Yahoo Finance and Value Line. She
18 developed three multi-stage DCF models utilizing
19 the high, mean and low growth rates of Zack's,
20 Yahoo Finance (First Call provides the financial
21 data) and Value Line growth estimates. She ends
22 up with three DCF results for each proxy group,
23 for a total of six DCF ROE results. For her
24 CAPM, she used a market return of 13.04% with

1 three different risk-free rates and utilized the
2 traditional CAPM and the zero-beta CAPM for both
3 of her proxy groups. She then combined the DCF
4 and CAPM results for each proxy group and added
5 a size premium of 50 basis points to derive her
6 recommended range of ROE values of 10.20% to
7 10.74%. In this case Corning is requesting the
8 low end of Company witness Bulkley's ROE range
9 for a one-year rate plan.

10 Q. What are your principal points of contention
11 with Company witness Bulkley's analyses?

12 A. For her DCF methodology, our primary concerns
13 regard the composition of her proxy groups and
14 her use of excessively high short-term (1st
15 stage), intermediate growth rates (2nd stage) and
16 long-term growth rates. With respect to her
17 CAPM methodology, we are primarily concerned
18 with her flawed approach to derive a 13.04%
19 market return that she employs in both her
20 traditional and zero-beta CAPM calculations. We
21 strongly disagree with her recommendation that
22 the DCF and CAPM be accorded equal weighting.
23 Finally, we disagree with the Company witness
24 adding a 50 basis point size premium to her DCF

1 and CAPM calculations.

2 Q. Please explain the concerns you have regarding
3 the composition of Company witness Bulkley's
4 Combined Utility proxy group.

5 A. We find the proxy group selection criteria of
6 requiring 70% of total operating income
7 requirement from 'regulated utility' operations
8 and eliminating utilities that derive less than
9 50% of operating income from regulated natural
10 gas distribution operations to be too
11 restrictive. Her methodology resulted in the
12 elimination of multiple companies whose risk
13 characteristics are closely comparable to the
14 others in the proxy group. The companies that
15 were eliminated from her proxy group, but
16 meeting Staff's criteria include: American
17 Electric Power Co. Inc.; Black Hills Corp.;
18 Edison International; El Paso Electric Co.;
19 Entergy Corp; Eversource Energy; First Energy
20 Corp.; IDACORP Inc.; MGE Energy Inc.; OGE Energy
21 Corp.; PG&E Corp.; Pinnacle West Capital Corp.;
22 PNM Resources Inc.; Portland General Electric
23 Co.; PPL Corp.; and WEC Energy Group. In
24 addition, her application of operating income

1 (earnings) instead of regulated revenue for
2 establishing the proxy group may allow companies
3 into the group that contain substantially
4 greater risk than a typical regulated utility.
5 Regulated revenues more accurately reflect a
6 company's exposure to riskier competitive
7 operations, because it is not uncommon for
8 competitive business ventures to be periodically
9 unprofitable. Using 70% of operating income as
10 a screening criteria could introduce companies
11 into the proxy group that are simply not
12 suitable due to their higher inherent risk
13 profile.

14 Q. Are there any other differences between your
15 proxy group and either of Company witness
16 Bulkley's proxy groups?

17 A. Yes. There is a large difference in the revenue
18 for non-regulated operations between Staff's and
19 Company witness Bulkley's proxy groups. For the
20 year ending 2015, the utility holding companies
21 that comprise Staff's proxy group received, on
22 average, 9.05% of their revenue from non-utility
23 activities. Company witness Bulkley's Combined
24 Utility proxy group had 22.74% of sales from

1 non-utility business, as shown in
2 Exhibit __ (FP-20). While at the same time,
3 Company witness Bulkley's Natural Gas (only)
4 proxy group averaged 34.11% of non-regulated
5 utility revenue for 2015.

6 Q. What does the larger presence of riskier non-
7 utility operations imply with respect to
8 investor return requirements?

9 A. The inclusion of holding companies whose
10 operations are exposed to higher levels of
11 competitive market forces means that both of
12 Company witness Bulkley's proxy groups have
13 significantly higher business risk profiles
14 overall than Staff's proxy group. With all else
15 being equal, the greater exposure to competitive
16 forces would incline a reasonable investor to
17 naturally require a higher rate of return on
18 their equity investment to compensate for the
19 perceived increased risk.

20 Q. Provide an example of how a company with a
21 higher risk profile could enter into a proxy
22 group with Company witness Bulkley's selection
23 criterion.

24 A. A good example would be to focus on changes in

1 operating expenses. Operating income is the
2 amount of revenue left over after accounting for
3 all the expenses necessary to keep the business
4 running. If a company has nearly equal revenue
5 from two or more of its business segments but
6 one of those segments has drastic increases or
7 decreases in its cost of goods, that business
8 segment will typically face higher business risk
9 relative to its other business segments that
10 don't face such drastic changes in its
11 underlying expenses. A holding company that
12 receives 30% of its revenues from utility
13 sources and 70% from riskier non-regulated
14 sources could be included in Company witness's
15 proxy group if the non-regulated sources had
16 little or no operating income and a normally
17 performing regulated utility subsidiary. In
18 that situation the high percentage of operating
19 income from the utility would allow it
20 admittance into the group, but, because of its
21 level of exposure to higher risk non-regulated
22 operations, its risk profile would be well above
23 that of a typical utility by any reasonable
24 standard. For this reason, we find that

1 regulated revenue is a better selection
2 criterion to use in selecting a proxy group.

3 Q. Please elaborate how Company Witness Bulkley's
4 use of short-term and long-term (terminal)
5 growth rates affect her DCF model.

6 A. As we discussed earlier, Company witness
7 Bulkley's model is undermined by its short-term,
8 intermediate and long-term growth rate
9 assumptions. Specifically, her model uses
10 earnings growth rates as a surrogate for short-
11 term dividend growth rates, ignoring available
12 dividend growth rates or forecasts. This is in
13 direct contrast to the basic premise of the DCF
14 which specifically measures the present value of
15 future dividends. The application of Company
16 witness Bulkley's earnings growth simply assumes
17 that dividend growth will match earnings growth,
18 although her testimony failed to present
19 evidence to support such an expectation.
20 However, a larger concern, is her application of
21 a historically derived real GDP rate, in
22 conjunction with a forecasted inflation rate as
23 the long-term growth rate of her proxy groups.
24 In addition, Company witness Bulkley's

1 application of the real GDP, together with a
2 forecasted inflation rate as her long-term
3 growth rate, is a poor proxy for the long-term
4 growth rate of the companies in the proxy group.
5 While long-term GDP growth is useful as a
6 reasonableness check on one's analysis, it
7 should not be substituted to estimate future
8 expected dividends of individual companies or
9 market sectors. The use of historical GDP
10 growth also ignores the implication of accretion
11 or dilution on a company when it issues new
12 shares of stock.

13 Q. Please explain your concerns with Company
14 witness Bulkley's application of three different
15 growth rates within her DCF Model.

16 A. She utilizes three separate growth rates within
17 her multi-stage DCF model. She has not provided
18 any explanation or research demonstrating that
19 the three-stage dividend growth model more
20 accurately reflects investors' pricing decisions
21 than the Commission's long-preferred two stage
22 growth analysis.

23 Q. Do you have any concerns with Company witness
24 Bulkley using three different earnings growth

1 sources?

2 A. Yes, her use of three different sources is also
3 problematic because it does not provide a direct
4 comparison, in that Yahoo Finance (First Call)
5 and Zack's do not explain what impact their
6 earnings growth forecasts may have upon the
7 respective dividend payout policies of the
8 companies within her proxy groups. Her short-
9 term dividend projections are a direct result of
10 the average earnings growth estimates of three
11 different sources, without any consideration to
12 the effect of future dividend payouts. It is
13 important to note, Company witness Bulkley's
14 short-term (1st stage) growth rates average 5.63%
15 and her intermediate (2nd stage) growth rates
16 average 5.49%, both of which exceeded Staff's
17 average short-term growth rates of 5.29%, as
18 well as, the Blue Chip Economic Indicators 4.0%
19 to 4.2%% estimate for Nominal GDP growth in the
20 next 5 years.

21 Q. Please discuss how Company witness Bulkley
22 developed her short-term dividend growth rate of
23 her proxy groups.

24 A. In the first stage of Company witness Bulkley's

1 DCF model, the current annualized dividend for
2 each company within her proxy group is
3 accelerated to a five year period based on the
4 average of the three to five year earnings
5 growth estimates as reported by Yahoo Finance
6 (First Call), Zack's, and Value Line.

7 Q. What are your concerns with this dividend
8 application by Company witness Bulkley?

9 A. It is highly unlikely that investors would rely
10 exclusively on the earnings per share growth
11 rate forecasts of Wall Street analysts in
12 determining short-term dividend projections.
13 The Dr. Robert Harris study from 1992 noted on
14 page 50 and 51 of Company witness Bulkley's pre-
15 filed testimony asserts that, "...a growing body
16 of knowledge shows that analyst's earnings
17 forecasts are indeed reflected in stock prices.
18 Such studies typically employ a consensus
19 measure of FAF (financial analyst earnings
20 forecasts) calculated as a simple average of
21 forecasts by individual analyst." Although, we
22 agree that all relevant information is
23 incorporated into a company's stock price, the
24 direct relationship of earnings to dividend

1 growth that Company witness Bulkley assumes is
2 remote. Dividend payout ratios will change due
3 to many factors including individual company
4 cash flow requirements, current economic
5 conditions, and future market conditions in
6 addition to other factors. Rational investors
7 will not just look at expected earnings but will
8 also factor in all relevant information when
9 estimating growth rates.

10 Q. Why do you find that Value Line short-term
11 dividend projections are better to use than
12 those in Company witness Bulkley's model?

13 A. On page 52 of her testimony, she claims that
14 Value Line projections of short-term dividend
15 growth do not explicitly include growth in
16 retained earnings and their use is not
17 appropriate for the DCF calculation. What she
18 has failed to recognize is that, while the long-
19 term dividend growth is constrained by the
20 combination of retention growth and issuing
21 stock above and or below book value, in the
22 short-term, dividend policy can drastically
23 change and result in dividends to grow above or
24 below retention growth. Consequently, her

1 short-term dividend projections are a direct
2 result of the average earnings growth estimates
3 of three different publications, without any
4 consideration upon the growth rates effect on
5 future dividend pay outs. Our use of Value Line
6 dividend growth projections recognizes the
7 impact of changes in payout policy while her
8 sole use of short-term earnings forecasts does
9 not.

10 Q. Does Company witness Bulkley have other
11 criticisms of Staff's application of Value
12 Line's dividend growth rates?

13 A. Yes. Company witness Bulkley indicated that
14 Value Line's dividend growth projections are a
15 reflection of expectations of a "single analyst"
16 and thus, attempts to discredit Staff's
17 utilization of those estimates by Value Line by
18 claiming the publication lacks expectations of
19 "multiple analysts" viewpoints. Although Value
20 Line assigns a lead analyst in both its electric
21 utility and gas utility industries, each report
22 goes through a continual evaluation and quality
23 control process where multiple analysts review
24 the reports before they are posted. A

1 correspondence describing this process is in
2 Exhibit __ (FP-21).

3 Q. Is there another advantage in using Value Line
4 projections in your analysis?

5 A. Yes. Staff and the Commission have reasonably
6 relied on Value Line for many years. This
7 methodology is generally understood by the
8 investment community and lends a degree of
9 predictability to the New York rate setting
10 process. While this consistency does not help
11 to identify the return that equity investors
12 currently require, it is important in the sense
13 that it provides predictability in the earnings
14 level that investors in New York utilities can
15 expect. This is particularly important to the
16 major credit rating agencies, who view
17 unpredictability as an additional risk.

18 Q. You have previously stated that Company Witness
19 Bulkley's estimated long-term dividend growth is
20 based upon expected GDP growth and a projected
21 inflation rate. How did she calculate the GDP
22 growth rate and the projected inflation rate?

23 A. The company witness utilized a 3.24% historical
24 growth in real GDP that's based on the 1929 to

1 2015 period, as illustrated in
2 Exhibit __ (AEB-3). Company witness Bulkley
3 then calculated an expected inflation rate of
4 2.05% based upon an average of the compound
5 annual Consumer Price Index (CPI) growth rate
6 forecasts for years 2022 to 2026, the compound
7 annual growth rate of the CPI for all urban
8 consumers as projected by the Energy Information
9 Administration (EIA) for years 2025 to 2040, and
10 the compound annual GDP Price Index for years
11 2025 to 2040. Although, adding these two
12 factors together would result in a 5.29% growth
13 rate, Company witness Bulkley also applied a
14 weighted formulaic calculation that increased
15 the results to a 5.36% estimated long-term
16 growth rate.

17 Q. Do you agree with her use of a historically-
18 derived average Real GDP as a surrogate for
19 investors' expectations with respect to future
20 Real GDP growth?

21 A. No. We do not consider her use of a
22 historically derived average real GDP growth
23 rate to be appropriate because average
24 historical growth rates by their nature measure

1 time periods that encompass far different
2 circumstances relative to current economic
3 conditions. In addition, her calculation does
4 not accurately measure GDP growth, in such that
5 her 2.05% inflation rate forecast is primarily
6 (2/3) composed of two Consumer Price Indexes.
7 The CPI measures changes in the price level of a
8 basket of consumer goods and services but unlike
9 the GDP deflator, the CPI does not measure
10 inflation over the entire economy.
11 Additionally, her use of the average real
12 historical GDP growth rate from 1929 to 2015 is
13 inappropriate because while historical averages
14 provide insight into how past factors might have
15 influenced past changes in GDP, they are poor
16 indicators of future economic activity. While,
17 on the other hand, the Long-Range Consensus U.S.
18 Economic Projections provided by Blue Chip
19 Economic Indicators, which we previously
20 discussed, and employed in validating our
21 recommended DCF model is a good source regarding
22 future economic activity growth that builds upon
23 historical trends and takes into account current
24 economic conditions. This report also reflects

1 the forward-looking consensus of approximately
2 50 of the financial community's prominent
3 economists. According to the Blue Chip Economic
4 Indicators October 10, 2016 publication,
5 Exhibit __ (FP-17), the consensus long-run
6 nominal GDP growth rate is currently 4.1%, which
7 includes both real GDP and expected inflation
8 components. Company witness Bulkley's long-term
9 growth rate of 5.36% is approximately 22% higher
10 than that of the forecasted nominal GDP growth
11 rate of 4.1%.

12 Q. Do you agree with Company witness Bulkley's
13 assumption that her expected real GDP growth
14 rate, in conjunction with a projected inflation
15 rate, is a reasonable proxy for the long-term
16 dividend growth rate in multi-stage DCF
17 analysis?

18 A. No. Company witness Bulkley uses a historical
19 real GDP growth rate of 3.24% and an inflation
20 rate of 2.05%, to generate a combined long-term
21 nominal GDP growth rate of 5.36%. Her
22 assumption is based upon the, "...common
23 theoretical assumption that, over the long-run,
24 all the companies in the economy will tend to

1 grow at the same constant rate." A reasonable
2 investor would consider the projected decrease
3 in sales growth for mature industries, such as
4 the electric and gas utility industries rather
5 than implement the long-term real GDP growth
6 rate as applied by Company witness Bulkley.

7 Q. Are there any other sources of GDP growth that
8 appear more reasonable relative to Company
9 witness Bulkley's historically based GDP growth
10 estimate?

11 A. Yes. The EIA' 2016 Annual Energy Outlook with
12 Projections to 2040, Exhibit __ (FP-22), states
13 that, "...real GDP grows at an average annual rate
14 of 2.2% from 2015 to 2040."

15 Q. What other concerns do you have with Company
16 witness Bulkley's terminal DCF growth rate of
17 5.36%?

18 A. Her terminal growth rates exceeds Staff's growth
19 rate by 64 basis points and greatly impacts her
20 average DCF calculation of 8.86% relative to
21 Staff's DCF calculation of 8.07%.

22 Q. Would you please summarize Company witness
23 Bulkley's CAPM approaches?

24 A. Her analysis resulted in six ROE estimates using

1 the traditional CAPM and six ROE estimates using
2 the zero-beta CAPM. Her CAPM models used a
3 Value Line beta, with three different risk-free
4 rates. All of the CAPM models used the same
5 Bloomberg Professional market return estimate of
6 13.04%

7 Q. Please explain how she derived each of the three
8 major components used in her CAPM methodologies;
9 the risk-free rate, beta and the market risk
10 premium.

11 A. Company witness Bulkley's two CAPM methodologies
12 use three primary inputs, a risk-free rate based
13 on the current three-month average yield on 30-
14 year Treasury Bonds (2.64%), the projected 30-
15 year Treasury yield for second quarter of 2016
16 to the third quarter of 2017 (3.22%), and the
17 projected 30-year Treasury yield for the period
18 2017-2021 (4.50%). She used an estimated S&P
19 500 required market return of 13.04% and
20 calculated three separate MRP's using the risk-
21 free rates mentioned above. The traditional
22 CAPM results ranged from a ROE of 10.50% to
23 11.09%, and the zero-beta CAPM ranged from
24 11.13% to 11.58%.

1 Q. Company witness Bulkley argues that the
2 Commission's preferred approach for calculating
3 the risk-free rate is flawed because it does not
4 address a companies' expected economic, or
5 asset, life, the equity duration of the utility
6 industry, or what Morningstar suggests is, "...the
7 time horizon of the chosen Treasury security is
8 that it should match the time horizon of
9 whatever is being valued," on page 63 of Company
10 witness Bulkley pre filed testimony. Do you
11 agree with her arguments?

12 A. No. While she is correct that utility plant
13 assets have very long lives, and we would agree
14 that sound financing practices generally dictate
15 these long-lived assets be financed with
16 similarly long-lived securities, her conclusion
17 that all utility equity investors have an
18 investment horizon of 30 years is
19 unsubstantiated. Utility companies commonly
20 fund their long-term investments with
21 obligations employing a variety of different
22 time horizons.

23 Q. Are Company witness Bulkley's expectations of
24 increased interest rates reasonable?

1 A. In support of her position, she mentions that
2 Goldman Sachs suggested the Federal Reserve will
3 need to increase rates four times in 2016, due
4 to an increase in core inflation. However, the
5 Federal Reserve has not yet raised rates even
6 once in 2016. In fact, the yields on 10-year US
7 Treasuries have fallen from 2.09% in January
8 2016 to 1.64% in September 2016.

9 Q. Is Company witness Bulkley's application of
10 projected treasury yields appropriate for the
11 CAPM methodology?

12 A. No. The Commission and Staff have maintained
13 for many years, and as mentioned earlier,
14 current rates are the best indicator of future
15 rates as they are based on the all information
16 currently available to investors.

17 Q. Please explain your concerns with Company
18 witness Bulkley's market return of 13.04%.

19 A. Her market return of 13.04% exceeds our 10.75%
20 estimate by 229 basis points, and also far
21 exceeds the 9.0% average return for the S&P
22 during the most recent ten year period of 2006-
23 2015. Her approach relies entirely upon a
24 constant growth DCF analysis of the S&P 500.

1 Company witness Bulkley assumes that the five
2 year earnings growth rate estimates from
3 Bloomberg Professional will last into
4 perpetuity, an assumption we find to be highly
5 suspect.

6 Q. Will your recommendations maintain the financial
7 integrity of the Company?

8 A. Yes, our recommendations will maintain Corning's
9 financial integrity.

10 Q. How have you reached your conclusion?

11 A. While Corning is not currently rated by either
12 S&P or Moody's, we have estimated Corning's
13 implied bond ratings using the S&P and Moody's
14 ratings methodologies. Providing Corning with
15 financial metrics consistent with a BBB/A bond
16 rating will allow the company the opportunity to
17 pursue alternative forms of financing to its
18 current reliance on the bank loans.

19 Q. What financial metrics are examined by S&P when
20 assigning a bond rating?

21 A. S&P examines three financial ratios. These are:
22 Funds From Operations (FFO)/Debt; Debt/
23 (Earnings Before Interest, Taxes, Depreciation
24 and Amortization (EBITDA); and, Debt/Capital.

- 1 Q. What does this analysis imply for an S&P rating
2 for the Company?
- 3 A. Using the S&P financial matrix shown in
4 Exhibit __ (FP-23), the three financial risk
5 ratios for Corning would imply an S&P bond
6 rating of between "BBB" and "A-".
- 7 Q. How does Moody's assess the business and
8 financial risk of a utility when assigning a
9 bond rating?
- 10 A. As illustrated in Exhibit __ (FP-23), Moody's
11 uses a rating grid incorporating four rating
12 factors in assigning a credit rating: (1)
13 Regulatory Framework-25%; (2) Ability to Recover
14 Costs and Earn Returns-25%; (3) Diversification-
15 10%; and, (4) Financial Strength, Key Financial
16 Metrics-40%.
- 17 Q. What are the metrics that Moody's uses in
18 determining the credit rating for a utility?
- 19 A. They are: (Cash Flow from Operations (CFO) pre-
20 Working Capital (WC) + Interest)/Interest; CFO
21 pre-WC/Debt; (CFO pre-WC-Dividends/Debt); and,
22 Debt/Capitalization.
- 23 Q. What are Corning's financial ratios using
24 Moody's four rating factors?

1 A. As with the S&P metrics, Exhibit __ (FP-23)
2 presents the Moody's ratios using Staff's
3 recommended rates of return. As the exhibit
4 illustrates, the four financial risk ratios for
5 Corning result in a Moody's implied bond rating
6 of "A".

7

8

SUMMARY OF STAFF'S ROE

9 Q. Please summarize the results of your ROE
10 recommendation.

11 A. Our recommended return on equity for Corning is
12 8.2%. This recommendation is based on our proxy
13 group result, composed of two-thirds the median
14 DCF result of 8.1% and one-third the average
15 CAPM result of 8.4%, with no adjustment for
16 financial and business risks and no size
17 premium.

18 Q. Does this conclude your testimony at this time?

19 A. Yes, it does.

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