BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PENNSYLVANIA PUBLIC UTILITY COMMISSION	:	
	:	DOCKET NO. R-2014-2428743
v.	:	
PENNSYLVANIA ELECTRIC COMPANY	:	

DIRECT TESTIMONY

OF

MARLON F. GRIFFING, PH.D.

ON BEHALF OF THE

PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

NOVEMBER 24, 2014

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I. INTRODUCTION

Q. Please state your name, occupation and business address.

A. My name is Dr. Marlon F. Griffing. I am a Senior Consultant with the economic consulting firm of Snavely King Majoros & Associates Inc. ("Snavely King"). My business address is Suite 350, 4351 Garden City Drive, Landover, MD 20785.

Q. Please describe Snavely King.

A. Snavely King was founded by the late Carl M. Snavely and Charles W. King in 1970 to conduct research on a consulting basis into the rates, revenues, costs and economic performance of regulated firms and industries. The firm has a professional staff of 10 economists, accountants, engineers and cost analysts. Most of its work involves the development, preparation, and presentation of expert witness testimony before federal and state regulatory agencies. Over the course of its 44-year history, members of the firm have participated in over 1,000 proceedings before almost all of the state commissions and all Federal commissions that regulate utilities or transportation industries.

Q. Have you prepared a summary of your qualifications and experience?

A. Yes. Attachment A is a summary of my qualifications and experience.

Q. Have you previously submitted testimony in regulatory proceedings?

A. Yes. Attachment B is a tabulation of my appearances as an expert witness before state regulatory agencies.

Q. For whom are you appearing in this proceeding before the Pennsylvania Public Utility Commission (Commission)?

A. I am appearing on behalf of the Pennsylvania Office of Consumer Advocate.

Q. What are your responsibilities in this Commission proceeding?

A. My responsibility is to determine a fair rate of return on common equity capital and a fair overall rate of return for the FirstEnergy electric distribution companies (Companies). The FirstEnergy Companies are Metropolitan Edison Co. (Met-Ed), Pennsylvania Electric Co. (Penelec), Pennsylvania Power Co. (Penn Power), and West Penn Power Co. (West Penn). When I refer to the four distribution companies, I will use the term "Companies." When I need to refer to the individual company I will use their names or abbreviations as noted.

Q. How do you address recommended rates for the Companies?

A. To arrive at recommended rates for common equity capital and overall rate of return, I analyze the Companies' capital structures and the costs for each component of those structures. The recommended capital structures for

the Companies are slightly different, while the analysis for the recommended common equity rate applies to all of the Companies.

Q. How is your testimony organized?

A. My testimony has eight sections.

- First, I discuss economic considerations and legal precedents underlying the cost of equity in regulatory proceedings.
- Second, I explain how I selected the members of the OCA Comparison Group of companies used in my analysis.
- Third, I discuss risk and capital structure for the OCA Comparison Group and the Companies.
- Fourth, I provide an overview of the Discounted Cash Flow (DCF) analysis.
- Fifth, I perform a DCF analysis for the OCA Comparison Group, check it for reasonableness, and recommend a return on equity (ROE) for the Companies.
- Sixth, I recommend a capital structure and overall rate of return (ROR) for the Companies.
- Seventh, I critique the Companies' rate of return analysis.
- Eighth, I summarize my testimony and recommendations.

Q. Please state your conclusions regarding the Companies' ROE and ROR.

A. I recommend a ROE of 9.27 percent for all the Companies. When this number is included in the calculation of a ROR, the results are weighted-average costs of capital of 7.24 percent for Met-Ed, 7.49 percent for Penelec, 7.69 percent for Penn Power, and 7.33 percent for West Penn. I note that my ROE is based on a strictly quantitative analysis and does not reflect any adjustment based on the customer service or reliability of service issues as testified to by OCA witness Barbara R. Alexander. Should the Commission make any adjustment to the Companies' ROE based on customer service and reliability of service concerns, I recommend that any such adjustment be a downward adjustment by 10 to 25 basis points.

II. THE COST OF EQUITY IN THE REGULATORY ENVIRONMENT

1. The Role of Economic Theory

Q. What is the basis in economic theory for regulating certain industries?

A. According to economic theory, the forces of supply and demand interacting in a competitive environment produce an allocation of resources that yields an optimal mix of goods and services. Firms and individuals maximize profits and satisfaction given the prices and incomes

that the interplay of market forces generates. One description for this outcome is that it is economically efficient. Put simply, there is no better output of goods and services that can be produced with the available resources.

Q. Does the economically efficient outcome occur in all industries?

A. No, several conditions must be present, including many buyers and sellers, perfect information about prices, identical products, and so forth. If these conditions exist, then price is the only way for providers of goods and services to compete in markets. If the conditions for competition do not exist, however, then letting supply and demand work unfettered will not produce the socially desired efficient outcome.

Q. What condition for competition is missing in the electric distribution industry?

A. The electric distribution industry does not have several sellers. The large size of the electric distribution systems required to provide the product means that local distribution companies have high costs. Consequently, it is difficult for firms to enter the market, resulting in less competition than would be the case if costs were lower. High costs in this context are known as a "barrier to entry."

Q. Are there other obstacles to competition in public utility markets?

A. Even if a firm is willing and able to raise the capital needed to be a viable electric distribution company, state and local governments typically have permitting processes that govern where and when utilities can build generation, transmission, and distribution facilities. Thus, money is not the only barrier that must be overcome. A further consequence of the existence of high costs is that the average cost of service declines over the range of effective demand. This condition opens the door to market failure because, in the industry, the larger the market share a firm gains, the lower its average costs and the greater its advantage over competitors. In effect, there is not enough room in the market for another competitor. The logical result is a market with one producer—often referred to as a natural monopolist—not the many firms envisioned in the theory of competition.

Q. How has society responded to the absence of competition in public utility markets?

A. Since sufficient competition does not exist in the markets for public utilities to ensure low prices and adequate service, society has typically turned to regulation to achieve these goals. Government regulators of utilities generally are charged with pursuing an outcome that approximates the efficient outcome of the competitive model. Regulation thus is viewed as a way to decrease prices and increase services provided by a natural monopoly. A challenge for regulators is to set policies which ensure that

the regulated firm provides an appropriate supply of services at reasonable rates. A reasonable rate enables a public utility not only to recover its operating expenses, depreciation, and taxes, but also to compete for funds in capital markets.

2. Standards for Finding a Fair Rate of Return

Q. Do standards exist for determining a fair rate of return?

A. Yes. Two United States Supreme Court (Court) cases are the basis for rate of return regulation in the United States. They are the *Bluefield Water Works (Bluefield)*[1] and the *Hope Natural Gas (Hope)*[2] cases. In *Hope*, the Court established the following standards for the return on equity that must be allowed a regulated public utility to provide for a "reasonable return":

> . . . the return to the equity owner should be commensurate with the returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[3]

It can be seen from this excerpt that there are essentially three standards for determining an appropriate return on equity from the standpoint of the equity owners of a regulated utility. The first is the "comparable earnings" standard; i.e., that the earnings must be "commensurate with the returns on

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1 *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia,* 262 U.S. 679 (1923).

2 *Federal Power Commission v. Hope Natural Gas Co.,* 320 U.S. 591 (1944).

3 *Hope*, 320 U.S. at 603.

investments in other enterprises having corresponding risks." The second is that earnings must be sufficient to assure "confidence in the financial integrity of the enterprise," and the third is that they must allow the utility to attract capital.

Q. How can the comparable earnings standard be applied in estimating the rate of return on equity capital?

A. There is circularity to the comparable earnings standard because the competitive nature of the capital markets virtually ensures that the returns to all enterprises having corresponding risks are comparable with each other. Investors establish the price of each traded stock based on that stock's present and prospective earnings in comparison with the present and prospective earnings of all other stocks and other investments available to them. If the earnings of a firm are depressed, then investors will pay only a low price for that firm's stock. As a result, the return on the market value of that stock will be comparable to the return on the market value of the stock of other companies that are highly profitable but which, as a consequence of their profitability, have been bid up to a very high price. Thus, if "return" is defined as the earnings of an equity investment relative to its current market price, then the comparable earnings test becomes a nullity: All returns are comparable with all other returns.

Q. How is this circularity typically resolved in public utility regulation?

A. In public utility regulation, the conventional procedure for resolving this circularity is to identify the required equity return based on the market value of a utility's stock. That return is combined with the cost of debt, and the blended return to total capital is then applied to a rate base reflective of the book value of the utility's investment. The book value is the accountant's quantification of the depreciated original cost of the utility's assets adjusted for ratepayer contributions such as deposits and deferred taxes. Under this procedure, the market price of a stock is used only to determine the return that investors expect from that stock. That expectation is then applied to the book value of the utility's investment to identify the level of earnings that regulation will allow the utility's common shareholders to recover.

Q. How can the financial integrity and capital attraction standards enunciated in *Hope* be applied in estimating the rate of return on equity capital?

A. If a utility can earn a return on its investment comparable to that required by enterprises of comparable risk, then it should have no difficulty in attracting capital and maintaining credit. Investors would have no reason to shun such a utility in favor of other investment opportunities. Thus, if the comparable earnings test is met, then the financial integrity and capital attraction standards are met as well.

Q. What is risk?

A. Risk is the chance of a loss or less-than-expected return on an investment. A business, for example, may introduce a new product with the expectation that it will sell well. There is, of course, no guarantee that consumers will take to the product. The risk investors attach to the company varies inversely with their view as to the probability of the product doing well. In the electric distribution market, there are a number of factors that create risk for local distribution companies. In general, the greater the risk of an investment, the greater the return required to attract investors, and vice versa.

Q. Does setting an allowed rate of return mean that the utility will earn that return?

A. No. There is no guarantee that the utility will earn the allowed rate of return. The utility has the reasonable *opportunity* to earn the allowed rate of return; in practice the utility may earn more or less than this return, depending on whether and how its management responds to technological and market developments, among other matters.

Q. What should the Commission consider in setting an appropriate rate of return?

A. The Commission should look to current market conditions as it balances investor and consumer interests. The rate of return should reflect the

condition of the capital markets in which the Companies will have to compete with other firms for funding. Under this forward-looking approach, historically allowed rates and historical performance are irrelevant issues except as they affect investors' views of a company's prospects.

Q. Please explain how the methods you have used to determine the cost of common equity capital for the Companies reflect current market conditions.

A. I used a market-oriented approach to determine the common-equity cost for the Companies. I analyzed the equity return that investors currently expect to receive from investing in companies with risks similar to the Companies. Many factors influence these investor expectations, among them: past performance of the companies, estimates of how the companies will perform in the future, and predicted general economic conditions. All of these factors and opportunity costs are considered by investors participating in the capital markets and are reflected in current prices in those markets. Thus, my analysis is forward-looking because it relies on investors' current assessment of what is likely to happen with their investments.

Q. What is the role of opportunity costs in your analysis?

A. In general, an opportunity cost is the value of the next best choice forgone

as the result of making a decision. Opportunity costs are central to my analysis. As investors decide where to place their assets, they have many opportunities from which to choose in the financial markets. Economic theory says they will choose the opportunity they think will provide them the best return, taking into account the level of risk with which they are comfortable. Thus, for the Companies to attract capital, the Company's forward-looking fair rate of return must at least equal the rate of return for the best alternative opportunity with similar risk.

Q. How do you know what equity rate of return the Companies must offer to investors to be an attractive opportunity?

A. No one knows with certainty what rate of return the Companies must offer to investors that is just sufficient to make the Company an attractive opportunity. However, various methods based on finance theory have been derived for reliably estimating what investors currently think that rate is. I have used the Discounted Cash Flow (DCF) method, which is widely used in utility general rate cases, and is the primary method relied on by the Pennsylvania Commission in determining rate of return (other methods serve as a check on the DCF method).

Q. Please summarize the DCF method.

A. The DCF method uses the current dividend yield and the expected growth rate of this yield to determine a required rate of return on an investment

opportunity. The required rate of return from a DCF analysis is derived from a formula for determining the net present value, or price, of a share of stock. There are several variations of DCF, but the constant-growth form I have selected assumes that dividends (D) are received at the end of each year, the annual growth rate of dividends (g) is constant to infinity, and the discount rate for dividends (k) is constant to infinity. The equation form of this constant-growth DCF model is:

$$k = \frac{D_1}{P_0} + g$$

Where:

- D_1 is the annual dividend one year from the present,
- P_0 is the current price of a stock share,
- g is the growth rate of the dividend, and
- k is the discount rate and also is the fair rate of return for equity.

Q. What information is used to develop values for the various terms in the DCF equation?

A. The annual dividend one year from now is derived by applying the growth-rate estimate (g) to the actual current annual dividend (D_0), information that is publicly available.

Q. Does your equity rate of return analysis use information specific to the Companies?

A. No. The Companies are wholly owned subsidiaries of FirstEnergy. The Companies are not publicly traded and, therefore, no such information is available for performing a direct DCF analysis on each of the Companies.

Q. Does your equity rate of return analysis use information for FirstEnergy, the Companies' parent company?

A. No. In contrast to the Companies, FirstEnergy does trade publicly, but it is my practice to not include the company under analysis, or the parent company of a unit that is the subject of my ROE analysis, in my DCF analysis in testimony. I continue that practice in this case.

Q. How do you use the DCF analysis to estimate the Companies' required rate of return?

A. I perform a DCF analysis on a group of electric distribution utilities comparable to the Companies that are publicly traded and have similar investment risk, as discussed below. The estimated rates of return for members of this group form the basis for my estimate of a fair rate of return for the Company.

III. CHOICE OF THE OCA COMPARISON GROUP

Q. Please discuss your choice of the OCA Comparison Group.

A. I set out to find a group of companies that are, from the perspective of investors, similar to the Companies. Thus, I wanted firms that are electric distribution companies that represent approximately the same investment risk as the Companies.

Q. Please describe how you found suitable candidate companies for the OCA Comparison Group.

A. I looked at Value Line, a widely used investor service, for companies that Value Line classifies as part of the Electric Utility Industry. The September 19, 2014 (Central); October 31, 2014 (West); and November 21, 2014 (East) editions of Value Line's Investment Survey include more than 40 companies in this category. See Exhibit ____ (MFG-1).

Q. How did you use this information in your selection process?

A. I applied screens to the initial set of Value Line Electric Utility Industry companies to ensure that the companies included in my OCA Comparison Group were similar in risk to the Companies.

Q. Please list the criteria you applied in the selection of the OCA Comparison Group.

A. I applied the following screens to the initial set of Electric Utility

companies:

1. U.S. firm based in the continental 48 states;
2. shares publicly traded on a stock exchange;
3. currently paying dividends and having positive growth-rate projections from expert analysts;
4. not expected to sell, merge into or be acquired by another company, or be engaged in an unusual regulatory proceeding;
5. S&P credit rating from A+ to BBB-; and
6. more than 50 percent of net assets dedicated to regulated electric operations.

Q. What is the purpose of applying the criterion that the companies be based in the 48 continental U.S. states?

A. I sought companies that face a business environment similar to that in which the Companies operate. The Companies' operating utilities in these cases are in Pennsylvania and subject to state regulation, statutes, and rules that are similar to those in the rest of the United States. The states of Alaska and Hawaii, although having regulation schemes similar to those of the other states, have business environments—due to their geography—that are substantially different from the business environment in the rest of the country. Therefore, I have limited candidates for the OCA Comparison Group to companies based in the 48 continental United States. Hawaiian Electric Industries and Avista are excluded because they have or are

acquiring operations in these states.

Q. What purpose is served by requiring that the companies be publicly traded, be paying dividends, and have positive growth-rate projections?

A. The primary analytical tool that I use for finding a company's ROE—the DCF model—requires information about common equity share prices, dividends, and growth-rate projections. The requirement that companies be publicly traded ensures that their common equity share prices are available. Moreover, if projections are negative, then any DCF analysis performed on them is not meaningful. Entergy has a negative growth-rate projection and is therefore excluded. The other companies meet the three criteria.

Q. Why is it important that companies involved in sales, mergers, acquisitions, or unusual regulatory proceedings be excluded from your analysis?

A. The share prices of companies involved in sales, mergers, or acquisitions can be volatile. Extreme increases in the share prices of LDCs that are part of sales, mergers, or acquisitions drive down the ROE results in DCF analysis, while extreme decreases in the share prices drive up the ROE results. Neither outcome yields meaningful DCF results. Therefore, it is appropriate to exclude such companies from the analysis.

Q. Are any companies in the initial set involved in sales, mergers, acquisitions, or unusual regulatory proceedings?

A. Yes. Wisconsin Energy is buying Integrys, Pepco Holdings is involved in a sale, PPL Corp. is spinning off its unregulated assets, TECO Energy is selling coal-mining operations and buying natural-gas operations, UIL Holdings is pursuing acquisition of Philadelphia Gas Works, and Northwestern Corp. is purchasing hydroelectric assets with the transaction pending before the Federal Energy Regulatory Commission. Therefore, I have dropped these firms from further consideration. In addition, PG&E is facing large fines as the consequence of a pipeline explosion. This event has the potential to affect the company's share price in the same way as the transactions mentioned. Therefore, I have also excluded PG&E from consideration.

Q. What is the purpose of using the S&P credit ratings as a criterion?

A. Requiring that the companies have a credit rating in a certain range means I obtain companies that are viewed by expert analysts as having similar risks.

Q. What S&P credit ratings range have you employed in these proceedings?

A. In these proceedings, I required that companies have a credit rating of A+ to BBB- to qualify for the OCA Comparison Group.

Q. Please explain why you used this range.

A. The purpose of the credit rating screen is to find companies that are similar to the Companies in terms of risk. The Companies do not have an independent credit rating, but the credit rating for FirstEnergy is a good surrogate because the Companies' operations both influence and reflect the risk level of FirstEnergy. Therefore, I want LDCs with credit ratings that are similar to FirstEnergy's credit rating. S&P has assigned FirstEnergy a credit rating of BBB-, which is an investment-grade rating. I extended the range of credit ratings to include all electric utilities with a credit rating up to A+. Of the companies in the initial set for the OCA Comparison Group, only MGE Energy, with a credit rating of AA-, is outside the range and thus excluded from the OCA Comparison Group.

Q. Are you concerned that the range of your credit ratings is too broad for the firms included to be considered of similar risk?

A. No. This range balances the desire to have a reasonable number of companies in the OCA Comparison Group with the intent of including companies with risk similar to that of the Companies. Further, the following statement from the S&P publication *2008 Corporate Criteria: Analytical Methodology* addresses credit ratings and relative risk.

> We strive for transparency around the rating process. However, it is critical to realize--and it should be apparent--that the ratings process cannot be reduced to a cookbook approach: Ratings

> incorporate many subjective judgments, and remain as much an art as a science.
>
> ... The rating matrix is not meant to be precise. There can always be small positives and negatives that would lead to a notch higher or lower than the typical outcome. [4]

Q. Your final screen to establish your OCA Comparison Group requires that more than 50 percent of net assets be dedicated to regulated electric operations. Please explain the purpose of this criterion.

A. For the firms to have similar risks, they must be part of the same industry. The Companies are regulated utility operations, so the firms considered for the OCA Comparison Group also must be part of that industry. This criterion ensures that more than half of the OCA Comparison Group firms' operations are in the same environment as the Companies.

Q. What is the outcome of your application of this screen?

A. All of the firms remaining under consideration for the OCA Comparison Group meet this criterion.

Q. Please describe the OCA Comparison Group after your screening.

A. The OCA Comparison Group is composed of 30 Electric Utility firms. See Exhibit ____ (MFG-1).

[4] Available at the Standard & Poor's website: http://www.standardandpoors.com/prot/ratings/articles/en/us/?articleType=HTML&assetID=1245372507776. Accessing the publication may require free registration.

IV. DCF OVERVIEW

Q. What is the purpose of a DCF analysis?

A. The goal of this analysis is to estimate an appropriate, forward-looking rate of return on equity. A DCF analysis requires a determination of expected growth rates and dividend yields in order to estimate this return.

Q. Please discuss expected growth rates.

A. Because a DCF analysis is forward-looking, I want to estimate the expected growth rate of dividends. Historical growth rates would be good indicators of the expected growth rate if:

1. the dividend payout ratio and the realized rate of return on equity capital were constant in the past and could be assumed to remain constant in the future, and;
2. any growth in book equity was attributable solely to retained earnings.

If, in practice, these conditions held, then earnings per share (EPS), dividends per share (DPS), and book value per share (BPS) would all grow at the same rate, and the past growth rates for these factors would be the rate at which they would grow in the future.

Q. Do you use historical growth rates in your analysis?

A. No. The conditions necessary for historical growth rates to be good

indicators of future growth rates are rarely satisfied. Most utilities' returns on equity and payout ratios have not remained constant over time. Further, growth in book value has occurred not only due to retained earnings, but also due to the issuance of new shares of common stock. Consequently, past growth rates of earnings, dividends, and book equity are frequently unequal. Moreover, an industry may face a changed business environment, thereby making the past a poor basis for projecting the future. Historical growth rates can differ significantly from forward-looking projected growth rates due to such factors as inflation rates, tax rates, the role of an industry in the economy, and the regulatory environment. In view of these limitations of using historical growth rates, I base my estimated growth rates on projected growth rates as publicly provided by "Zacks Investment Research," a respected investor services company, Thomson Financial Network estimates provided on Yahoo! Finance, and "The Value Line Investment Survey."

Q. Please discuss the dividend yields used in your DCF analysis.

A. To estimate the required rate of return on equity capital today, I estimate the expected dividend yield, D_1/P_0 where P_0 is the price of a share of common equity today and D_1 is the dividend in the next period. The use of this dividend yield assumes that dividends are distributed at the end of each period (year). This version is known as the constant-growth DCF model. Since the current equity price per share incorporates all market

information considered relevant by investors, generally speaking, non-recent historical prices should be avoided in calculating the dividend yield. However, since share prices are volatile in the short run, it is desirable to use a period of time long enough to avoid short-term aberrations in the capital market.

Q. What period do you use to establish average common equity share prices for the companies in the OCA Comparison Group?

A. I use the trading period of October 20, 2014-November 14, 2014 to find average common equity share prices. This four-week period is long enough to dampen any short-term aberrations in the capital market. It is also close to the November 24, 2014 filing date for my Direct Testimony, thus making the results timely. I used closing prices for the OCA Comparison Group member companies obtained at Yahoo! Finance. See Exhibit ____ (MFG-2) Schedule 1, pages 1-8.

V. DCF ANALYSIS FOR THE OCA COMPARISON GROUP

Q. Please discuss the required rate of return for the OCA Comparison Group.

A. To estimate the required rate of return for the group, I estimate the expected growth rate, g, and the expected dividend yield, D_1/P_0.

Q. Please discuss the expected growth rate for the OCA Comparison Group.

A. As noted above, it is appropriate in this proceeding to use only the forecasted growth rates to estimate the expected growth rate to be used in the DCF analysis. Zacks and Yahoo! Finance provide five-year growth-rate projections for EPS and Value Line provides five-year growth rate projections for EPS, DPS, and BPS. To maintain consistency across the sources, I used only the EPS estimates from Value Line.

Q. What information did you use from Zacks?

A. I used the Zacks EPS five-year growth projections available November 14, 2014 for the individual firms in the OCA Comparison Group. See Exhibit ____ (MFG-3), Schedule 1.

Q. What information did you use from Yahoo! Finance?

A. I used the Yahoo! Finance EPS five-year growth projections available November 14, 2014 for the individual firms in the OCA Comparison Group. See Exhibit ____ (MFG-3), Schedule 1.

Q. What information did you use from Value Line?

A. I used the Value Line EPS five-year growth projections for the individual firms in the OCA Comparison Group as reported by Value Line in its September 19, 2014, October 31, 2014, and November 21, 2014 issues.

See Exhibit ____ (MFG-3), Schedule 1.

Q. How do you combine the Zacks, Yahoo! Finance, and Value Line estimates?

A. I weighted the Zacks, Yahoo! Finance, and Value Line EPS values equally to find my best estimate of the expected growth rate for each company in the OCA Comparison Group.

Q. Please discuss your calculation of the expected dividend yield for the Comparison Group.

A. The appropriate dividend to use in the constant-growth DCF model is the annual dividend rate at the beginning of the next period (year). I begin my estimation of the expected dividend yield by finding the dividends that each OCA Comparison Group member company is currently paying by multiplying by four their most recent quarterly dividends as reported by Value Line in its September 19, 2014, October 31, 2014, and November 21, 2014 issues.

Q. Please continue.

A. Next, I adjust annualized dividends for expected growth. The method I use assumes dividend increases will be evenly distributed over time. Hence, the average dividend will increase by one-half a year's projected growth rate. The annualized dividend yield for a firm is, therefore, transformed

into the expected dividend yield by multiplying it by one-half the growth-rate estimate derived for the firm and adding the product to the annualized dividend yield. The sum of these operations for each firm yields the D_1 values that I use in my estimates. See Exhibit ____ (MFG-3), Schedule 1.

Q. Did you make adjustments to the OCA Comparison Group at this point of your analysis?

A. Yes. After adding the growth-rate estimates and the dividend-yield estimates for each company to obtain the individual ROEs, I examined the ROEs for reasonableness. After ordering the OCA Comparison Group companies by ROE, I eliminated the six companies with the lowest ROEs and the two companies with the highest ROEs. See Exhibit ____ (MFG-3), Schedule 2.

Q. Please explain why you took these companies out of the OCA Comparison Group.

A. The six companies at the low end of the group had ROEs of 5.85 percent to 7.84 percent. It is my judgment that the Companies would not be competing against these firms for capital; therefore, it is not appropriate to include their low ROEs in the calculation of the ROE for the Companies. Similarly, the companies at the top of the OCA Comparison Group have ROEs of 12.22 percent and 14.99 percent. Again, these returns are outliers and are eliminated from calculation of the Companies' ROE.

Q. What do you call the remaining companies?

A. I call the 22 remaining companies the Revised OCA Comparison Group.

Q. What ROE did you find for the Revised OCA Comparison Group?

A. The Revised OCA Comparison Group has a mean growth rate of 5.77 percent and a mean expected dividend yield of 3.48 percent. When rounding of individual firms' ROEs is taken into account, the average of the ROEs is 9.27 percent.

Q. Did you calculate other ROEs for the Revised OCA Comparison Group?

A. Yes. I calculated a Low ROE and a High ROE for each company in the Revised OCA Comparison Group, using only the lowest and highest growth-rate values among Zacks, Yahoo! Finance, and Value Line. I then took the averages of those High and Low ROEs to develop a range of ROEs for the group.

Q. What ROEs does this analysis yield?

A. The low end of the range is 8.47 percent and the high end of the range is 10.05 percent.

Q. What does your ROE range reflect?

A. The ROE range of 158 basis points (10.05 percent minus 8.47 percent) that I have estimated reflects differences of opinion among the various independent expert analysts contributing to the Zacks, Yahoo! Finance, and Value Line estimates about the forward-looking growth prospects of the companies in the Revised OCA Comparison Group. The sources of the variations among the experts are the different views they hold about the effect general economic factors and company-specific factors have on the firms. Thus, the analysts' perspectives about variables such as predicted interest-rate levels, predicted economic growth, and local regulatory environments affect their estimates.

VII. REASONABLENESS CHECK AND RECOMMENDED ROE

Q. Have you checked the reasonableness of your ROE estimate?

A. Yes. I performed a Capital Asset Pricing Model (CAPM) analysis for the companies in the OCA Comparison Group.

Q. Please discuss the CAPM method.

A. The basic premise of the CAPM method is that any risk which is company-specific can be diversified away by investors. Therefore, the only risk that matters is the systematic risk of the stock. This systematic risk is measured by beta (β). In its simplest form, the CAPM assumes the

following form:

$$k = r + \beta (km - r)$$

Where:

- k is the required rate of return for the stock in question;
- β is beta, the measure of systematic risk;
- r is the rate of return on a riskless asset; and
- km is the required rate of return on the market portfolio.

Q. What are the strengths and weaknesses of the CAPM method?

A. The CAPM is theoretically sound, but its application raises some issues. The analysis using CAPM selects a riskless asset, beta, and market risk premium. The ROE analysis can vary considerably depending on the analyst's choices for these variables. Thus, what at first may seem like a model that is straightforward actually depends heavily on the particular input values used by an analyst.

Q. Are you recommending rejecting CAPM?

A. No. I use the CAPM, but only to check the reasonableness of my DCF analysis, which, in my understanding, is the reason the Commission uses CAPM or any other method.

Q. Please explain the calculation of a CAPM ROE.

A. First, the analyst must select the rate of return for a riskless asset. Short-term assets such as 90-day Treasury Bills are considered to be virtually

riskless; the default risk is next to nothing and the inflation risk is negligible. Equity investors, however, typically have a longer planning horizon than the 90-day maturity of these instruments, so the return on these bills is not suitable for this CAPM process. Long-Term Treasury bonds, on the other hand, match the planning horizon and have yields that are closer to common equity returns. But these instruments are subject to substantial inflation risk and, therefore, are not riskless. Intermediate Treasury securities, those with maturities of three to five years, are a compromise solution. The inflation risk is smaller than that for long-term bonds and the maturity period corresponds to the time span for the EPS growth-rate estimates made by expert analysts that are relied upon in DCF analysis. Typically, I would use the Intermediate Treasury securities in my analysis for these reasons. However, as I explain below, I do not use Intermediate Treasury securities in my CAPM analysis in these proceedings.

Q. Are there reasons not to use the Intermediate Treasury securities in this docket?

A. Yes. Intermediate Treasury bonds' yields since the Federal Reserve took unusual measures to combat the Great Recession of December 2007-June 2009 have been low. Therefore, they are not appropriate for inclusion in CAPM analysis at this time.

Q. Which security do you use as the riskless asset in your CAPM analysis?

A. I use the average yield on a 30-year Treasury bond for October 20, 2014-November 14, 2014 as my riskless asset rate. This average yield is 3.05 percent. See Exhibit ____ (MFG-5), Schedule 1. However, the 30-year Treasury bond is not a free-risk asset. The yield on 30-year Treasury bonds incorporates a risk-premium associated with interest risk, which is the premium investors must be paid to induce them to forego the opportunity of possibly earning higher interest rates later. Therefore, using 30-year Treasury bonds in a CAPM analysis may result in an upward bias of the ROE.

Q. What value do you use for beta (β)?

A. I use the betas for each company in the Revised OCA Comparison Group provided in their respective issues of the Value Line Investment survey. The average beta for the 22 companies in the Revised OCA Comparison Group is 0.75. See Exhibit___ (MFG-5), Schedule 2. A beta of 1 indicates that a company's share price will move with market, while a beta higher than 1 indicates that a stock will be more volatile than the market, and a beta lower than 1 indicates that a stock will be less volatile than the market.

Q. What else is involved in your calculation?

A. I need to calculate a market rate of return. The term within parentheses in the CAPM equation often is called the market "risk premium." It typically is calculated as a unit using historical data.

Q. What method do you use to find the market risk premium?

A. I employ forecast data from Value Line regarding dividend yield and growth rates for the broad economy (1,700 stocks), combined with the 30-year bond and beta information referenced above. See Exhibit____ (MFG-5), Schedule 3. Using these inputs means my CAPM calculation is forward-looking.

Q. What is the result of your CAPM analysis?

A. My CAPM analysis yields an ROE value of 8.08 percent. An important assumption is spreading the forecast growth over four years, the midpoint of the 3- to 5-year period to which the forecast applies. See Exhibit_____ (MFG-5), Schedule 4.

Q. Please discuss how the CAPM analysis affects your ROE recommendation.

A. Reiterating, the mean ROE from my DCF analysis of the Revised OCA Comparison Group is 9.27 percent. My CAPM analysis yielded 8.08 percent. This value is outside the low end (8.47 percent) of my DCF ROE

range. While not definitive due to the identified shortcomings of the CAPM, this outcome indicates that I should look no higher than the midpoint of my DCF analysis for a recommended ROE for the Companies.

Q. What is your recommended ROE for the Companies?

A. My recommended ROE for the Companies is the midpoint of my DCF analysis, 9.27 percent.

Q. Have you made any adjustments to your ROE to accommodate other factors?

A. No. An advantage of the DCF model is that it incorporates factors that affect investors' view of the world and does not require ad hoc adjustments. The share price of common equity is the mechanism through which most of these influences are felt. For example, if investors are optimistic about the economy in general or about a specific company, the share price of that company will be higher, all other things being equal. If investors have qualms about the economy or the company, its share price will be lower. Either case affects the ROE of the company, one making it lower and the other higher. It is a strength of the DCF model that analysts do not have to be correct about the reason(s) investors send share prices one way or another; the analysts just have to observe the share prices and correctly input them into the model.

Q. The Companies have suggested that their ROE awards should be at the top end of cost of capital witness Dr. Michael J. Vilbert's range because they have provided reliable service and good customer service. Do you agree?

A. No. OCA witness Barbara R. Alexander has documented that the Companies have provided low or average customer service as compared to other Pennsylvania EDCs, and that service reliability has generally deteriorated. West Penn, in particular, is singled out by Ms. Alexander as needing to improve customer service. She recommends that the Commission order West Penn to raise its performance to the level of the other FirstEnergy Companies. Met-Ed, Penelec, and West Penn, additionally, have not performed well in billing practices. Ms. Alexander also cites one or more of the Companies for shortcomings in other service categories. Therefore, I do not agree that the Companies have provided reliable service and good customer service as the Companies suggest. They certainly should not be rewarded with ROE awards at the top of Dr. Vilbert's range as the Companies advocate.

Q. Why have you not recommended ROE awards for the Companies below the midpoint of your DCF analysis range?

A. My analysis is strictly quantitative. Ms. Alexander raises numerous concerns as to the customer service, quality, and reliability of service for these companies. The Commission should consider these concerns when

setting the ROE. In keeping with Commission practice, reductions of 10 to 25 basis points from my quantitative recommendation could be appropriate, with the larger reductions made for the Companies with the least adequate service.

VIII. APPROPRIATE CAPITAL STRUCTURE FOR RATEMAKING

Q. What capital structures have the Companies proposed to use in this general rate case?

A. The Companies have submitted individual proposed capital structures in Exhibit RAD-1.

Q. Do you accept the Companies' proposed capital structure ratios?

A. Yes, provisionally. I recommend that the Companies update their exhibits to report on how closely their actual capital structures have tracked with their projected capital structures included in their initial filings. I will evaluate these updates in my Surrebuttal Testimony. In the meantime, I have adopted the proposed capital structures of the Companies for ratemaking purposes in my Direct Testimony.

IX. RECOMMENDED CAPITAL STRUCTURE AND OVERALL RATE OF RETURN

Q. What costs of long-term debt did you use in your calculations?

A. I reviewed the Companies' calculations for long-term debt cost as part of my analysis of the Companies' proposed capital structure. Based on the information available at this time, I conclude that these calculations are reasonable. Therefore, I have used the Companies' proposed costs in my calculations. See Exhibit ____ (MFG-4), Schedule 1.

Q. What is your recommendation regarding the overall rate of return (ROR) for the Companies?

A. I multiply the long-term debt and the common-equity ratios by their appropriate cost rates. The sum of these weighted costs is the overall rate of return on capital. See Exhibit ____ (MFG-4), Schedule 2.

Q. Please summarize your recommendations.

A. MFG-4, Schedule 2 shows that when I include my recommended ROE of 9.27 percent, I obtain an overall rate of return (ROR) of 7.24 percent for Met Ed, 7.49 percent for Penelec, 7.69 percent for Penn Power, and 7.33 percent for West Penn. Based on the information available at this time, I recommend that the Commission approve these RORs as the representative forward-looking costs of capital for the Companies' test year. I do note that should the Commission adjust any or all of the

Companies' ROEs downward for customer service and reliability of service shortcomings, the corresponding RORs will also have to be adjusted downward using the same formulation I describe above.

X. CRITIQUE OF THE COMPANIES' ANALYSIS

Q. How does your ROE recommendation compare with the recommendation by the Companies?

A. Dr. Vilbert recommends an ROE of 10.9 percent, compared with my recommendation of 9.27 percent.

Q. What methods does Dr. Vilbert use to arrive at his recommendation?

A. Dr. Vilbert uses a DCF model and the CAPM in his analysis.

Q. How does Dr. Vilbert arrive at his ROE recommendation?

A. Dr. Vilbert performs two DCF analyses that he concludes yield a high ROE estimate of 10.9 percent. He also presents a CAPM analysis and ECAPM analysis in which he produces an ROE estimate of 9.3 percent. This yields his range of 9.3 percent to 10.9 percent.[5] He supports choosing the top end of his range by asserting that continuing uncertainty in the capital markets justifies the higher ROE.

[5] Variations on the basic methods, such as a multi-stage DCF analysis, produce outcomes between the top and bottom of Dr. Vilbert's range.

Q. Please explain the difference between your recommended return on equity and Dr. Vilbert's corresponding recommendation.

A. There are three factors that can explain at least part of the difference in our ROE recommendations. Two are likely minor contributors, while the third is very important.

1. Difference in Dates

Q. When did Dr. Vilbert prepare his analysis?

A. Dr. Vilbert prepared his analysis a few months ago, so he is relying on different information than I am. However, the difference in growth-rate estimates, dividends paid, and share prices, while not zero, likely is not a large factor in explaining the differences. If Dr. Vilbert updates his ROE calculations in his rebuttal, it is likely that any such gap will be reduced because we will be working with data that has a greater overlap than exists between the data sets we used in our direct testimonies.

2. Difference in Comparison Companies

Q. Does the membership of the proxy companies that you and Dr. Vilbert use in your DCF analyses differ?

A. Yes. Although Dr. Vilbert and I chose many of the same companies, the groups are not identical. Hence, small differences in the outcome of our analyses are likely attributable to this factor.

3. Difference in DCF Methods

Q. How do you and Dr. Vilbert agree in your DCF Approach?

A. Dr. Vilbert calculates his basic DCF ROE the same way that I do. See Table No. MJV-7 from Exhibit ____ (MJV-1), page 48 of 67. Column 3 of this table is labeled "DCF Cost of Equity," and is equivalent to the DCF ROE estimate found in Column I of my Exhibit ____ (MFG-3), Schedule 1, at least in how the values are calculated.

Q. How does Dr. Vilbert depart from your DCF Approach?

A. Instead of stopping at this point, Dr. Vilbert asserts that it is necessary to use the After-Tax Weighted-Average Cost of Capital (ATWACC) to adjust the ROE value to reflect the differences in risk of companies caused by differences in their capital structures. In this proceeding, he states that he is converting all of the companies from their various capital structures to the proposed capital structures of the Companies so that there is a common basis for deriving the ROEs.

Q. What are the mathematics of Dr. Vilbert's procedure?

A. Dr. Vilbert uses the DCF ROE for each company and the equity and debt ratios of its capital structure (along with the income tax rate for each company) as inputs into the ATWACC formula to find the "Overall After-Tax Cost of Capital" for each firm. The values yielded are shown in Column 10 of Table MJV-7. Dr. Vilbert then finds the mean of these

ATWACC values. At this point, he engages in a "what-if" exercise, taking the mean ATWACC value and substituting it into the ATWACC formula along with the equity and debt ratios for the Companies, the cost of debt, and the income tax rate. Note that ROE is the unknown variable.

Q. What is the interpretation of the ROE that Dr. Vilbert finds?

A. By manipulating terms in the formula according to rules of simple algebra, he arrives at the "Estimated Return on Equity" found in Column 6 of Table MJV-8. Dr. Vilbert asserts that this value is the appropriate ROE for the Companies because it incorporates risk differences due to capital structure differences. In effect, he is saying that the new ROE is what his proxy companies would need to earn if they had the Companies' proposed capital structure.

Q. Do you have a comment about Dr. Vilbert's Estimated Return on Equity?

A. Yes. When the market value of equity shares exceeds the book value of the shares, the Estimated Return on Equity exceeds the DCF ROE.[6] The market value of equity for the companies that Dr. Vilbert and I use to calculate our DCF ROEs is larger than the book value of that equity, so the ATWACC process artificially increases the ROE over what it would be using the typical DCF method. The ATWACC step is the main factor

[6] When the book value and market value are equal, the DCF ROE and the Estimated Return on Equity are equal; and when book value is greater than market value, the DCF ROE is the higher of the two.

causing Dr. Vilbert's ROE—for purposes of ratemaking—in this proceeding to be more than a full percentage point higher than the ROE I obtained.

Q. What is your response to the ATWACC adjustment?

A. The Companies assert that differences in leverage (how much debt versus equity there is in a capital structure) are not captured by the DCF process. As I said in my earlier discussion about the strengths of DCF, the model **does** capture such differences. Again, the main mechanism is the share price of common equity, but the expert analysts who make growth-rate projections also are aware of leverage as a factor in a company's financial performance and incorporate it in their forecasts. Thus, investors—who have access to market value versus book value information and typically are fully informed about the effects of leverage on risk—and expert analysts, incorporate leverage into their decisions about buying common equity shares and issuing growth-rate forecasts. Therefore, the ATWACC process serves no purpose in ratemaking. The Commission should reject the DCF ROE estimates of Dr. Vilbert that the ATWACC process yields. If it does not, the ROE in this proceeding will be artificially inflated in favor of the Companies.

Q. Has the Commission dealt with proposals using leverage in the process of estimating ROE in previous proceedings?

A. Yes. The Commission has heard leverage-based proposals to increase ROE in Docket No. R-00061366, Metropolitan Edison, Pennsylvania Electric; Docket No. R-00072711, Aqua Pennsylvania, Inc.; and Docket No. R-2012-2290597, PPL Electric Utilities Corporation, among other recent proceedings. The proposals in these proceedings may have differed in the mathematics of the leverage proposals, but they were all rejected by the Commission.

Q. Do you have experience dealing with proposed leverage-based ROE adjustments?

A. Yes. As the cost of capital witness for the Minnesota Department of Commerce (Minnesota's advocacy agency), I opposed leverage adjustment proposals made by Paul Moul (who has appeared before the Commission as a cost of capital witness) before the Minnesota Public Utilities Commission (MPUC) in Docket No. G007,011/GR-08-835, and Docket No. G007,011/GR-10-977. Mr. Moul appeared on behalf of Minnesota Energy Resources Corporation in those proceedings; his proposals were rejected by the MPUC.

Q. Has Dr. Vilbert's ATWACC adjustment been accepted in any other jurisdictions?

A. The ATWACC adjustment recommended by Dr. Vilbert has been presented in many regulatory jurisdictions. To the best of my knowledge, it has been rejected by all of those jurisdictions, with the exception of one jurisdiction in Canada. When given the opportunity in OCA Interrogatory Set VI, No. 5 to identify jurisdictions in which the ATWACC was accepted, Dr. Vilbert's reply was that he does not keep a file of this information.

XI. SUMMARY

Q. What are the criteria the Commission should consider in setting the Companies' ROE and ROR?

A. The Commission should only consider whether the ROE and ROR meet the *Bluefield* and *Hope* criteria for a fair return. Recounting, these criteria include returns commensurate with returns being earned on other investments with equivalent risks, rate of return sufficient to enable the utility to attract capital, and returns sufficient to enable the regulated company to maintain its credit rating and financial integrity. The interpretation of the *Hope* and *Bluefield* criteria is that a company should be given the opportunity to earn a ROE and ROR sufficient to meet these standards.

Q. What is your recommended return on equity and overall cost of capital?

A. I recommend a ROE of 9.27 percent and RORs of 7.24 percent for Met-Ed, 7.49 percent for Penelec, 7.69 percent for Penn Power, and 7.33 percent for West Penn when this ROE is used as an input for the weighted-average cost of capital for each Company.

Q. Does this conclude your testimony?

A. Yes, however I reserve the right to update this testimony as may be necessary.

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SCHEDULES

PENELEC

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
OCA Comparison Group
Initial Set of Value Line Electric Utility Companies

Docket Nos. R-2014-2428745
R-2014-2428743
R-2014-2428744
R-2014-2428742
Exhibit No. _____ (MFG-1)

OCA Comparison Group-- Initial Set	**OCA Comparison Group-- Screened**
Allete*	Allete*
Alliant Energy*	Alliant Energy*
Ameren*	Ameren*
American Electric Power*	American Electric Power*
Black Hills Corp.**	Black Hills Corp.**
CenterPoint Energy*	CenterPoint Energy*
Cleco*	Cleco*
CMS Energy*	CMS Energy*
Consolidated Edison***	Consolidated Edison***
Dominion Resources***	Dominion Resources***
DTE Energy*	DTE Energy*
Duke Energy ***	Duke Energy ***
Edison International**	Edison International**
El Paso Electric**	El Paso Electric**
Entergy*	Entergy*
Great Plains Energy*	Great Plains Energy*
Idacorp**	Idacorp**
NextEra Energy***	NextEra Energy***
Northeast Utilities***	Northeast Utilities***
OGE Energy*	OGE Energy*
Otter Tail*	Otter Tail*
Pinnacle West Capital**	Pinnacle West Capital**
PNM Resources**	PNM Resources**
Portland General Electric**	Portland General Electric**
PSEG***	PSEG***
SCANA***	SCANA***
Sempra Energy**	Sempra Energy**
Southern Co.***	Southern Co.***
Vectren Corp.*	Vectren Corp.*
Westar Energy*	Westar Energy*
Xcel Energy**	Xcel Energy**
MGE Energy*	
Integrys*	
Wisconsin Energy*	
Pepco Holdings***	
TECO Energy***	
UIL Holdings***	
Avista**	
Northwestern Corp.**	
PG&E**	
Hawaiian Electric Industries**	

Value Line Investment Survey: Electric Utilities (Central), September 19, 2014;* Electric Utilities (West), October 31, 2014;** Electric Utilities (East), November 21, 2014.***

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
Common Equity Share Prices

Docket Nos. R-2014-2428745
R-2014-2428743
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Allete

Date	Close
14-Nov-14	$ 49.83
13-Nov-14	$ 50.07
12-Nov-14	$ 51.25
11-Nov-14	$ 52.17
10-Nov-14	$ 52.65
7-Nov-14	$ 52.25
6-Nov-14	$ 51.81
5-Nov-14	$ 52.77
4-Nov-14	$ 52.49
3-Nov-14	$ 52.17
31-Oct-14	$ 52.24
30-Oct-14	$ 52.19
29-Oct-14	$ 50.92
28-Oct-14	$ 51.17
27-Oct-14	$ 50.25
24-Oct-14	$ 50.18
23-Oct-14	$ 49.97
22-Oct-14	$ 49.62
21-Oct-14	$ 49.50
20-Oct-14	$ 49.39
	$ 51.14

Alliant Energy

Date	Close
14-Nov-14	$ 61.77
13-Nov-14	$ 61.78
12-Nov-14	$ 62.49
11-Nov-14	$ 63.43
10-Nov-14	$ 63.40
7-Nov-14	$ 62.75
6-Nov-14	$ 61.79
5-Nov-14	$ 63.09
4-Nov-14	$ 61.82
3-Nov-14	$ 62.39
31-Oct-14	$ 61.91
30-Oct-14	$ 61.91
29-Oct-14	$ 60.40
28-Oct-14	$ 61.02
27-Oct-14	$ 60.59
24-Oct-14	$ 60.36
23-Oct-14	$ 60.09
22-Oct-14	$ 59.98
21-Oct-14	$ 59.70
20-Oct-14	$ 59.26
	$ 61.50

Ameren

Date	Close
14-Nov-14	$ 42.21
13-Nov-14	$ 42.39
12-Nov-14	$ 42.72
11-Nov-14	$ 43.31
10-Nov-14	$ 43.32
7-Nov-14	$ 43.31
6-Nov-14	$ 42.42
5-Nov-14	$ 43.40
4-Nov-14	$ 42.40
3-Nov-14	$ 43.04
31-Oct-14	$ 42.34
30-Oct-14	$ 42.58
29-Oct-14	$ 41.41
28-Oct-14	$ 41.67
27-Oct-14	$ 41.23
24-Oct-14	$ 41.24
23-Oct-14	$ 41.01
22-Oct-14	$ 40.70
21-Oct-14	$ 40.48
20-Oct-14	$ 40.46
	$ 42.08

American Electric Power

Date	Close
14-Nov-14	$ 56.06
13-Nov-14	$ 56.31
12-Nov-14	$ 56.87
11-Nov-14	$ 57.94
10-Nov-14	$ 58.38
7-Nov-14	$ 58.32
6-Nov-14	$ 57.87
5-Nov-14	$ 59.74
4-Nov-14	$ 58.13
3-Nov-14	$ 58.65
31-Oct-14	$ 58.34
30-Oct-14	$ 58.27
29-Oct-14	$ 56.76
28-Oct-14	$ 56.59
27-Oct-14	$ 56.76
24-Oct-14	$ 56.47
23-Oct-14	$ 55.28
22-Oct-14	$ 55.92
21-Oct-14	$ 55.56
20-Oct-14	$ 55.36
	$ 57.18

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
Common Equity Share Prices

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Black Hills Corp.		CenterPoint Energy		Cleco Corporation		CMS Energy	
Date	Close	Date	Close	Date	Close	Date	Close
14-Nov-14	$ 53.89	14-Nov-14	$ 24.04	14-Nov-14	$ 53.36	14-Nov-14	$ 32.15
13-Nov-14	$ 54.42	13-Nov-14	$ 24.19	13-Nov-14	$ 53.51	13-Nov-14	$ 32.31
12-Nov-14	$ 55.81	12-Nov-14	$ 24.57	12-Nov-14	$ 53.52	12-Nov-14	$ 32.48
11-Nov-14	$ 56.63	11-Nov-14	$ 25.30	11-Nov-14	$ 53.57	11-Nov-14	$ 33.26
10-Nov-14	$ 56.86	10-Nov-14	$ 25.38	10-Nov-14	$ 53.76	10-Nov-14	$ 33.20
7-Nov-14	$ 56.66	7-Nov-14	$ 25.23	7-Nov-14	$ 53.51	7-Nov-14	$ 32.91
6-Nov-14	$ 56.01	6-Nov-14	$ 24.94	6-Nov-14	$ 53.38	6-Nov-14	$ 32.37
5-Nov-14	$ 56.83	5-Nov-14	$ 25.13	5-Nov-14	$ 53.29	5-Nov-14	$ 33.21
4-Nov-14	$ 55.29	4-Nov-14	$ 24.64	4-Nov-14	$ 53.62	4-Nov-14	$ 32.80
3-Nov-14	$ 54.51	3-Nov-14	$ 24.88	3-Nov-14	$ 53.78	3-Nov-14	$ 32.99
31-Oct-14	$ 54.73	31-Oct-14	$ 24.55	31-Oct-14	$ 53.76	31-Oct-14	$ 32.67
30-Oct-14	$ 54.60	30-Oct-14	$ 24.41	30-Oct-14	$ 53.62	30-Oct-14	$ 32.77
29-Oct-14	$ 53.26	29-Oct-14	$ 24.20	29-Oct-14	$ 53.50	29-Oct-14	$ 32.15
28-Oct-14	$ 53.20	28-Oct-14	$ 24.29	28-Oct-14	$ 53.50	28-Oct-14	$ 32.33
27-Oct-14	$ 52.13	27-Oct-14	$ 24.01	27-Oct-14	$ 53.50	27-Oct-14	$ 32.11
24-Oct-14	$ 51.72	24-Oct-14	$ 24.00	24-Oct-14	$ 53.40	24-Oct-14	$ 32.09
23-Oct-14	$ 52.16	23-Oct-14	$ 23.82	23-Oct-14	$ 53.27	23-Oct-14	$ 31.93
22-Oct-14	$ 51.61	22-Oct-14	$ 23.52	22-Oct-14	$ 53.14	22-Oct-14	$ 31.73
21-Oct-14	$ 51.42	21-Oct-14	$ 23.87	21-Oct-14	$ 53.42	21-Oct-14	$ 31.56
20-Oct-14	$ 50.13	20-Oct-14	$ 23.54	20-Oct-14	$ 53.24	20-Oct-14	$ 31.37
	$ 54.09		$ 24.43		$ 53.48		$ 32.42

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
Common Equity Share Prices

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Exhibit No. _____, (MFG-2), Schedule 1, page 3 of 8

Consolidated Edison		Dominion Resources		DTE Energy		Duke Energy	
Date	Close	Date	Close	Date	Close	Date	Close
14-Nov-14	$ 62.03	14-Nov-14	$ 71.57	14-Nov-14	$ 79.87	14-Nov-14	$ 79.11
13-Nov-14	$ 62.00	13-Nov-14	$ 72.26	13-Nov-14	$ 79.78	13-Nov-14	$ 78.99
12-Nov-14	$ 62.25	12-Nov-14	$ 72.71	12-Nov-14	$ 80.90	12-Nov-14	$ 79.85
11-Nov-14	$ 63.46	11-Nov-14	$ 73.91	11-Nov-14	$ 82.79	11-Nov-14	$ 82.66
10-Nov-14	$ 63.47	10-Nov-14	$ 74.36	10-Nov-14	$ 83.85	10-Nov-14	$ 82.81
7-Nov-14	$ 63.57	7-Nov-14	$ 73.89	7-Nov-14	$ 83.31	7-Nov-14	$ 82.08
6-Nov-14	$ 63.25	6-Nov-14	$ 73.08	6-Nov-14	$ 82.67	6-Nov-14	$ 81.17
5-Nov-14	$ 64.64	5-Nov-14	$ 74.18	5-Nov-14	$ 84.16	5-Nov-14	$ 83.50
4-Nov-14	$ 63.38	4-Nov-14	$ 71.82	4-Nov-14	$ 82.39	4-Nov-14	$ 82.23
3-Nov-14	$ 63.60	3-Nov-14	$ 72.56	3-Nov-14	$ 82.80	3-Nov-14	$ 82.38
31-Oct-14	$ 63.36	31-Oct-14	$ 71.30	31-Oct-14	$ 82.16	31-Oct-14	$ 82.15
30-Oct-14	$ 63.54	30-Oct-14	$ 71.58	30-Oct-14	$ 81.99	30-Oct-14	$ 82.29
29-Oct-14	$ 62.28	29-Oct-14	$ 70.17	29-Oct-14	$ 80.05	29-Oct-14	$ 80.27
28-Oct-14	$ 62.88	28-Oct-14	$ 70.71	28-Oct-14	$ 81.20	28-Oct-14	$ 80.72
27-Oct-14	$ 62.69	27-Oct-14	$ 70.36	27-Oct-14	$ 80.61	27-Oct-14	$ 80.61
24-Oct-14	$ 62.50	24-Oct-14	$ 70.72	24-Oct-14	$ 80.20	24-Oct-14	$ 80.30
23-Oct-14	$ 62.01	23-Oct-14	$ 70.10	23-Oct-14	$ 80.00	23-Oct-14	$ 80.07
22-Oct-14	$ 61.90	22-Oct-14	$ 70.03	22-Oct-14	$ 79.86	22-Oct-14	$ 80.16
21-Oct-14	$ 61.07	21-Oct-14	$ 70.01	21-Oct-14	$ 79.75	21-Oct-14	$ 79.08
20-Oct-14	$ 61.46	20-Oct-14	$ 69.47	20-Oct-14	$ 78.64	20-Oct-14	$ 79.50
	$ 62.77		$ 71.74		$ 81.35		$ 81.00

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
Common Equity Share Prices

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Edison International		El Paso Electric		Entergy Corp.		Great Plains Energy	
Date	Close	Date	Close	Date	Close	Date	Close
14-Nov-14	$ 61.76	14-Nov-14	$ 37.55	14-Nov-14	$ 81.45	14-Nov-14	$ 26.38
13-Nov-14	$ 61.68	13-Nov-14	$ 37.73	13-Nov-14	$ 81.68	13-Nov-14	$ 26.43
12-Nov-14	$ 62.40	12-Nov-14	$ 38.40	12-Nov-14	$ 81.62	12-Nov-14	$ 26.72
11-Nov-14	$ 63.21	11-Nov-14	$ 39.04	11-Nov-14	$ 82.96	11-Nov-14	$ 27.15
10-Nov-14	$ 63.08	10-Nov-14	$ 39.48	10-Nov-14	$ 83.29	10-Nov-14	$ 27.15
7-Nov-14	$ 62.38	7-Nov-14	$ 39.20	7-Nov-14	$ 82.68	7-Nov-14	$ 27.00
6-Nov-14	$ 61.99	6-Nov-14	$ 38.70	6-Nov-14	$ 81.96	6-Nov-14	$ 26.92
5-Nov-14	$ 63.02	5-Nov-14	$ 39.36	5-Nov-14	$ 83.70	5-Nov-14	$ 27.30
4-Nov-14	$ 62.31	4-Nov-14	$ 38.95	4-Nov-14	$ 82.47	4-Nov-14	$ 26.88
3-Nov-14	$ 63.24	3-Nov-14	$ 38.95	3-Nov-14	$ 83.85	3-Nov-14	$ 27.05
31-Oct-14	$ 62.58	31-Oct-14	$ 37.84	31-Oct-14	$ 84.02	31-Oct-14	$ 26.93
30-Oct-14	$ 62.56	30-Oct-14	$ 37.85	30-Oct-14	$ 84.24	30-Oct-14	$ 26.89
29-Oct-14	$ 61.38	29-Oct-14	$ 37.70	29-Oct-14	$ 82.06	29-Oct-14	$ 26.33
28-Oct-14	$ 61.76	28-Oct-14	$ 37.78	28-Oct-14	$ 81.88	28-Oct-14	$ 26.44
27-Oct-14	$ 60.87	27-Oct-14	$ 37.35	27-Oct-14	$ 82.11	27-Oct-14	$ 26.21
24-Oct-14	$ 60.65	24-Oct-14	$ 37.35	24-Oct-14	$ 82.14	24-Oct-14	$ 26.21
23-Oct-14	$ 59.85	23-Oct-14	$ 37.43	23-Oct-14	$ 81.29	23-Oct-14	$ 26.24
22-Oct-14	$ 60.33	22-Oct-14	$ 37.50	22-Oct-14	$ 80.94	22-Oct-14	$ 26.15
21-Oct-14	$ 59.93	21-Oct-14	$ 36.75	21-Oct-14	$ 80.00	21-Oct-14	$ 25.93
20-Oct-14	$ 59.82	20-Oct-14	$ 36.46	20-Oct-14	$ 79.84	20-Oct-14	$ 25.67
	$ 61.74		$ 38.07		$ 82.21		$ 26.60

*-Entergy has been removed from consideration for the OCA Comparison Group but remains in the analysis in order to show its negative growth-rate projection.

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
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Idacorp		Nextera Energy		Northeast Utilities		OGE Energy	
Date	Close	Date	Close	Date	Close	Date	Close
14-Nov-14	$ 60.86	14-Nov-14	$ 101.85	14-Nov-14	$ 48.80	14-Nov-14	$ 36.35
13-Nov-14	$ 61.18	13-Nov-14	$ 102.27	13-Nov-14	$ 49.27	13-Nov-14	$ 36.43
12-Nov-14	$ 62.07	12-Nov-14	$ 103.09	12-Nov-14	$ 49.49	12-Nov-14	$ 37.43
11-Nov-14	$ 62.91	11-Nov-14	$ 104.80	11-Nov-14	$ 50.54	11-Nov-14	$ 37.77
10-Nov-14	$ 63.10	10-Nov-14	$ 105.61	10-Nov-14	$ 50.73	10-Nov-14	$ 37.83
7-Nov-14	$ 62.55	7-Nov-14	$ 104.73	7-Nov-14	$ 50.70	7-Nov-14	$ 37.72
6-Nov-14	$ 61.94	6-Nov-14	$ 103.95	6-Nov-14	$ 49.50	6-Nov-14	$ 37.33
5-Nov-14	$ 62.77	5-Nov-14	$ 104.88	5-Nov-14	$ 50.83	5-Nov-14	$ 37.42
4-Nov-14	$ 61.83	4-Nov-14	$ 100.96	4-Nov-14	$ 49.51	4-Nov-14	$ 37.06
3-Nov-14	$ 63.20	3-Nov-14	$ 100.81	3-Nov-14	$ 49.58	3-Nov-14	$ 37.33
31-Oct-14	$ 63.23	31-Oct-14	$ 100.22	31-Oct-14	$ 49.35	31-Oct-14	$ 37.29
30-Oct-14	$ 63.19	30-Oct-14	$ 99.91	30-Oct-14	$ 49.35	30-Oct-14	$ 37.22
29-Oct-14	$ 61.58	29-Oct-14	$ 98.60	29-Oct-14	$ 48.35	29-Oct-14	$ 36.74
28-Oct-14	$ 61.65	28-Oct-14	$ 99.13	28-Oct-14	$ 48.78	28-Oct-14	$ 37.03
27-Oct-14	$ 60.30	27-Oct-14	$ 98.09	27-Oct-14	$ 48.45	27-Oct-14	$ 36.95
24-Oct-14	$ 59.93	24-Oct-14	$ 98.36	24-Oct-14	$ 48.59	24-Oct-14	$ 36.82
23-Oct-14	$ 59.57	23-Oct-14	$ 97.80	23-Oct-14	$ 48.41	23-Oct-14	$ 36.89
22-Oct-14	$ 59.14	22-Oct-14	$ 96.53	22-Oct-14	$ 48.07	22-Oct-14	$ 36.60
21-Oct-14	$ 58.66	21-Oct-14	$ 95.52	21-Oct-14	$ 47.81	21-Oct-14	$ 36.63
20-Oct-14	$ 58.13	20-Oct-14	$ 95.13	20-Oct-14	$ 48.07	20-Oct-14	$ 36.22
	$ 61.39		$ 100.61		$ 49.21		$ 37.05

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Exhibit No. _____, (MFG-2), Schedule 1, page 6 of 8

Otter Tail Corp.	
Date	Close
14-Nov-14	$ 29.17
13-Nov-14	$ 29.39
12-Nov-14	$ 30.15
11-Nov-14	$ 31.14
10-Nov-14	$ 31.24
7-Nov-14	$ 30.94
6-Nov-14	$ 30.76
5-Nov-14	$ 31.18
4-Nov-14	$ 30.80
3-Nov-14	$ 30.83
31-Oct-14	$ 31.00
30-Oct-14	$ 30.82
29-Oct-14	$ 30.00
28-Oct-14	$ 29.78
27-Oct-14	$ 29.46
24-Oct-14	$ 29.13
23-Oct-14	$ 29.40
22-Oct-14	$ 29.06
21-Oct-14	$ 29.06
20-Oct-14	$ 29.17
	$ 30.12

Pinnacle West	
Date	Close
14-Nov-14	$ 60.79
13-Nov-14	$ 61.23
12-Nov-14	$ 61.80
11-Nov-14	$ 62.82
10-Nov-14	$ 62.81
7-Nov-14	$ 62.50
6-Nov-14	$ 61.79
5-Nov-14	$ 62.89
4-Nov-14	$ 61.66
3-Nov-14	$ 62.25
31-Oct-14	$ 61.47
30-Oct-14	$ 60.52
29-Oct-14	$ 59.76
28-Oct-14	$ 59.77
27-Oct-14	$ 59.61
24-Oct-14	$ 59.17
23-Oct-14	$ 59.10
22-Oct-14	$ 58.73
21-Oct-14	$ 58.52
20-Oct-14	$ 58.50
	$ 60.78

PNM Resources	
Date	Close
14-Nov-14	$ 28.42
13-Nov-14	$ 28.44
12-Nov-14	$ 28.74
11-Nov-14	$ 29.23
10-Nov-14	$ 29.33
7-Nov-14	$ 29.22
6-Nov-14	$ 28.94
5-Nov-14	$ 29.45
4-Nov-14	$ 29.06
3-Nov-14	$ 29.21
31-Oct-14	$ 28.85
30-Oct-14	$ 28.69
29-Oct-14	$ 28.04
28-Oct-14	$ 28.35
27-Oct-14	$ 27.83
24-Oct-14	$ 27.97
23-Oct-14	$ 27.68
22-Oct-14	$ 27.70
21-Oct-14	$ 27.59
20-Oct-14	$ 27.21
	$ 28.50

Portland General	
Date	Close
14-Nov-14	$ 35.69
13-Nov-14	$ 35.76
12-Nov-14	$ 36.30
11-Nov-14	$ 37.14
10-Nov-14	$ 37.10
7-Nov-14	$ 36.73
6-Nov-14	$ 36.51
5-Nov-14	$ 37.05
4-Nov-14	$ 36.39
3-Nov-14	$ 36.57
31-Oct-14	$ 36.41
30-Oct-14	$ 36.41
29-Oct-14	$ 35.49
28-Oct-14	$ 35.38
27-Oct-14	$ 35.36
24-Oct-14	$ 35.54
23-Oct-14	$ 35.62
22-Oct-14	$ 35.17
21-Oct-14	$ 34.78
20-Oct-14	$ 34.33
	$ 35.99

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Exhibit No. _____, (MFG-2), Schedule 1, page 7 of 8

Public Service Enterprise Group		SCANA		Sempra Energy		Southern Co.	
Date	Close	Date	Close	Date	Close	Date	Close
14-Nov-14	$ 39.48	14-Nov-14	$ 55.55	14-Nov-14	$ 108.67	14-Nov-14	$ 46.64
13-Nov-14	$ 39.28	13-Nov-14	$ 55.99	13-Nov-14	$ 109.51	13-Nov-14	$ 46.94
12-Nov-14	$ 39.72	12-Nov-14	$ 56.32	12-Nov-14	$ 110.65	12-Nov-14	$ 47.10
11-Nov-14	$ 40.95	11-Nov-14	$ 57.01	11-Nov-14	$ 112.49	11-Nov-14	$ 47.58
10-Nov-14	$ 41.46	10-Nov-14	$ 56.73	10-Nov-14	$ 112.60	10-Nov-14	$ 47.59
7-Nov-14	$ 41.10	7-Nov-14	$ 56.53	7-Nov-14	$ 112.49	7-Nov-14	$ 47.13
6-Nov-14	$ 40.72	6-Nov-14	$ 55.86	6-Nov-14	$ 112.84	6-Nov-14	$ 47.01
5-Nov-14	$ 41.97	5-Nov-14	$ 56.67	5-Nov-14	$ 113.44	5-Nov-14	$ 47.96
4-Nov-14	$ 41.17	4-Nov-14	$ 55.35	4-Nov-14	$ 110.90	4-Nov-14	$ 46.94
3-Nov-14	$ 41.62	3-Nov-14	$ 55.53	3-Nov-14	$ 110.84	3-Nov-14	$ 46.77
31-Oct-14	$ 41.31	31-Oct-14	$ 54.89	31-Oct-14	$ 110.00	31-Oct-14	$ 46.36
30-Oct-14	$ 40.73	30-Oct-14	$ 54.32	30-Oct-14	$ 110.49	30-Oct-14	$ 46.45
29-Oct-14	$ 39.47	29-Oct-14	$ 53.24	29-Oct-14	$ 108.51	29-Oct-14	$ 46.42
28-Oct-14	$ 39.57	28-Oct-14	$ 53.79	28-Oct-14	$ 109.04	28-Oct-14	$ 47.37
27-Oct-14	$ 39.46	27-Oct-14	$ 53.19	27-Oct-14	$ 107.76	27-Oct-14	$ 47.38
24-Oct-14	$ 39.57	24-Oct-14	$ 53.33	24-Oct-14	$ 107.86	24-Oct-14	$ 47.41
23-Oct-14	$ 38.87	23-Oct-14	$ 53.05	23-Oct-14	$ 106.64	23-Oct-14	$ 47.21
22-Oct-14	$ 38.86	22-Oct-14	$ 52.77	22-Oct-14	$ 105.84	22-Oct-14	$ 47.19
21-Oct-14	$ 38.76	21-Oct-14	$ 52.45	21-Oct-14	$ 105.82	21-Oct-14	$ 46.93
20-Oct-14	$ 38.16	20-Oct-14	$ 52.17	20-Oct-14	$ 104.60	20-Oct-14	$ 46.78
	$ 40.11		$ 54.74		$ 109.55		$ 47.06

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
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Exhibit No. ____, (MFG-2), Schedule 1, page 8 of 8

Vectren Corp.		Westar Energy		Xcel Energy	
Date	Close	Date	Close	Date	Close
14-Nov-14	$ 44.11	14-Nov-14	$ 38.39	14-Nov-14	$ 33.04
13-Nov-14	$ 44.44	13-Nov-14	$ 38.72	13-Nov-14	$ 33.22
12-Nov-14	$ 45.47	12-Nov-14	$ 38.95	12-Nov-14	$ 33.41
11-Nov-14	$ 45.86	11-Nov-14	$ 39.44	11-Nov-14	$ 33.88
10-Nov-14	$ 45.60	10-Nov-14	$ 39.21	10-Nov-14	$ 33.99
7-Nov-14	$ 45.24	7-Nov-14	$ 39.09	7-Nov-14	$ 33.60
6-Nov-14	$ 44.87	6-Nov-14	$ 38.26	6-Nov-14	$ 33.05
5-Nov-14	$ 45.86	5-Nov-14	$ 38.31	5-Nov-14	$ 34.09
4-Nov-14	$ 44.87	4-Nov-14	$ 37.82	4-Nov-14	$ 33.47
3-Nov-14	$ 45.14	3-Nov-14	$ 37.80	3-Nov-14	$ 33.75
31-Oct-14	$ 44.95	31-Oct-14	$ 37.81	31-Oct-14	$ 33.47
30-Oct-14	$ 45.26	30-Oct-14	$ 37.67	30-Oct-14	$ 33.52
29-Oct-14	$ 44.49	29-Oct-14	$ 37.09	29-Oct-14	$ 32.85
28-Oct-14	$ 44.60	28-Oct-14	$ 37.13	28-Oct-14	$ 33.08
27-Oct-14	$ 43.99	27-Oct-14	$ 36.79	27-Oct-14	$ 32.83
24-Oct-14	$ 43.83	24-Oct-14	$ 36.79	24-Oct-14	$ 32.90
23-Oct-14	$ 43.43	23-Oct-14	$ 36.55	23-Oct-14	$ 32.70
22-Oct-14	$ 42.98	22-Oct-14	$ 36.60	22-Oct-14	$ 32.70
21-Oct-14	$ 43.05	21-Oct-14	$ 36.38	21-Oct-14	$ 32.45
20-Oct-14	$ 42.39	20-Oct-14	$ 36.19	20-Oct-14	$ 32.28
	$ 44.52		$ 37.75		$ 33.21

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
OCA Comparison Group
DCF with Zacks, Yahoo! Finance, and Value Line EPS Growth-Rate Estimates, Equity Prices–September 2014-November 2014

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R-2014-2428743
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Exhibit No. _____ (MFG-3), Schedule 1

Company Name	A Zacks EPS Growth Rate (%)	B Yahoo! Finance EPS Growth Rates (%)	C Value Line EPS Growth Rates (%)	D Zacks-Yahoo! Finance-Value Line Mean Growth Rate (%)
Allete*	NA	6.00%	6.00%	6.00%
Alliant Energy*	4.90%	4.90%	6.00%	5.27%
Ameren*	8.30%	8.90%	4.50%	7.23%
American Electric Power*	4.90%	4.95%	4.50%	4.78%
Black Hills Corp.**	NA	7.00%	9.50%	8.25%
CenterPoint Energy*	4.80%	3.85%	3.50%	4.05%
Cleco*	4.00%	4.00%	3.50%	3.83%
CMS Energy*	6.10%	6.80%	6.50%	6.47%
Consolidated Edison***	3.00%	2.90%	2.00%	2.63%
Dominion Resources***	5.80%	6.70%	5.50%	6.00%
DTE Energy*	6.20%	6.10%	6.50%	6.27%
Duke Energy ***	4.70%	4.70%	5.00%	4.80%
Edison International**	8.10%	3.40%	2.50%	4.67%
El Paso Electric**	6.70%	7.00%	3.00%	5.57%
Entergy*	-1.00%	4.00%	1.00%	1.33%
Great Plains Energy*	5.00%	5.00%	6.00%	5.33%
Idacorp**	4.00%	4.00%	1.50%	3.17%
NextEra Energy***	6.65%	6.55%	6.00%	6.40%
Northeast Utilities***	6.65%	5.90%	8.00%	6.85%
OGE Energy*	6.55%	7.05%	5.50%	6.37%
Otter Tail*	NA	6.00%	15.50%	10.75%
Pinnacle West Capital**	3.95%	3.60%	4.00%	3.85%
PNM Resources**	8.50%	9.00%	11.00%	9.50%
Portland General Electric**	7.85%	7.85%	5.00%	6.90%
PSEG***	2.60%	1.75%	2.00%	2.12%
SCANA***	4.40%	4.65%	5.00%	4.68%
Sempra Energy**	7.45%	7.60%	7.00%	7.35%
Southern Co.***	3.65%	3.35%	3.50%	3.50%
Vectren Corp.*	5.00%	4.50%	9.00%	6.17%
Westar Energy*	3.80%	3.20%	6.00%	4.33%
Xcel Energy**	4.15%	4.35%	5.50%	4.67%

Company Name	E Average of Closing Prices	F Annualized Dividend	G Dividend Yield (Rate/Price)	H Expected Dividend Yield	I Mean Required Rate of Return on Equity
Allete*	$ 51.14	$ 1.96	3.83%	3.95%	9.95%
Alliant Energy*	$ 61.50	$ 2.04	3.32%	3.40%	8.67%
Ameren*	$ 42.08	$ 1.60	3.80%	3.94%	11.17%
American Electric Power*	$ 57.18	$ 2.00	3.50%	3.58%	8.36%
Black Hills Corp.**	$ 54.09	$ 1.56	2.88%	3.00%	11.25%
CenterPoint Energy*	$ 24.43	$ 0.95	3.89%	3.97%	8.02%
Cleco*	$ 53.48	$ 1.60	2.99%	3.05%	6.88%
CMS Energy*	$ 32.42	$ 1.08	3.33%	3.44%	9.91%
Consolidated Edison***	$ 62.77	$ 2.52	4.01%	4.07%	6.70%
Dominion Resources***	$ 71.74	$ 2.40	3.35%	3.45%	9.45%
DTE Energy*	$ 81.35	$ 2.76	3.39%	3.50%	9.77%
Duke Energy ***	$ 81.00	$ 3.18	3.93%	4.02%	8.82%
Edison International**	$ 61.74	$ 1.42	2.30%	2.35%	7.02%
El Paso Electric**	$ 38.07	$ 1.12	2.94%	3.02%	8.59%
Entergy*	$ 82.21	$ 2.52	3.07%	3.09%	4.42%
Great Plains Energy*	$ 26.60	$ 0.92	3.46%	3.55%	8.88%
Idacorp**	$ 61.39	$ 1.88	3.06%	3.11%	6.28%
NextEra Energy***	$ 100.61	$ 2.90	2.88%	2.97%	9.37%
Northeast Utilities***	$ 49.21	$ 1.57	3.19%	3.30%	10.15%
OGE Energy*	$ 37.05	$ 0.90	2.43%	2.51%	8.87%
Otter Tail*	$ 30.12	$ 1.21	4.02%	4.24%	14.99%
Pinnacle West Capital**	$ 60.78	$ 2.38	3.92%	3.99%	7.84%
PNM Resources**	$ 28.50	$ 0.74	2.60%	2.72%	12.22%
Portland General Electric**	$ 35.99	$ 1.12	3.11%	3.22%	10.12%
PSEG***	$ 40.11	$ 1.48	3.69%	3.73%	5.85%
SCANA***	$ 54.74	$ 2.10	3.84%	3.93%	8.61%
Sempra Energy**	$ 109.55	$ 2.64	2.41%	2.50%	9.85%
Southern Co.***	$ 47.06	$ 2.10	4.46%	4.54%	8.04%
Vectren Corp.*	$ 44.52	$ 1.44	3.23%	3.33%	9.50%
Westar Energy*	$ 37.75	$ 1.40	3.71%	3.79%	8.12%
Xcel Energy**	$ 33.21	$ 1.20	3.61%	3.70%	8.36%

A: Zacks website, November 16, 2014.
B: Yahoo! Finance website G: F/E
C: Value Line Investment Survey: Electric Utilities (Central), September 19, 2014;* Electric Utilities (West), October 31, 2014;** Electric Utilities (East), November 21, 2014.***
E: Yahoo! Finance website; October 20, 2014-November 14, 2014 (20 trading days).
F: Value Line Investment Survey: Electric Utilities (Central), September 19, 2014;* Electric Utilities (West), October 31, 2014;** Electric Utilities (East), November 21, 2014.***

D: (A + B + C)/3 G: F/E H: G*(1+(0.5*D)) I: D + H

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
Revised OCA Comparison Group
DCF with Zacks, Yahoo! Finance, and Value Line EPS Growth-Rate Estimates, Equity Prices--September 2014-November 2014

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R-2014-2428744
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Attachment No. _____ (MFG-3), Schedule 2

Company Name	Mean Required Rate of Return on Equity	Values deleted from the ROE calculation
Entergy*	4.42%	x
PSEG***	5.85%	x
Idacorp**	6.28%	x
Consolidated Edison***	6.70%	x
Cleco*	6.88%	x
Edison International**	7.02%	x
Pinnacle West Capital**	7.84%	x
CenterPoint Energy*	8.02%	
Southern Co.***	8.04%	
Westar Energy*	8.12%	
Xcel Energy**	8.36%	
American Electric Power*	8.36%	
El Paso Electric**	8.59%	
SCANA***	8.61%	
Alliant Energy*	8.67%	
Duke Energy ***	8.82%	
OGE Energy*	8.87%	
Great Plains Energy*	8.88%	
NextEra Energy***	9.37%	
Dominion Resources***	9.45%	
Vectren Corp.*	9.50%	
DTE Energy*	9.77%	
Sempra Energy**	9.85%	
CMS Energy*	9.91%	
Allete*	9.95%	
Portland General Electric**	10.12%	
Northeast Utilities***	10.15%	
Ameren*	11.17%	
Black Hills Corp.**	11.25%	
PNM Resources**	12.22%	x
Otter Tail*	14.99%	x

Revised Comparison Group--Company Name	Mean Required Rate of Return on Equity
Allete*	9.95%
Alliant Energy*	8.67%
Ameren*	11.17%
American Electric Power*	8.36%
Black Hills Corp.**	11.25%
CenterPoint Energy*	8.02%
CMS Energy*	9.91%
Dominion Resources***	9.45%
DTE Energy*	9.77%
Duke Energy ***	8.82%
El Paso Electric**	8.59%
Great Plains Energy*	8.88%
NextEra Energy***	9.37%
Northeast Utilities***	10.15%
OGE Energy*	8.87%
Portland General Electric**	10.12%
SCANA***	8.61%
Sempra Energy**	9.85%
Southern Co.***	8.04%
Vectren Corp.*	9.50%
Westar Energy*	8.12%
Xcel Energy**	8.36%

ROE and ROR Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
OCA Comparison Group
DCF with Zacks, Yahoo! Finance, and Value Line EPS Growth-Rate Estimates, Equity Prices--September 2014-November 2014

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R-2014-2428743
R-2014-2428744
R-2014-2428742
Exhibit No. _____ (MFG-3), Schedule 3

	A	B	C	D	D1	D2
Company Name	Zacks EPS Growth Rate (%)	Yahoo! Finance EPS Growth Rates (%)	Value Line EPS Growth Rates (%)	Zacks-Yahoo! Finance-Value Line Mean Growth Rate (%)	Zacks-Yahoo! Finance-Value Line Low Growth Rate (%)	Zacks-Yahoo! Finance-Value Line High Growth Rate (%)
Allete*	NA	6.00%	6.00%	6.00%	6.00%	6.00%
Alliant Energy*	4.90%	4.90%	6.00%	5.27%	4.90%	6.00%
Ameren*	8.30%	8.90%	4.50%	7.23%	4.50%	8.90%
American Electric Power*	4.90%	4.95%	4.50%	4.78%	4.50%	4.95%
Black Hills Corp.**	NA	7.00%	9.50%	8.25%	7.00%	9.50%
CenterPoint Energy*	4.80%	3.85%	3.50%	4.05%	3.50%	4.80%
CMS Energy*	6.10%	6.80%	6.50%	6.47%	6.10%	6.80%
Dominion Resources***	5.80%	6.70%	5.50%	6.00%	5.50%	6.70%
DTE Energy*	6.20%	6.10%	6.50%	6.27%	6.10%	6.50%
Duke Energy ***	4.70%	4.70%	5.00%	4.80%	4.70%	5.00%
El Paso Electric**	6.70%	7.00%	3.00%	5.57%	3.00%	7.00%
Great Plains Energy*	5.00%	5.00%	6.00%	5.33%	5.00%	6.00%
NextEra Energy***	6.65%	6.55%	6.00%	6.40%	6.00%	6.65%
Northeast Utilities***	6.65%	5.90%	8.00%	6.85%	5.90%	8.00%
OGE Energy*	6.55%	7.05%	5.50%	6.37%	5.50%	7.05%
Portland General Electric**	7.85%	7.85%	5.00%	6.90%	5.00%	7.85%
SCANA***	4.40%	4.65%	5.00%	4.68%	4.40%	5.00%
Sempra Energy**	7.45%	7.60%	7.00%	7.35%	7.00%	7.60%
Southern Co.***	3.65%	3.35%	3.50%	3.50%	3.35%	3.65%
Vectren Corp.*	5.00%	4.50%	9.00%	6.17%	4.50%	9.00%
Westar Energy*	3.80%	3.20%	6.00%	4.33%	3.20%	6.00%
Xcel Energy**	4.15%	4.35%	5.50%	4.67%	4.15%	5.50%
Mean	5.68%	5.76%	5.76%	5.77%	4.94%	6.59%

	E	F	G	H	I	I1	I2
Company Name	Average of Closing Prices	Annualized Dividend	Dividend Yield (Rate/Price)	Expected Dividend Yield	Mean Required Rate of Return on Equity	Low Required Rate of Return on Equity	High Required Rate of Return on Equity
Allete*	$ 51.14	$ 1.96	3.83%	3.95%	9.95%	9.95%	9.95%
Alliant Energy*	$ 61.50	$ 2.04	3.32%	3.40%	8.67%	8.30%	9.40%
Ameren*	$ 42.08	$ 1.60	3.80%	3.94%	11.17%	8.44%	12.84%
American Electric Power*	$ 57.18	$ 2.00	3.50%	3.58%	8.36%	8.08%	8.53%
Black Hills Corp.**	$ 54.09	$ 1.56	2.88%	3.00%	11.25%	10.00%	12.50%
CenterPoint Energy*	$ 24.43	$ 0.95	3.89%	3.97%	8.02%	7.47%	8.77%
CMS Energy*	$ 32.42	$ 1.08	3.33%	3.44%	9.91%	9.54%	10.24%
Dominion Resources***	$ 71.74	$ 2.40	3.35%	3.45%	9.45%	8.95%	10.15%
DTE Energy*	$ 81.35	$ 2.76	3.39%	3.50%	9.77%	9.60%	10.00%
Duke Energy ***	$ 81.00	$ 3.18	3.93%	4.02%	8.82%	8.72%	9.02%
El Paso Electric**	$ 38.07	$ 1.12	2.94%	3.02%	8.59%	6.02%	10.02%
Great Plains Energy*	$ 26.60	$ 0.92	3.46%	3.55%	8.88%	8.55%	9.55%
NextEra Energy***	$ 100.61	$ 2.90	2.88%	2.97%	9.37%	8.97%	9.62%
Northeast Utilities***	$ 49.21	$ 1.57	3.19%	3.30%	10.15%	9.20%	11.30%
OGE Energy*	$ 37.05	$ 0.90	2.43%	2.51%	8.87%	8.01%	9.56%
Portland General Electric**	$ 35.99	$ 1.12	3.11%	3.22%	10.12%	8.22%	11.07%
SCANA***	$ 54.74	$ 2.10	3.84%	3.93%	8.61%	8.33%	8.93%
Sempra Energy**	$ 109.55	$ 2.64	2.41%	2.50%	9.85%	9.50%	10.10%
Southern Co.***	$ 47.06	$ 2.10	4.46%	4.54%	8.04%	7.89%	8.19%
Vectren Corp.*	$ 44.52	$ 1.44	3.23%	3.33%	9.50%	7.83%	12.33%
Westar Energy*	$ 37.75	$ 1.40	3.71%	3.79%	8.12%	6.99%	9.79%
Xcel Energy**	$ 33.21	$ 1.20	3.61%	3.70%	8.36%	7.85%	9.20%
Mean			3.39%	3.48%	9.27%	8.47%	10.05%

A: Zacks website, November 16, 2014.
B: Yahoo! Finance website G: F/E
C: Value Line Investment Survey: Electric Utilities (Central), September 19, 2014;* Electric Utilities (West), October 31, 2014;** Electric Utilities (East), November 21, 2014.***
E: Yahoo! Finance website; October 20, 2014-November 14, 2014 (20 trading days)
F: Value Line Investment Survey: Electric Utilities (Central), September 19, 2014;* Electric Utilities (West), October 31, 2014;** Electric Utilities (East), November 21, 2014.***

D: (A + B + C)/3 G: F/E H: G*(1+(0.5*D)) I: D + H
D1: MIN(A:C) I1: D1 + H
D2: MAX(A:C) I2: D2 + H

ROE and ROR Analysis
Capital Structure for Pennsylvania Electric

Docket No. R-2014-2428743

Exhibit No. _____ (MFG-4), Schedule 1

Source: PN Exhibit RAD-1

Penelec

	Ratio	Cost
Long-Term Debt	50.10%	5.72%
Common Equity	49.90%	

Recommended ROE and ROR
Capital Structure for Pennsylvania Electric

Docket No. R-2014-2428743

Exhibit No. _____ (MFG-4), Schedule 2

	Recommended			Range			
Penelec							
	Ratio	**Cost**	**Mean**	**Low**	**WACC**	**High**	**WACC**
Long-Term Debt	50.10%	5.72%	2.87%	5.72%	2.87%	5.72%	2.87%
Common Equity	49.90%	9.27%	4.62%	8.47%	4.23%	10.05%	5.01%
Overall Rate of Return			7.49%		7.09%		7.88%

ROE and ROR Analysis
CAPM Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
Riskless asset calculation

Docket Nos. R-2014-2428745
R-2014-2428743
R-2014-2428744
R-2014-2428742
Exhibit No. _____ (MFG-5), Schedule 1

Daily Treasury Yield Curve Rates

October 20, 2014-November 14, 2014

Date	1 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
10/20/2014	0.03	0.02	0.06	0.10	0.37	0.76	1.41	1.85	2.20	2.68	2.96
10/21/2014	0.04	0.02	0.06	0.10	0.38	0.77	1.44	1.88	2.23	2.72	3.00
10/22/2014	0.04	0.02	0.06	0.11	0.41	0.80	1.46	1.90	2.25	2.73	3.01
10/23/2014	0.02	0.01	0.06	0.11	0.41	0.83	1.52	1.95	2.29	2.77	3.05
10/24/2014	0.02	0.01	0.06	0.11	0.41	0.82	1.52	1.96	2.29	2.77	3.05
10/27/2014	0.03	0.02	0.06	0.11	0.41	0.81	1.51	1.94	2.27	2.75	3.04
10/28/2014	0.02	0.02	0.05	0.11	0.42	0.84	1.53	1.97	2.30	2.79	3.06
10/29/2014	0.01	0.03	0.07	0.11	0.48	0.93	1.61	2.03	2.34	2.79	3.06
10/30/2014	0.01	0.01	0.06	0.11	0.48	0.91	1.58	2.02	2.32	2.77	3.04
10/31/2014	0.01	0.01	0.05	0.11	0.50	0.95	1.62	2.05	2.35	2.81	3.07
11/3/2014	0.03	0.02	0.07	0.12	0.52	0.96	1.63	2.05	2.36	2.80	3.07
11/4/2014	0.04	0.03	0.06	0.11	0.52	0.97	1.63	2.05	2.35	2.78	3.05
11/5/2014	0.04	0.03	0.07	0.11	0.52	0.97	1.63	2.05	2.36	2.79	3.06
11/6/2014	0.04	0.03	0.06	0.12	0.54	1.01	1.67	2.09	2.39	2.83	3.09
11/7/2014	0.04	0.03	0.06	0.12	0.51	0.95	1.60	2.01	2.32	2.76	3.04
11/10/2014	0.04	0.02	0.07	0.13	0.55	1.00	1.65	2.07	2.38	2.81	3.09
11/12/2014	0.05	0.02	0.07	0.14	0.55	1.00	1.65	2.06	2.37	2.81	3.09
11/13/2014	0.05	0.02	0.08	0.15	0.53	0.97	1.64	2.05	2.35	2.80	3.08
11/14/2014	0.04	0.02	0.07	0.15	0.54	0.96	1.62	2.02	2.32	2.77	3.04
						Mean	1.57				3.05

Source: http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2014

ROE and ROR Analysis
CAPM Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
Beta calculation for Revised Comparison Group

Docket Nos. R-2014-2428745
R-2014-2428743
R-2014-2428744
R-2014-2428742
Exhibit No. _____ (MFG-5), Schedule 2

Company Name	Value Line Betas--Revised Comparison Group
Allete*	0.80
Alliant Energy*	0.80
Ameren*	0.75
American Electric Power*	0.70
Black Hills Corp.**	0.90
CenterPoint Energy*	0.75
CMS Energy*	0.75
Dominion Resources***	0.70
DTE Energy*	0.75
Duke Energy ***	0.60
El Paso Electric**	0.70
Great Plains Energy*	0.85
NextEra Energy***	0.70
Northeast Utilities***	0.75
OGE Energy*	0.85
Pinnacle West Capital**	0.70
Portland General Electric**	0.80
SCANA***	0.75
Sempra Energy**	0.75
Southern Co.***	0.55
Vectren Corp.*	0.80
Westar Energy*	0.75
Xcel Energy**	0.70
Mean	0.75

Value Line Investment Survey: Electric Utilities (Central), September 19, 2014;* Electric Utilities (West), October 31, 2014;** Electric Utilities (East), November 21, 2014.***

THE VALUE LINE Investment Survey®

Part 1
Summary & Index

File at the front of the *Ratings & Reports* binder. Last week's *Summary & Index* should be removed.

November 21, 2014

TABLE OF SUMMARY & INDEX CONTENTS

Summary & Index Page Number

SCREENS

The Median of Estimated **PRICE-EARNINGS RATIOS** of all stocks with earnings

18.2

26 Weeks Ago	Market Low 3-9-09	Market High 9-18-14
18.0	10.3	18.3

The Median of Estimated **DIVIDEND YIELDS** (next 12 months) of all dividend paying stocks under review

2.0%

26 Weeks Ago	Market Low 3-9-09	Market High 9-18-14
2.0%	4.0%	2.0%

The Estimated Median Price **APPRECIATION POTENTIAL** of all 1700 stocks in the hypothesized economic environment 3 to 5 years hence

35%

26 Weeks Ago	Market Low 3-9-09	Market High 9-18-14
35%	185%	35%

ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER

Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXX, No. 14.
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ROE and ROR Analysis
CAPM Analysis for Metropolitan Edison, Pennsylvania Electric, Pennsylvania Power, and West Penn Power Companies
ROE calculation for Revised OCA Comparison Group
November 2014

Docket Nos. R-2014-2428745
R-2014-2428743
R-2014-2428744
R-2014-2428742
Exhibit No. _____ (MFG-5), Schedule 4

$k = r + \beta (k_m - r)$

Where:

k = required rate of return for the specific stock

β = beta, the systematic or stock-specific risk

r = rate of return on a riskless asset

k_m = required rate of return in the market portfolio

4-Year Annualized Growth Rate for Value Line Data

November 21, 2014 forecast data*
2.0 percent dividend yields
35 percent market appreciation potential, 3-5 years

4-year growth rate ($1.35^{0.25}$ - 1.00)	7.79%
Value Line forecast result (2.0% + 7.79%)	9.79%
Market risk premium (9.79% - 3.05%)	6.74%

*-(MFG-5), Schedule 3

r =	3.05%	30-Year Treasury Bill October 20, 2014-November 14, 2014 average, (MFG-5), Schedule 1
$(k_m - r)$ =	6.74%	Market risk premium
β =	0.00	Value Line mean beta for Revised Comparison Group, (MFG-5), Schedule 2
CAPM ROE k =	3.05%	

ATTACHMENT A

Experience

Snavely King Majoros & Associates, Inc.

Senior Consultant ***(2014-Present)***

Dr. Griffing is principal investigator and expert witness for Capital Structure, Cost of Capital, Cost of Equity, Overall Rate of Return, Rate Design, Certificate of Need and Contested-Case issues and proceedings. Dr. Griffing holds bachelors, masters, and doctoral degrees in economics. He has over 15 years' experience as an expert witness and consultant, addressing the cost of capital, capital structure, or rate design, reliability and supply adequacy for natural-gas, electricity and oil-pipeline companies in certificate of need cases, and competitive-environment issues for telecommunications utilities. He has appeared over 30 times before the regulatory agencies of four state commissions. He also managed the DOC's testimony in two oil-pipeline certificate-of-need cases and arbitrated a telecommunications dispute for the Nebraska Public Service Commission.

Minnesota Department of Commerce.

Public Utilities Financial Analyst ***(2003-2013)***

Testified before the Minnesota Public Utilities Commission (Minnesota PUC) on behalf of ratepayers in contested-case proceedings: Expert witness for return on equity, rate of return, and rate design in general rate cases filed by electric utilities and natural-gas local distribution companies; economic-need expert witness in oil-pipeline certificate-of-need cases; manager of Department team in oil-pipeline certificate-of-need cases,

Also prepared comments on behalf of ratepayers regarding such matters as capital structure, depreciation rates, demand entitlements, and service quality and reliability in dockets before the Minnesota PUC. Comments included analysis, explanation, and conclusions regarding technical, legal, and quantitative issues.

Griffing Economic Consulting

Economic Consultant ***(2003)***

Conducted arbitration case for the Nebraska Public Service Commission: Set the calendar, presided over evidentiary hearing, evaluated evidence and wrote recommended decision report for the Commission. The case involved disputed interconnection compensation between a local exchange carrier and a cellular service provider.

Nebraska State Homebuilders Association: Studied infrastructure development fees for developers and their effect on housing affordability for "Hometown Heroes" (teachers, firefighters, police officers, emergency medical technicians). Wrote report for delivery to the Association Board of Directors.

QSI Consulting, Inc.

Senior Consultant ***(2000-2002)***

Provided expert-witness services for private-sector and public-sector clients regarding telecommunications public policy. Specialized as an expert witness before state commissions and arbitration panels in dockets regarding implementation of pro-competition policies. Major contributor to statistical standards applied to test of service provided by Qwest Communications to competitive local exchange carriers. Public-sector clients included the Nebraska Public Service Commission, New Mexico Public Regulations Commission Advocacy Staff and the South Dakota Public Utilities Commission.

Nebraska Public Service Commission,

Economic Analyst (1998-2000)

Provided advocacy and advisory analysis to commissioners regarding telecommunications issues, including opening local networks to competition and ensuring rural communities access to all services. Participated in evaluation of submitted testimony, testimony preparation and presentation, and writing commission orders.

Education

Ph.D., M.A., B.A., Economics, University of Nebraska-Lincoln

Concentration areas included Industrial Organization (study of regulatory and antitrust policy) and Public Economics.

Dissertation: Fundamentals of Land Prices in the Urban Fringe and Their Effect on Use-Value Assessment Tax Expenditures Refereed Publication: Journal of Urban Economics, Use-Value Assessment Tax Expenditures in Urban Areas, Pages 443-452, John E. Anderson and Marlon F. Griffing.

ATTACHMENT B

Regulatory Projects and Appearances

Testimony in Contested-Case Proceedings before the Minnesota Public Utilities Commission

Testimony in these cases may be accessed by year (e.g., "05") and docket number (e.g., "1380") at:

https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showeDocketsSearch&showEdocket=true

Cost of Capital

In the Matter of the Petition of CenterPoint Energy Minnegasco, A Division of CenterPoint Resources Corp. for Authority to Increase Natural Gas Rates I Minnesota, Docket No. G008/GR-04-901

In the Matter of the Petition of Great Plains Natural Gas Company Request for General Rate Increase, Docket No. G004/GR-04-1487

In the Matter of the Petition of Northern States Power Company dba Xcel Energy Request for General Rate Increase, Docket No. Goo2/GR-04-1511

In the Matter of a Petition by Interstate Power and Light Company for Authority to Increase Electric Rates in Minnesota, Docket No. E001/GR-05-748

In the Matter of the Application of CenterPoint Energy Resources Corp., D/B/A CenterPoint Energy Minnesota Gas, for Authority to Increase Natural Gas Rates in Minnesota, Docket No. G008/GR-05-1380

In the Matter of the Petition of Northern States Power Company, a Minnesota Corporation and Wholly Owned Subsidiary of Xcel Energy Inc., for Authority to Increase Rates for Natural Gas Service in Minnesota, G002/GR-06-1429

In the Matter of Minnesota Energy Resources Corporation's Application for Authority to Increase Natural Gas Rates in Minnesota, Docket No. G007,011/GR-08-835

In the Matter of an Application by CenterPoint Energy Resources Corp., D/B/A CenterPoint Minnesota Gas to Increase Natural Gas Rates in Minnesota, Docket No. G008/GR-08-1075

In the Matter of the Petition of Northern States Power Company, a Minnesota Corporation, for Authority to Increase Rates for Natural Gas Service in Minnesota, Docket No. G002/GR-09-1153

In the Matter of the Application of Otter Tail Power Company for Authority to Increase Rates for Electric Utility Service in Minnesota, Docket No. E017/GR-10-239

In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota, Docket No. G007,011/GR-10-977

Rate Design

In the Matter of Otter Tail Corporation dba Otter Tail Power Company's Application for Authority to Increase Rates for Electric Service in Minnesota, Docket No. E017/GR-07-1178

Certificate of Need

In the Matter of the Petition of Northern States Power Company dba Xcel Energy dba Xcel Energy Certificate Need to Establish an Independent Spent Fuel Storage Installation at the Monticello Generating Plant, Docket No. E002/CN-05-123

In the Matter of a Certificate of Need Application for Great River Energy's Cambridge Station, Docket No. ET2/CN-05-347

In the Matter of the Application of Minnesota Pipeline Company for a Certificate of Need for a Crude Oil Pipeline, Docket No. PL-5/CN-06-02

Attachment B

Manager of Contested-Case Proceedings

In the Matter of the Application of Enbridge Energy (Southern Lights) LLC for a Certificate of Need for a Crude Oil Pipeline for the Southern Lights Project, Docket No. PL-9/CN-07-464

In the Matter of the Application of Enbridge Energy, Limited Partnership and Enbridge Pipelines (Southern Lights) LLC for a Certificate of Need for the Alberta Clipper and Southern Lights Diluent Pipeline Projects, Docket No. PL-9/CN-07-465

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
v.	:	Docket No. R-2014-2428743
Pennsylvania Electric Company	:	
	:	

VERIFICATION

I, Marlon Griffing, hereby state that the facts above set forth in my Direct Testimony, OCA Statement No. 2, are true and correct and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Signature: Marlon Griffing
Marlon Griffing

Consultant Address: 938 Juno Avenue
St. Paul MN 55102

DATED:

197340