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# BEFORE THE <br> PUBLIC UTILITIES COMMISSION OF OHIO 

THE DAYTON POWER AND LIGHT COMPANY

CASE NO. 12-426-EL-SSO
CASE NO. 12-427-EL-ATA
CASE NO. 12-428-EL-AAM
CASE NO. 12-429-EL.WVR
CASE NO. 12-672-EL-RDR

## ELECTRIC SECURITY PLAN

# THE DAYTON POWER AND LIGHT COMPANY CASE NO. 12-426-EL-SSO 

Electric Security Plan

## Testimony

## The Dayton Power \& Light Company

## BEFORE THE

PUBLIC UTILITIES COMMISSION OF OHIO

THE DAYTON POWER AND LIGHT COMPANY

CASE NO. 12-426-EL-SSO
CASE NO. 12-427-EL-ATA
CASE NO. 12-428-EL-AAM
CASE NO. 12-429-EL-WVR
CASE NO. 12-672-EL-RDR

## ELECTRIC SECURITY PLAN (ESP) <br> DIRECT TESTIMONY <br> OF WILLIAM J. CHAMBERS

- MANAGEMENT POLICIES, PRACTICES, AND ORGANIZATION
- OPERATING INCOME
- RATE BASE
- ALLOCATIONS
- RATE OF RETURN
- RATES AND TARIFFS
- OTHER


## BEFORE THE

# PUBLIC UTILITIES COMMISSION OF OHIO 

## ELECTRIC SECURITY PLAN (ESP) DIRECT TESTIMONY OF

WILLIAM J. CHAMBERS

## ON BEHALF OF <br> THE DAYTON POWER AND LIGHT COMPANY

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## INTRODUCTION

Q. Please state your name and address.
A. My name is William J. Chambers. I reside at 3 Albion Place, Charlestown, Massachusetts 02129. I am currently an Associate Professor of Finance at Boston University.
Q. What is the purpose of your testimony?
A. My testimony will focus on the financial integrity of The Dayton Power and Light Company ("DP\&L"), the importance of maintaining that integrity and how the proposal before the Commission will serve this purpose. As part of my analysis, I will address whether DP\&L's ESP proposal, if accepted by the Commission in most economically material respects, will provide the utility with an opportunity to earn a reasonable return on its average equity (ROE) over the next five years. This is important to DP\&L's financial health because DP\&L's expected profits should be sufficient not only to motivate and enable DP\&L to provide safe and reliable service to its customers, but also to avoid financial distress and provide a rate of return to investors that is commensurate with the risk they bear. Otherwise, DP\&L's cost of capital will increase, its access to capital may be restricted, and its financial health will deteriorate, jeopardizing its ability to provide safe and reliable service to its customers. Indeed, if rates are severely lowered, the impact on DP\&L's financial integrity and survival probability likewise will be severe.

## Q. What is a reasonable expected ROE for DP\&L in your opinion and how is it determined?

A. A company's ROE is one of the more important metrics for judging its financial integrity and viability. While it is understood that with the move to a more competitive and market-driven environment, utilities will not be guaranteed any given level of ROE, nevertheless they must be afforded the opportunity to earn a reasonable, market-driven rate of return in order to remain financially sound. The expected rate of return should be commensurate with the risk that investors bear when they invest their equity capital in the enterprise. For DP\&L, this includes the risk of a vertically integrated utility transitioning to a distribution utility with market-based capacity and energy procurement. To determine an appropriate ROE for such an enterprise, I have gathered data on actual and projected ROEs for utilities of similar risk. In addition, I have relied on a recent decision by the Commission in which it determined that a reasonable expected ROE for this type of enterprise is in the range of $7 \%$ to $11 \% .{ }^{1}$ Based on market information, I believe that a range of $7.7 \%$ to $10.4 \%$ is a reasonable ROE for DP\&L to be able to function effectively and maintain its financial integrity.

[^0]
## Q. Please summarize the conclusions that you have reached.

A. Assuming that DP\&L's ESP rate proposal, including the Service Stability Rider (SSR) and the Switching Tracker, ${ }^{2}$ is adopted in all economically material respects, and DP\&L's future performance is comparable to the projections underlying the ESP proposal, DP\&L probably will be able to maintain an ROE in line with historical and projected ROEs for firms of comparable risk, and in the range of reasonableness defined by the Commission. Specifically, my analysis indicates that comparable firms' ROEs are in the range of 7.7\% to $10.4 \%$, consistent with the Commission's range of $7 \%$ to $11 \%$.


[^1]
${ }^{3}$ See, e.g., Bluefield Water Works and Improvement Company v. Public Service Commission of the State of West Virginia (262 U.S. 679); Federal Power Commission et. al. v. Hope Natural Gas Company (320 U.S. 591).

## Q. Please identify the Exhibits attached to your testimony.


#### Abstract

A. The following exhibits summarize the projected financial ratios for DP\&L from 20132017: - WJC-1: DP\&L's ESP as filed. - WJC-2: Pro forma Base Case that modifies the capital structure of DP\&L. - WJC-3: Pro forma case including the consequences of anticipated additional customer shopping. - WJC-4: Pro forma case including the consequences of a full rejection of the proposed SSR.


- WJC-5: Pro forma case including the effect of anticipated additional customer shopping and rejection of the proposed SSR.

Each of these exhibits contains a number of supporting schedules, numbered with suffixes of A through D. For example, Exhibit WJC-1.A contains the variables used to calculate the financial ratios in Exhibit WJC-1. These data in turn come from the projected income statement (WJC-1.B), balance sheet (WJC-1.C) and statement of cash flows (WJC-1.D).

A number of exhibits summarize the results. I graph the projected ratios from these scenarios in Exhibits WJC-6.A through WJC-6F. Exhibit WJC-7.A is a graph of the projected dividend payments and Exhibit WJC-7.B shows the projected issuance of short-
term debt. Exhibit WJC-8 summarizes the implications of the likely credit ratings in 2013 and 2017 for each scenario.

Exhibit WJC-9 provides data on the capital structure for a sample of DP\&L's peer firms. Exhibit WJC-10 provides financial ratios for a sample of peer firms from a study by Fitch Ratings. Exhibit WJC-11 provides the details of the pro forma debt adjustment. Finally, Exhibits WJC-12.A through WJC-12.C provide the historical and projected ROE for a sample of peer firms.

Appendices A through I contain various supporting documents, including information from third-party sources.

## II. PROFESSIONAL BACKGROUND

## Q. What is your educational and work background?

A. I received a B.A. in Economics \& History at the College of Wooster. I then received M.A., M.Phil. and Ph.D. degrees in Economics at Columbia University.

I joined the faculty of Boston University in 2005. I teach courses in finance, investment analysis, portfolio management, capital markets and financial institutions. Prior to joining Boston University, I worked in various capacities for Standard \& Poor's for 22 years. A complete listing of my professional experience is included in my curriculum vitae, which is attached as Appendix A.

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## Q. What were your responsibilities at Standard \& Poor's?

A. The large majority of my time at Standard \& Poor's ("S\&P") was in its debt rating division. Initially, I worked to rate sovereign governments, states and localities and government-owned enterprises, including utilities and financial institutions.

Subsequently, I had oversight over all corporate credit ratings for companies domiciled outside of the U.S. and was responsible for the merger and integration of the international group with the U.S. domestic corporate rating group. I was actively involved in the rating of many utilities as they moved from public to private ownership or underwent deregulation.

My last years at $\mathrm{S} \& \mathrm{P}$ were with a consulting unit established to work with corporate entities and financial institutions to improve their internal credit evaluation systems. Throughout my tenure in the credit rating part of the business, I was involved in the development and application of credit rating criteria for sovereign risk, general corporate risk and specific topics including parent-subsidiary relationships.
Q. Have you previously given testimony before the PUCO?
A. No. I have not previously testified before the PUCO. I have previously testified before other regulatory and judicial bodies. This testimony is listed in Appendix A.
Q. What has been the nature of that testimony?
A. My work has concentrated on the creditworthiness of companies and other entities and the impact that creditworthiness can have on a company's access to capital markets and
on the cost of funds that they obtain in those markets. Of course, an evaluation of the revenues and profits of these various enterprises was an important element of my analysis for those cases.

## Q. How does your experience relate to your testimony in this proceeding?

A. I understand that a critical issue in this hearing is the financial integrity of DP\&L and the Company's ability to earn a reasonable rate of return under the approved rate structure. Ready access to financial markets and the ability to meet financial obligations in a timely manner are essential to every utility. If the financial integrity of DP\&L is impaired or damaged, the cost of capital to the utility would likely rise materially and the availability of capital will be diminished. These effects would harm both DP\&L and its customers, through higher costs and diminished quality of service.
Q. Does your testimony focus solely on the projected rate of return implied by DP\&L's ESP?
A. No. My testimony and analysis include the projected rate of return but also extend beyond the ROE to consider wider-ranging aspects of financial integrity. While, as noted previously, the projected rate of return is a critical element to any analysis of financial integrity, financial integrity is a broader concept that incorporates both business and financial parameters. In other words, expected profitability (e.g., as measured by the ROE) is one of the most important of several important elements of an assessment of financial integrity but not the entire story.

## Q. How do you define financial integrity in this context?

A. There is no single, simple definition because financial integrity has many different dimensions. For a firm like DP\&L to have strong financial integrity it must have a solid business as well as a sound financial position. It must be able to operate its business efficiently, by means of having qualified management, capable personnel and adequate infrastructure. It must have the financial means to meet its obligations in a timely manner and to be able to invest to maintain its infrastructure and develop new infrastructure for the future. It must be sufficiently flexible to address changing conditions and to respond to those changes. A company's financial integrity also must be assessed in the context of the risks and uncertainties associated with the company's own performance, looking forward, not just backward, within the framework of the regional, national and international economies. One way of defining financial integrity is to relate it to a company's overall creditworthiness.
Q. How does one assess the creditworthiness of an enterprise like DP\&L?
A. When evaluating a company's creditworthiness, investors in a company like DP\&L must assess a number of different factors encompassing both its business and financial risk. The rate of return and other financial parameters are important elements of that assessment but they do not represent the entire picture. Ratings assigned by independent rating agencies also constitute such an assessment, and contribute to the information available to investors. My analysis has followed the criteria and approach established by the rating agencies and adopted by many investors.

## Q. Why are credit ratings important to a company like DP\&L?

A. Many debt and equity investors pay close attention to credit ratings as an independent view of the creditworthiness of the companies they are considering. Such ratings may supplement an investor's own analysis or in some cases may be used in lieu of such internal analysis. For many institutional investors, investment guidelines (whether statutory, regulatory or self-imposed) refer to credit ratings. Additionally, historically there has been a close, inverse relationship between ratings assigned by the major agencies and the rates of interest paid by, and default rates of, borrowers - lower ratings are associated with higher rates of interest and higher default rates. Consequently, lower ratings tend to increase the cost of borrowing for a company.

## Q. What are the rating agencies and what do they do?

A. Rating agencies provide an independent assessment of and opinion about the creditworthiness of both borrowers and the specific obligations they issue. The primary rating agencies - Fitch Ratings, Moody's Investors Service, and Standard \& Poor's have been rating debt obligations since early in the $20^{\text {th }}$ century. Fees received for credit ratings make up the vast majority of the revenues for these companies, which employ a large group of experienced credit analysts to generate those ratings. Their sole focus is on the assessment of creditworthiness and the ratings are not recommendations either to buy or sell particular securities or opine on the suitability of particular securities for any investor.

## Q. Do the rating agencies attempt to tell the Commission or a utility what policies they should adopt or what actions they should take?

A. No. None of the rating agencies attempt to influence either a regulator's or a company's decisions. Their ratings are intended to assess the future performance of the business over time, which depends, in part, on the current and anticipated regulatory environment.

## Q. What is the rating scale and what do the rating symbols mean?

A. Each credit rating agency uses a rating scale that allows investors to compare the debt issued by different firms across industries. Appendix B displays the rating scales for S\&P, Moody's and Fitch. S\&P rates firms on a scale of AAA (the most creditworthy), $\mathrm{AA}, \mathrm{A}, \mathrm{BBB}, \mathrm{BB}, \mathrm{B}, \mathrm{CCC}, \mathrm{CC}, \mathrm{C}$ and D (default). For ratings below AAA , this basic scale is refined with plus and minus suffixes to gradate the ratings further. Debt with a rating of BBB- or higher is considered to be "investment grade." An investment grade rating indicates a high level of creditworthiness and a low likelihood of default. Such companies are expected to meet their obligations in a timely manner across a wide range of foreseeable economic conditions and have ready access to medium- and long-term debt markets. Debt rated below investment grade (i.e., $\mathrm{BB}+$ or lower) is sometimes called "speculative grade," "high yield" or "junk." Fitch's rating symbols are similar to S\&P's.

For Moody's, debt that is rated Aaa, Aa, A or Baa is considered investment grade; debt assigned a rating of $\mathrm{Ba}, \mathrm{B}, \mathrm{Caa}, \mathrm{Ca}$ or C is considered below investment grade. Moody's also distinguishes within the major categories other than Aaa by assigning a 1,2 or 3 to the rating, with 1 signifying the highest rating within the category and 3 the lowest.

In addition, credit rating agencies provide investors with further insight and granularity to the rating. For example, S\&P comments on the firm's rating as being "stable" or as having a "negative outlook" or "positive outlook," indicating that S\&P anticipates a possible credit rating change in the coming 6 to 24 months.

When an event occurs that will potentially affect a company's rating but its consequences may not be immediately determinable, the agencies signal this possible change to the market by formally designating the company as being on Rating Watch (Fitch), CreditWatch (S\&P) or Watchlist or Under Review (Moody's). For example, when S\&P places a company on CreditWatch, it generally indicates that $\mathbf{S \& P}$ anticipates that a credit rating change may occur in the short run (e.g., 90 days).

## Q. How does DP\&L's credit rating and outlook compare to those of other major

 integrated electricity, transmission and distribution utilities?A. DP\&L currently has a BBB- long-term credit rating from S\&P and has been on CreditWatch with Negative Implications since April 23, 2012, indicating that S\&P is closely monitoring the firm's situation and that a downgrade of the credit rating is a distinct possibility. S\&P also lowered the evaluation of DP\&L's business position, discussed in more detail below, from "Excellent" to "Strong." Moody's currently has a slightly higher rating of Baa2 with a Stable outlook. Fitch Ratings rates DP\&L BBBwith a Stable outlook. In all cases, the reference here is to the long-term, senior unsecured debt of the Company. DP\&L's ratings are currently toward the lower end of the spectrum of integrated electricity utilities, with the vast majority holding credit ratings in the $\mathrm{A}, \mathrm{A}-, \mathrm{BBB}+$ and BBB rating categories.

## Q. What criteria do the agencies use to establish their ratings?

A. All of the rating agencies regularly publish the criteria that they employ to assign ratings. These criteria cover both the business and financial risk of the subject company as well as how the agency views specific features of debt issues, such as pledged collateral or subordination. Each agency develops its own criteria, but across the major rating agencies the criteria employed are highly similar. While the published criteria identify the factors that are considered, there is no fixed weight assigned to each of the factors in determining a final rating. Rather the agencies use a judgmental approach to weighing the various factors and determining a final rating outcome. Appendix C contains a sample of the ratings criteria used for investor-owned regulated utilities.
Q. Is one of those criteria the Company's ROE?
A. Yes, definitely. Various measures of actual and expected profitability, including ROE, are among the most important of the financial criteria reviewed by the credit rating agencies or, indeed, by any investor along with other cash flow and leverage indicators.
Q. Can you provide an overview of the credit rating process?
A. Yes. The rating agencies have established a clear process for gathering information and assigning their ratings. ${ }^{4}$ As noted above, the agencies publish documents explaining their ratings criteria. The debt rating process is careful, considered and deliberative and involves a great deal of interaction between the rated entity (the debt issuer) and the

[^2]rating agency. It is an ongoing process in which past projections and results are considered along with the outlook for the future.

## Q. What types of information does a rating agency use to determine a rating?

A. The rating process involves evaluating a broad range of information concerning the company's business and financial position and involves qualitative information including the business risk factors as well as quantitative analysis. Public and private/confidential information received from the debt issuer (the borrower) is reviewed and incorporated into the assessment of the company's creditworthiness. Because a rating is forward looking, endeavoring to determine the creditworthiness of the issuer always involves an assessment of what will transpire in the future, for the economy at large, the company's industry and the company itself. This assessment includes management's projections for the future as well as reviews of what has occurred in the past. Rather than try to predict specific outcomes, the rating agency tries to ascertain how much of a margin of safety the debt issuer will be able to maintain in terms of timely payment of principal and interest under various possible outcomes. Information received from the issuer is not taken at face value but is assessed as to its credibility, and is considered in the context of the overall economy and the company's industry sector.

## Q. How do ratings agencies obtain information from the company?

A. The issuer's principal contact with the agencies is through the primary analyst assigned to the company. However, most interactions between the issuer and the agency include two or more analysts, the primary and a backup, and many of the discussions, particularly for larger, more complex companies, would involve several members of the agency team.

This back-up procedure is designed to ensure the accurate collection and understanding of all information provided by the borrower as well as to assure continuity of the information flow should the primary analyst be reassigned or leave the agency and to provide for longer-term institutional consistency.
Q. How do the rating agencies distill the information they obtain into a rating?

The rating agency then communicates its rating and the reasoning behind that decision to the debt issuer and the wider investment community.
Q. Do rating agencies provide information to the public about the financial condition of firms at various rating levels?
A. Yes. The agencies frequently publish ratings guidance regarding specific financial ratios
and the range of those ratios featured by companies receiving certain letter ratings. These factors are useful for the debt issuers as well as investors and other observers. An example of this kind of overview is provided in Appendix F, a review of U.S. Utilities published by Fitch Ratings in June 2012. However, no single factor or ratio necessarily dictates a particular debt rating. Frequently, companies will display financial ratios for various factors that might suggest different ratings. For example, the company may feature a relatively high level of profitability, suggesting a high rating, while also displaying a high level of debt, indicative of a lower rating. The rating committee process is designed to balance and evaluate all available information and determine a single final rating to be assigned to the issuer.

## Q. Do the rating agencies adjust their ratings over time?

A. Yes. After an agency has published a rating, it maintains surveillance on that rating so long as the debt is outstanding and the agency has sufficient information to make an informed rating decision. The surveillance process is similar to that of the assignment of an initial rating in terms of frequent exchanges of information between the debt issuer and the agency and regular committee reviews. The monitoring process may result in the periodic affirmation of a rating or, should conditions change, an appropriate modification to the rating. The agency will disseminate any rating changes and affirmations to the general investment community.
Q. Do the ratings include an assessment of the business as well as the utility's finances?
A. Yes. A rating involves the evaluation and assessment of a wide range of both business and financial factors and balancing these factors to determine the overall rating. The
business analysis is critical since it defines the context or environment in which the utility operates. S\&P has stated:

Our corporate analytical methodology organizes the analytical process according to a common framework, and it divides the task into several categories so that all salient issues are considered. The first categories involve fundamental business analysis; the financial analysis categories follow. (Credit ratings often are identified with financial analysis--especially ratios. And we publish ratio statistics and benchmarks both for sectors and individual companies. But ratings analysis starts with the assessment of the business and competitive profile of the company. Two companies with identical financial metrics are rated very differently, to the extent that their business challenges and prospects differ.) ${ }^{5}$

## Q. What are some examples of these business factors?

A. Appendix D shows the relative importance that $\mathrm{S} \& \mathrm{P}$ assigns to a number of business factors affecting several industries, including regulated utilities and competitive power generation. As noted above, the types of factors considered by Moody's and Fitch are similar in my experience.

Within the utility sector, S\&P notes the following:
For most companies, business profile scores are assessed using five categories; specifically, regulation, markets, operations, competitiveness, and management. The emphasis placed on each category may be influenced by the dominant strategy of the company or other factors. For example, for a regulated transmission and distribution company, regulation may account for $30 \%$ to $40 \%$ of the business profile score because regulation can be the single-most important credit driver for this type of company. Conversely, competition, which may not exist for a transmission and distribution company, would provide a much lower proportion (e.g., $5 \%$ to $15 \%$ ) of the business profile score. ${ }^{6}$

[^3]A more detailed list of factors considered by S\&P for electric utilities is shown in Appendix E. Based on this business analysis, S\&P publishes a business profile score. As noted previously, in April 2012, S\&P assigned DP\&L a business profile score of "Strong," which was a downward revision from the previous score of "Excellent," and reflects the increased competitive environment facing the company.
Q. How do the rating agencies factor in the utility's regulatory environment?
A. The rating agencies see a stable, consistent, transparent regulatory environment that sets reasonable objectives for the regulated entities as a positive for all affected parties.
Q. Have the recent financial and operational challenges facing utilities increased the financial community's focus on the actions of utility regulators?
A. Yes. The challenges facing utilities have increased as they have moved into a more competitive, market-based environment, and the uncertain economic environment has compounded these challenges. A consistent, transparent approach to regulation, which facilitates planning and provides appropriate flexibility to address these many uncertainties, establishes an environment in which a utility can operate effectively and best serve its stakeholders.

## Q. What financial factors do the rating agencies consider in assessing creditworthiness?

A. On the financial side, the rating agency analysis is also comprehensive, with the greatest emphasis being on the level of debt and the sufficiency of cash flow to meet debt and other obligations ${ }^{7}$.

The financial factors fall into several main categories:

1) Capital Structure and Leverage

- Total Debt to Total Capital
- Total Debt to Funds from Operations
- Total Debt to Free Operating EBITDA ${ }^{8}$
- Maturity Structure of Outstanding Debt

2) Cash Flow Adequacy

- Funds from Operations to Interest Expense
- Free Operating Cash Flow to Interest Expense
- $\mathrm{EBIT}^{9}$ to Interest Expense
- EBITDA to Interest Expense
- Funds from Operations plus Interest to Capital Expenditures
- Common Dividend Payout Ratio

3) Profitability

- Operating Profit to Revenue (Operating Profit Margin)
- EBIT to Assets
- Net Income to Revenue (Profit Margin)
- Net Income to Total Assets (Return on Assets)
- Net Income to Total Equity (Return on Equity)

4) Liquidity

- Operating Cash Flow plus Available Cash to Funds Required for Operating Expenses
- Operating Cash Flow to Gross Capital Expenditures
- Available Backup Credit Facilities

[^4]The ranges of these key ratios associated with particular rating levels are published by the agencies. One recently published review of regulated utilities by Fitch Ratings is attached as Appendix F.

As noted, no one single factor or ratio determines the ultimate credit rating. Nor are the indicated benchmark levels for each ratio necessarily binding. Instead, it is the analysis and balancing of all the relevant factors including the business profile score over a medium-term horizon that determines the final rating.

## Q. Once the rating agencies have evaluated both the company's business and financial position, how do they determine an overall credit rating?

A. The business risk and financial risk for the entity are reviewed and weighed by the rating committee. If a company has strong scores on both business and financial risk (e.g., low risk) then the subsequent rating would be high. Conversely if the company is viewed as highly risky from both a business and financial perspective, the consequent rating will be low. But there are many instances when the relative risk levels vary. These situations are obviously more challenging. This interaction is illustrated in Appendix G.

Notably, this evaluation of the business and financial risk is not a mechanical process, but rests on the judgment of the rating committee. There is no single factor, formula or ratio that automatically determines the rating. There is no fixed weight to any of the individual factors, or the business or financial risk scores overall. I believe this is especially important since the rating is forward-looking and attempts to look into the inherently uncertain future. The experience of the members of the rating committee and the
backgrounds they bring to the table are extremely valuable here, and the close correlation of the ratings assigned and default rates by borrowers indicate that the system is robust.

## 3 IV. ANALYSIS OF DP\&L'S BUSINESS RISK

Q. In this context, how do you assess the business risk for DP\&L?
A. In my analysis I focused on four principal areas:

1) The demographic and economic environment in DP\&L's service area;
2) DP\&L's infrastructure;
3) DP\&L's regulatory environment; and
4) Increased competition facing DP\&L.
Q. What are the important demographic trends and elements of the economic environment that are affecting DP\&L?
A. DP\&L provides services to a significant portion of west-central Ohio, focused around the Dayton Metropolitan Area. The service area comprises the majority of 13 counties and portions of an additional 11 counties. According to the U.S. Census, the total population of the 13 -county primary area was approximately 1.24 million in 2010 , virtually unchanged from the 2000 figure. Over the same period, Ohio's total population rose by $1.6 \%$ to 11.54 million. Population growth is a mixed blessing for electric utilities in that it represents both potentially increased sales opportunities, but also creates a demand for the development of new infrastructure, as does the redistribution of population.

Income levels of the service area population were close to the state average. U.S. Census data indicate that average per capita income between 2006 and 2010 was $\$ 25,400$ in the Dayton Metropolitan Area and $\$ 23,800$ in the 13-county primary area, as compared with the state average of $\$ 25,100$. On a per household basis, the median household income for the state was $\$ 47,400$, equal to that of the Dayton Metropolitan Area and lower than the $\$ 49,700$ for the 13 county primary area. Thus, on an ability-to-pay basis, the population of the DP\&L service area appears to be similar to that of the remainder of Ohio. In a like vein, the unemployment rate for May 2012 showed that Clinton, Montgomery, Fayette and Preble counties were slightly above the state average of $6.9 \%$, while Champaign, Shelby, Greene, Logan, Miami, Darke, Warren, Auglaize, Union and Mercer counties were all below the state average, according to the Ohio Department of Jobs and Family Services.
from industrial and commercial customers, who tend to be relatively price sensitive and prone to shopping. ${ }^{11}$
Q. What type of infrastructure does DP\&L have?
A. Approximately $\$ 1.74$ billion, or $33 \%$, of DP\&L's gross property, plant and equipment are transmission and distribution assets. In addition to transmission and distribution facilities, DP\&L owns portions of 7 generating stations and $100 \%$ of the coal-fired Hutchings Station. Ownership percentages, capacity and book asset values as of the end of 2011 for these facilities are as shown below.

|  |  |  |  |  | SCR and FGD <br> Equipment |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Ownership <br> $(\%)$ | Summer <br> Capacity <br> (MW) | Gross <br> Plant in <br> Service <br> $(\$$ mil. $)$ | Accumulated <br> Depreciation <br> $(\$$ mil.) | Installed and In <br> Service <br> (Yes/No) |
| Production Units: |  |  |  |  |  |
| Beckjord Unit \# 6 | 50 | 207 | $\$ 75$ | $\$ 58$ | No |
| Conesville Unit \#4 | 17 | 129 | 121 | 32 | Yes |
| East Bend Station | 31 | 186 | 202 | 133 | Yes |
| Killen Station | 67 | 402 | 617 | 299 | Yes |
| Hutchings Station | 100 | 365 | 124 | 114 | No |
| Miami Fort Units \#7 \& 8 | 36 | 368 | 366 | 129 | Yes |
| Stuart Station | 35 | 808 | 725 | 278 | Yes |
| Zimmer Station | 28 | 365 | 1,059 | 626 | Yes |
| Transmission | Varies |  | 2,830 | $\$ 3,380$ | $\$ 1,726$ |
| Total |  |  |  |  |  |

Curtently, only the Beckjord and Hutchings Station plants are not equipped with SCR and FGD pollution control equipment. Duke Energy, operator of the Beckjord plant, has indicated its upcoming closure at the end of 2014 or early 2015 , and DP\&L is currently deciding on action with respect to the Hutchings Station plant, the capital cost of which is

[^5]virtually fully amortized. Some analysts have concluded that all of the coal-fired plants with pollution-control equipment are relatively low cost. ${ }^{12}$ However, the constant potential for new environmental regulations, which could affect the need for additional capital expenditures or the viability of such plants in a competitive landscape, adds an element of risk to DP\&L's operations. DP\&L also owns or has interests in a number of natural gas-powered peaking units and a solar-powered unit.

## Q. What is the regulatory environment facing DP\&L?

A. DP\&L's activities are regulated by the Public Utilities Commission of Ohio. Over the past ten years, the Commission has been in the process of implementing a wide series of initiatives affecting Ohio electric utilities, most especially regarding the introduction of competition in generation, permitting customers to choose their electricity supplier ("shopping"), and mandates regarding energy efficiency and the use of alternative energy sources. While the actual and potential effects of such changes are indeed likely to be substantial, the changes appear to have been introduced in a reasonable, transparent and straightforward manner, which has permitted the affected utilities to adapt to the new requirements. However, "the interplay between standard-service rates and market prices will continue to be a key driver of cash flow and shareholder value as long as the regulatory structure holds in Ohio."13

[^6]
## Q. How has competition affected DP\&L?

A. Competition has been introduced to Ohio utilities in several inter-related ways. Utilities are transitioning to an open, competitive market for power generation. This development is expected to result in lower revenues for the power they produce. Simultaneously, customers have been able to shop amongst energy suppliers to be able to obtain lower rates, thus removing the generation and some transmission revenues from some customers in DP\&L's service area. Hence, DP\&L potentially faces both lower unit sales and a lower average price per unit. The effect of these adverse changes has been and will continue to be significant. The proposed Switching Tracker can help DP\&L mitigate some of those risks.
Q. Please describe the switching that has occurred to date.
A. I understand that essentially all of DP\&L's larger industrial and commercial customers have switched to either third-party generation providers or to DP\&L's affiliate DPLER at lower rates. For residential customers, the rate of switching to date has been much lower. However, the pace of residential switching has increased as information has been disseminated more widely. Such switching reduces DP\&L's retail load, thereby reducing its revenues as it sells more of its power at wholesale (lower) rates. I understand that DP\&L had experienced about 55\% switching through February 2012 (as incorporated in its previous MRO filing) and Company Witness Hoekstra has indicated that switching increased to $62 \%$ as of August 30, 2012. The proposed Switching Tracker is designed to protect $D P \& L$ from further loss of revenue from additional switching.

## Q. What other business risks does DP\&L face?

A. DP\&L faces a number of other risks that are listed in DPL, Inc.'s SEC Form 10-K that may lead to profit fluctuations despite DP\&L's regulated rates. These risks include volatility in fuel costs, volatility in emission allowance prices, the possibility of operational problems with its facilities, problems caused by severe weather, issues in dealing with PJM Interconnection (the regional transmission organization ("RTO") that controls DP\&L's transmission functions and through which DP\&L markets much of its power), and other risks.

## Q. What conclusions have you reached regarding the overall business position of DP\&L?

A. Having weathered the first significant round of competition, DP\&L's current business position appears relatively stable, though weaker than in previous years, with a stable economic and demographic service area and good infrastructure. However, increased competition in particular could present significant challenges to the Company, especially if the Switching Tracker is not approved and if the level of customer switching increases beyond levels experienced to date. In addition, there is always some risk that new environmental regulations concerning the Company's coal-fired generation capacity could require some additional capital investment or alternatively make those plants less economic to operate.

## Q. How does your conclusion correspond with those of the rating agencies?

A. My views closely correspond with recent statements by the rating agencies. In its April 23, 2012 announcement placing DP\&L on CreditWatch, S\&P noted that,

We have revised our assessment of DPL and DP\&L's business risk profiles to "strong" from "excellent" to reflect the increased competition in Ohio along with the expected growth of the unregulated retail business. In addition, we expect the increasing competitive pressure due to lower wholesale electric prices will materially stress DPL's profit margins. ${ }^{14}$

It went on to add:

We base the strong business risk profiles of both entities on DP\&L's eventual transition to generation market rates. We expect that growth of DPL's retail subsidiary combined with increasing competitive pressure due to lower wholesale electric prices will materially stress DPL's profit margins in the near term. Our assessment of business risk also takes into account the increasing retail competition, a lack of fuel diversity, and a weak economy in Dayton. Those factors are partially offset, in our view, by the lower-risk regulated transmission and distribution (T\&D) portion of the business; generally low-cost generating facilities; and the completion of a heavy environmental compliance program. ${ }^{15}$

Finally, it noted the uncertainty regarding the transition period to market rate pricing.

Moody's lowered the ratings for both DP\&L and DPL Inc. on November 28, 2011. In announcing the change, Moody's noted:

> The rating also reflects DP\&L's reasonably supportive regulatory framework in Ohio although the utility has some uncertainty with its upcoming Electric Security Plan (ESP) rate filing in 2012 . We anticipate that the supportive regulatory framework, comparable to other Ohio utilities, will continue. 16

[^7]Moody's subsequently noted its view of DP\&L as "a low-cost utility" and that it anticipated a "reasonable transition to market rates" but also cautioned that "if DP\&L experiences material, unrecoverable cost increases or capital expenditures, the rating of both DPL and DP\&L could be downgraded. ${ }^{17}$

Fitch Ratings, in announcing a downgrade of the ratings in November, 2011, cited "[a]n increasingly competitive operating environment in Ohio due to customers' ability to choose electricity providers" as well as a "generating fleet that is nearly $100 \%$ coal-fired and exposed to potential additional environmental regulation," mitigated by "[c]onstructive regulatory mechanisms that allow for timely recovery of costs" and a "low-cost generating fleet with environmental control equipment on the majority of its coal-fired plants." ${ }^{18}$

## V. <br> EVALUATION OF DP\&L'S PROJECTED FINANCIAL CONDITION

## Q. Can you describe the entity whose financial condition you are analyzing?

A. I am analyzing the utility DP\&L, a wholly-owned subsidiary of DPL Inc. Pursuant to an acquisition on November 28, 2011, DPL Inc. is now a wholly-owned, indirect subsidiary of The AES Corporation. Aside from DP\&L, DPL Inc. has several other subsidiaries, including DPL Energy Resources ("DPLER"), which sells competitive electric energy services, and DPL Energy, LLC ("DPLE"), which owns and operates peaking generation facilities from which it makes wholesale sales.

[^8]Q. How do analysts determine whether the financial ratios for a firm are favorable or unfavorable?
A. Where possible, financial analysis is undertaken in several different ways to provide the most comprehensive view of the entity. One method is to track the performance of a single company over time, a so-called time series analysis or trend analysis - to gauge its absolute performance and to note whether this performance is improving or deteriorating. The second method is to compare a company's performance relative to an industry standard or similar peer companies, a so-called cross-sectional analysis.

## Q. Were you able to undertake both types of analysis for DP\&L?

A. Yes. The time series analysis can be readily based on the projections of DP\&L's financial position as filed by the Company. I treat these projections as a forecast of DP\&L results as a hypothetical stand-alone entity, with one exception related to DP\&L's debt described later. However, rating agencies and investors do not typically rely on just one set of assumptions. They will examine the sensitivity of the results of the analysis to certain critical assumptions - a "what would happen if..." analysis. For this reason, I have examined the case as filed but also have analyzed the financial consequences of some alternative outcomes.

The cross-sectional analysis is hampered by the fact that DP\&L has historically held a low proportion of debt on its own balance sheet relative to its peers. For example, in Fitch's recent review of U.S. utilities there were eight other integrated utility companies in addition to DP\&L that were rated BBB-. As shown in Exhibit WJC-10, the median ratio of total debt to total capitalization (debt plus equity) among those eight firms was
$53.9 \%$ and, excluding DP\&L, the ratio ranged from a low of $45.4 \%$ to a high of $61.5 \%$. ${ }^{19}$
DP\&L's debt ratio of $40.0 \%$ is clearly below those of its peers. In contrast, the debt ratio of DPL Inc., DP\&L's immediate parent, was $54.1 \%$ at the end of 2011, much closer to that of DP\&L's peers rated BBB-. The apparent low level of debt at the DP\&L level while a higher proportion of debt is held at the parent level has the potential to distort the analysis and the ability to compare DP\&L with its industry peers.

## Q. Are you implying that DP\&L has too much equity and too little debt, and should increase the amount of debt on its own balance sheet?

A. No. The point is that from an economic perspective, a portion of the debt held on the DPL Inc. balance sheet is attributable to DP\&L. The pro forma adjustment presents an

[^9] economically realistic picture of the financial condition of DP\&L based on industry norms. Without making this adjustment, comparisons between DP\&L and other utilities or the rating agencies metrics would be distorted. For example, the unadjusted numbers from the Fitch study (Appendix F) suggest that DP\&L should be rated A+ or higher, if the rating were based solely on this factor. The fact that Fitch's rating of DP\&L is substantially lower at BBB - indicates that the rating agencies make this type of adjustment to the raw, reported numbers for their analysis.

## Q. Can you summarize the key assumptions underlying the financial projections included in the filing?

A. As explained by Company Witness Jackson, the as-filed projections are based on forward market pricing and a transition to auction pricing of $10 \%$ of load beginning January 2013, $40 \%$ beginning June 2014, 70\% beginning June 2015, and $100 \%$ as of June 2016. The as-filed projections assume no growth in output through 2017 and use capital and O\&M assumptions consistent with the MRO filed on March 30, 2012. The EIA projects electricity usage will grow at an annual rate of only $0.4 \%$ nationally between 2011 and 2017, thus providing support to this zero-growth projection. ${ }^{21}$

Obviously, any projections are subject to many different factors. For example, the overall load growth, customer switching, and changes in market prices for energy could all have significant impacts. One of the biggest uncertainties associated with the projections is the assumption regarding customer shopping and switching to other providers. Since February 17, 2012, DP\&L has experienced a significant increase in

[^10]customer switching. Specifically, as of February $17,2012,55 \%$ of DP\&L's customers had chosen to switch to generation service from suppliers other than DP\&L. As of August 30, 2012, $62 \%$ of DP\&L's customers had chosen to switch to service from alternate suppliers. DP\&L projects customer switching to continue to increase going forward. DP\&L's belief is that the shopping rate will reach an estimated of customers choosing to switch to generation service from suppliers other than DP\&L by December 31, 2013 and will rise to almost $\square$ by the end of 2017. DP\&L's Base Case projections assume no additional customer switching beyond that which had occurred as of August 2012. That is, the Base Case is based on the then-existing level of switching and does not attempt to project additional customer switching that would occur. Consequently, as noted below, I have examined scenarios under which the customer switching level is higher. These scenarios highlight the impact on DP\&L's financial condition if the Switching Tracker is not approved.


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## Q. How do you construct the pro forma financial statements?

[^12]

[^13]
Q. What alternative scenarios did you examine?
A. I examined three alternatives to the Base Case to determine how sensitive the results would be, should some factor or factors differ from that of the case as filed. First, I examined the impact of additional customer switching. The case as filed did not attempt to project any customers switching beyond the levels realized as of August 2012. There is a risk that customers will continue to shop subsequent to that date and thus DP\&L will lose additional retail generation sales. This scenario provides a quantitative assessment of the impact of that switching if the Switching Tracker is not approved. Second, I examined the impact of rejecting the proposed SSR under the Base Case assumption of no additional switching beyond the August 2012 level. Third, I considered a scenario that combines SSR rejection and increased customer switching (absent the Switching Tracker).

## Q. What information did you rely upon to develop these scenarios?

A. The Company provided projections of DP\&L's financial statements factoring in projected incremental switching but without the benefit of the proposed Switching Tracker. ${ }^{25}$ As noted above, this scenario assumes switching increases to $\square$ of customers by 2013 and to almost $\square$ by 2017, up from $62 \%$ as of August 30, 2012. Morningstar also considers variations in switching rate assumptions as a "key sensitivity" in their valuation analysis. ${ }^{26}$ I then made the same pro forma debt adjustments that I discussed previously so that all the alternative scenarios are consistent in that respect.


[^14]A. As proposed by the Company, the Switching Tracker would moderate, but not completely eliminate, the negative effect of increased customer switching. There would still be a significant negative impact in 2013 since the Switching Tracker would not be implemented until January 2014. In 2014 and following years, the Switching Tracker would provide additional revenue to partially offset that lost to increased switching. The financial results would thus be closer to those described under the Base Case scenario
Q. Does the No Switching Tracker scenario provide insight into the financial impact of faster transition to competitive bidding?
A. Yes. From a financial perspective, customer switching absent the Switching Tracker carries many of the same implications as a faster transition to $100 \%$ competitive bidding. In either case, DP\&L is likely to receive lower prices per unit for its retail volume and overall lower sales volumes.


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A. It is possible that reduced electricity rates due to the SSR removal could encourage a marginal increase in electricity usage by customers. Any such increase in electricity demand would moderate the impact of the lower rates on DP\&L's revenues. Academic research on the price elasticity of demand for electricity indicates that each percent decrease in price would lead to an increase in unit demand of $0.4 \%$ or less.

 retail sales volume relative to the Base Case, the small magnitude of the potential net impact of this side effect on revenue or profit does not affect my conclusions.



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Q. In your opinion, is the rate relief specified under the Company's proposal necessary to maintain the financial integrity of the Company?
A. Yes. As shown above, the SSR is important to maintain DP\&L's financial integrity even if it does not experience additional switching (or if it does experience switching but the Switching Tracker is approved). The Switching Tracker is also critical to reduce the risk that increased customer switching would cause a deterioration in DP\&L's financial integrity.



## VI. POTENTIAL CONSEQUENCES OF CHANGES TO DP\&L'S CREDIT RATING

Q. Can you provide a brief discussion on why credit ratings are important for regulated utilities and their customers?
A. Yes. Credit ratings are an important source of information for many market participants. An adverse change in credit ratings can result in a downward revision of investors' perceptions about the stock and bonds of the company.
Q. Do ratings have an impact on the interest rates that a utility must pay on its debt?
A. Yes. Credit ratings have a significant impact on the costs of borrowing. While the absolute interest rates that utilities pay vary over time, as with any other borrower, there is a close, inverse relationship between the company's credit rating and the cost of borrowing. The higher the rating, the lower the cost of borrowing, and the lower the credit rating, the higher the cost of borrowing (see Appendix H).


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Q. Apart from the interest rate, do credit ratings affect a utility's access to the capital market?
A. Yes. Many investors have established limitations for their investments and are precluded from investing or can invest only relatively modest amounts in lower-rated securities. The most severe distinction is that between investment and speculative grade securities, and that is precisely the threshold DP\&L is at currently. Many institutions will not even consider investing in speculative grade securities - those rated $\mathrm{BB}+$ and below. That restriction applies to medium- and longer-term borrowing. In the commercial paper market, even entities with long term ratings in the BBB or BBB- categories cannot effectively borrow, regardless of the interest rates offered.

Q. Since DPL is now a subsidiary of AES, dividend levels and shareholder expectations no longer matter, correct?
A. No, that is not correct. AES made a sizeable investment in DPL to become its sole shareholder, and looks for and is entitled to a reasonable return on its investment just like any other shareholder in any other entity. If a parent company does not feel it will earn a

[^15]reasonable return on its investment, it will be unwilling to make additional capital contributions that may be needed to fund capital expenditures.
Q. Although the rating agencies rate a utility's debt, do their actions have significance for equity investors?
A. Yes. A reduced credit rating is an indication that DP\&L may not be able to meet its debts as they come due. Firms in such situations have trouble raising equity capital because the new investors are rightly concerned that the money they invest will accrue to the bondholders' benefit.

## 9 VII. <br> VII. OTHER


Q. Is the rate of return still an important factor to consider in the current rate hearing?
A. Yes. From the Company's or an investor's perspective, the rate of return remains a key element in determining the company's financial integrity, along with and in the context of many other factors. Being able to achieve an adequate ROE is critical to the Company's
ability to continue to attract capital from outside lenders as well as to provide a reasonable return to the Company's equity investors.

However the focus has changed over time. Historically many utilities and regulators concentrated on determining a specific rate of return for the company and rates were set which could virtually guarantee the company that specified rate of return. The introduction of competition has dramatically changed that situation and utilities cannot be guaranteed a specific rate of return. Nevertheless, the introduction of increased competition must not prevent the utility from having the opportunity to earn an adequate rate of return. To set rates at such levels and in such a way as to make it impossible for the utility to have an opportunity to earn a reasonable rate of return would be economically confiscatory and precluded under the Ohio Constitution and under wellestablished legal precedents dating back to the Bluefield and Hope decisions. ${ }^{28}$
Q. How can rates be set to provide a utility with the opportunity to earn a reasonable rate of return without providing such a guaranteed return?
A. This can best be accomplished by focusing on two elements - establishing a range of reasonable rates of return and then concentration on the revenue side of the equation. This represents a change from the traditional cost-plus orientation under which operating and financing costs were determined and a ROE, calculated by applying a single, specified rate, was added on to determine a total revenue requirement. This total revenue requirement was then allocated to capacity and energy to determine the rates.

[^16]Rather than selecting a single value for the ROE, the Commission can indicate a range of possible rates of return which can be viewed as reasonable given current economic and market conditions, an approach the Commission employed in its recent Ohio Power Company decision. ${ }^{29}$

If the utility can generate reasonable revenues then the burden is placed on the utility to control its costs in order to generate a reasonable rate of return.

## Q. How should the reasonable range of the ROE be set for DP\&L?

A. The three primary methods for determining reasonable ROE levels remain the same as in the past - looking at market comparables, the discounted cash flow (DCF) approach and the Capital Asset Pricing Model (CAPM) ${ }^{30}$ In this setting, I believe that among these methods the comparable method is the most resilient and least prone to "assumption" error. While theoretically robust and in wide use, both the DCF and CAPM methods are very reliant on critical assumptions and even relatively small changes in those assumptions can result in substantial changes in the resultant ROE calculation.
Q. In developing a comparable analysis should the other companies examined be limited to other electric utilities?
A. No, not necessarily. Historically, under a protective regulatory environment utilities were considered something of a special class of companies. Because they were subject to less competition and realized a more stable rate of return over time, investors treated utilities

[^17]differently than other companies in more competitive sectors. But as utilities have become subject to more competition, utilities should be looked at more as other industrial companies, subject to many of the same risks and uncertainties. If utilities are subject to a greater level of competition and hence greater uncertainty and risk, they should have the opportunity to earn a higher rate of return than in the past to compensate investors for this added degree of uncertainty.

## Q. What criteria should be used for selecting comparable companies?

A. Comparisons are always easiest among companies within the same industrial sector and subject to similar degrees of risk, as reflected in the credit ratings. While investors will certainly look across the board to balance the various elements that enter into an investment decision and not limit themselves to one single sector, if we're able to identify a reasonably large group of similarly-situated companies, the need for adjustments is reduced.
Q. Have you identified a group of electric utilities that represent a reasonable basis for comparison?
A. Yes. I have identified a group of other utilities with a similar risk profile to that of DP\&L. These represent companies operating in various parts of the U.S. and vary in size, but overall I believe that they form a reasonable basis for comparison. The sample of companies selected is presented in Exhibit WJC-12.A.

For each of the companies I collected information on their reported net income for the years 2009, 2010 and 2011 and their shareholder's equity for the years 2008 through 2011. I then calculated the ROE based on the company's average equity for each of the
three years. I also collected projected ROEs from ValueLine for the years 2012, 2013 and 2014-2016 to the extent that it was available for these companies
Q. What were the rates of return for companies which you consider comparable?
A. The historical ROE's for the entire group of companies identified in Exhibit WJC-12.A are reported below. I believe the most extreme values, either high or low, do not contribute meaningfully to identifying a reasonable range of possible outcomes. By focusing on the $25^{\text {th }}$ percentile and $75^{\text {th }}$ percentile figures the extreme values are eliminated. While these vary from year to year, the 3 year average captures a reasonable range for the industry. Thus, a range for ROE of $7.7 \%$ and $10.4 \%$ reflects a rate of return that investors could reasonably expect to receive from similarly situated utility companies and is the one that I recommend to the Commission for consideration.

Historical Return on Average Equity for Selected Utilities

|  | 2009 | 2010 | 2011 | Average |
| :--- | :---: | :---: | :---: | :---: |
| Minimum | $5.1 \%$ | $4.9 \%$ | $0.2 \%$ | $3.4 \%$ |
| $25^{\text {th }}$ Percentile | $7.4 \%$ | $8.2 \%$ | $7.5 \%$ | $7.7 \%$ |
| Median | $8.7 \%$ | $9.4 \%$ | $8.9 \%$ | $9.0 \%$ |
| Average | $9.4 \%$ | $10.0 \%$ | $8.8 \%$ | $9.4 \%$ |
| $75^{\text {th }}$ Percentile | $9.9 \%$ | $10.9 \%$ | $10.3 \%$ | $10.4 \%$ |
| Maximum | $20.4 \%$ | $17.4 \%$ | $14.4 \%$ | $17.4 \%$ |

For firms with available data, I also examined projected ROEs from ValueLine for the years 2012, 2013 and an average rate for 2015-2017. The interquartile range of $8.3 \%$ to $10.0 \%$ is narrower than the historical data above. The median of $9.3 \%$ is very close to the median of $9.0 \%$ from the historical data. Given the smaller sample of firms with available projected ROE, I rely more heavily on the historical data for my recommended range of ROEs.

Projected Return on Average Equity for Selected Utilities

|  | 2012 | 2013 | $2015-2017$ | Average |
| :--- | :---: | :---: | :---: | :---: |
| Minimum | $7.5 \%$ | $8.0 \%$ | $8.5 \%$ | $8.0 \%$ |
| $25^{\text {th }}$ Percentile | $8.0 \%$ | $8.0 \%$ | $9.0 \%$ | $8.3 \%$ |
| Median | $9.0 \%$ | $9.5 \%$ | $9.5 \%$ | $9.3 \%$ |
| Mean | $9.2 \%$ | $9.5 \%$ | $10.2 \%$ | $9.6 \%$ |
| $75^{\text {th }}$ Percentile | $10.0 \%$ | $9.5 \%$ | $10.5 \%$ | $10.0 \%$ |
| Maximum | $13.0 \%$ | $13.0 \%$ | $14.0 \%$ | $13.3 \%$ |

1 Q. What other review did you undertake to assure yourself that this constituted a 2 reasonable range for the ROE?

3 A. I also examined ROE's for utilities rated BBB- (or Baa3) from each of the three major $7.7 \%$ to $10.4 \%$ appears reasonable.

Historical Interquartile Return on Average Equity for BBB- Rated Utilities

| Agency | 2009 | 2010 | 2011 | Average |
| :--- | :---: | :---: | :---: | :---: |
| $25^{\text {th }}$ Percentile |  |  |  |  |
| Fitch Ratings | $7.0 \%$ | $7.5 \%$ | $8.5 \%$ | $7.7 \%$ |
| Moody's Investors Service (Baa3) | $7.1 \%$ | $7.2 \%$ | $5.8 \%$ | $6.7 \%$ |
| Standard \& Poor's | $7.3 \%$ | $9.6 \%$ | $7.5 \%$ | $8.1 \%$ |
|  |  |  |  |  |
| $75^{\text {th }}$ Percentile |  |  |  |  |
| Fitch Ratings | $9.7 \%$ | $9.7 \%$ | $9.8 \%$ | $9.7 \%$ |
| Moody's Investors Service (Baa3) | $9.9 \%$ | $10.7 \%$ | $9.7 \%$ | $10.1 \%$ |
| Standard \& Poor's | $8.7 \%$ | $14.6 \%$ | $10.4 \%$ | $11.2 \%$ |

7 VIII. CONCLUSION

8 Q. Does this conclude your direct testimony?
A. Yes, it does.

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## APPENDIX A

## WILLIAM J. CHAMBERS, Ph.D.

## Curriculum Vitae

| 3 Albion Place | Home: 617-242-2046 Summer: 705-286-1742 |
| :--- | :--- |
| Charlestown, Massachusetts 02129 | Mobile: 857-540-9556 |
|  | E-mail: wchamber@bu.edu |

## Independent Consultant

September 2005 - Present
Typical assignments include:
Development and delivery of expert testimony regarding creditworthiness, credit ratings, and the impact of credit ratings on the financial viability of companies, their access to capital markets and cost of capital
Development and improvement of credit evaluation models, templates and scorecards
Evaluation and validation of internal credit evaluation systems
Review of credit evaluations of individual companies
Review or simulation of rating agency ratings
Assessment of economic and capital models
Instruction at professional courses concerning internal credit evaluation systems

## Boston University

September 2005-Present

## Metropolitan College <br> Department of Administrative Sciences <br> Associate Professor

Responsible for teaching graduate and undergraduate courses in corporate finance, investment analysis, portfolio management, multinational finance, international investments and capital markets.
Coordinate on-line instructional program for banking \& financial services, project management, international marketing, insurance, business continuity and human resources management.

Standard \& Poor's, New York, New York

## Consultant to Risk Solutions

Managing Director
Risk Solutions Americas Practice Leader Global Head of Content Development \& Quality Assurance

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Responsible for Americas operations of newly formed group covering consulting, credit training, credit modeling, default\& recovery information, etc. Coordinated work with other departments of S\&P including Structured Finance and Corporate \& Government Ratings. A major portion of the work was with banks and other financial institutions, improving their internal rating systems and compliance with Basel II international capital standards.
Developed and co-taught courses on internal credit scoring systems, credit scoring, loss given default and portfolio management.
Oversaw research on default, credit transition, loss given default
Oversaw development of credit risk models

## Managing Director, Corporate Ratings

Strategic Planning, Product Development \& Marketing
December 1996-December 2000
Headed team responsible for Corporate Ratings Group strategic planning, product research, development and launch and marketing.
Oversaw development of Bank Loan Ratings and Rating Evaluation Service, which provides advice regarding the impact of identified strategic actions such as acquisitions or recapitalization on firm's creditworthiness.
Oversaw acquisition of Portfolio Management Data and Canadian Bond Rating Service
Oversaw development of credit risk models and creation of loss given default database

## Managing Director, International Corporate Ratings

January 1992-December 1996
Responsible for all non-US corporate ratings including developed and emerging markets, including first corporate ratings assigned in Latin America, China and Southeast Asia. Developed criteria for evaluating corporate entities, parent-subsidiary relationships, sovereign risk impact on corporate creditworthiness, and structured financings.

Director, Standard \& Poor's Australia
January 1990-December 1991
Oversaw acquisition of Australian Ratings in Melbourne and its integration into the S\&P network Reviewed all existing debt ratings and coordinated conversion to international rating scale

## Director, International Public Sector Ratings

September 1983-December 1989
Responsible for rating of sovereign, municipal and government-owned institutions in Canada, Australia, New Zealand, Sweden and Germany. Responsible for analysis of multi-lateral lending institutions, including the International Bank for Reconstruction \& Development (World Bank, IFC), Inter-American Development Bank \& Asian Development Bank.
Participated in development of criteria and first assignment of ratings to international structured finance, bond insured transactions, sovereign risk effect on private sector borrowers (sovereign ceiling) and preferred creditor status of multi-lateral lenders.
Researched and developed office plans for Canada and Australia
G.M. Stamm Economic Research Associates, Toronto, OntarioVice President and Director of ResearchMarch 1979-September 1983
Oversaw all economic and financial research for consultant specializing in real estate and public finance sectors. Developed background analysis, expert testimony and support for hearings before the Ontario Municipal Board and Ontario Energy Board, regarding impact of energy pricing on corporate customers, impact of real estate development on municipalities and existing businesses, etc.
Regional Municipality of Durham, Whitby, Ontario Senior Economist
Conducted a wide variety of financial and economic studies for the region concerning fiscal capacity and impact of development, capital works financing, budgets, self insurance, etc.

Newfields Development Corp., Dayton, Ohio Director of Financial Planning

June 1974-March 1976
Analyzed all financial aspects of large, new town development
Taught economics as an Adjunct at Miami University of Ohio

## Education:

Columbia University, New York, New York<br>Department of Economics<br>M.A., M. Phil, Ph.D. June 1975<br>Fields of Specialization: Urban Economics, Public Finance, Monetary Theory, Microeconomic Theory<br>Dissertation: The Optimal Allocation of Land to Transportation in Urban Areas William Vickrey, Advisor<br>College of Wooster, Wooster, Ohio<br>Major in Economics and History B.A., June 1968

## Summary of Relevant Expert Witness Experience

1980-1983 Testimony before the Ontario Energy Board on behalf of the Association of Major Power Consumers of Ontario (AMPCO) for Ontario Hydro's annual rate hearings.

2009 Rohm \& Haas vs. The Dow Chemical Company<br>2009 General Electric Capital Canada Inc. vs. Her Majesty The Queen<br>2009 In The Matter Of The Current And Future Financial Condition Of Baltimore Gas And Electric Company Before The Public Service Commission Of Maryland<br>2011 El Fassi Realty Corp. v. 31 West 34th Street LLC<br>2011 NA General Partnership \& Subsidiaries, Iberdrola Renewables Holdings, Inc. \& Subsidiaries, Successor in Interest to NA General Partnership \& Subsidiaries v.<br>Commissioner of Internal Revenue, Docket No. 525-10

## APPENDIX B

## Agency Credit Rating Scale

| S\&P Rating / <br> Moody's <br> Rating / <br> Fitch Rating | S\&P <br> Description | Moody's Description | Fitch Description |
| :---: | :---: | :---: | :---: |
| Investment Grade Rating Categories |  |  |  |
| $\begin{aligned} & \overline{A A A} \\ & \text { Aaa } \\ & \text { AAA } \end{aligned}$ | An obligation rated 'AAA' has the highest rating assigned by Standard \& Poor's. The obligor's capacity to meet its financial commitment on the obligation is extremely strong. | Obligations rated Aaa are judged to be of the highest quality, with minimal credit risk. | $A A A^{\prime}$ ratings denote the lowest expectation of default risk. They are assigned only in cases of exceptionally strong capacity for payment of financial commitments. This capacity is highly unlikely to be adversely affected by foreseeable events. |
| $\begin{aligned} & A A \\ & A a \\ & A A \end{aligned}$ | An obligation rated ' $A$ ' differs from the highestrated obligations only to a small degree. The obligor's capacity to meet its finantial commitment on the obligation is very strong. | Obligations rated $A a$ are judged to be of high quality and are subject to very low credit risk. | 'AA' ratings denote expectations of very tow default risk. They indicate very strong capacity for payment of financial commitments. This capacity is not significantly vulnerabie to foreseeable. events. |
| $\begin{aligned} & \mathbf{A} \\ & \mathbf{A} \\ & \mathbf{A} \end{aligned}$ | An obligation rated ' $A$ ' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial cornmitment on the obligation is still strong. | Obligations rated A are considered upper-medium grade and are subject to low credit risk. | ' $A$ ' ratings denote expectations of low default risk. The capacity for payment of financial commitments is considered strong. This capacity may, nevertheless, be <br> more vulnerable to adverse business or economic conditions than is the case for higher ratings. |
| $\begin{aligned} & \hline \text { BBB } \\ & \text { Baa } \\ & \text { BBB } \end{aligned}$ | An obligation rated 'BBB' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation. | Obligations rated Baa are subject to moderate credit risk. <br> They are considered mediumgrade and as such may possess certain speculative characteristics. | 'BBB' ratings indicate that expectations of default risk are currently low. The capacity for payment of financial commitments is considered adequate but adverse business or economic conditions are more likely to impair this capacity. |
| Non-Investment Grade, Sub-Investment Grade, Speculative Grade Rating Categories |  |  |  |
| $\begin{aligned} & \hline \mathrm{BB} \\ & \mathrm{Ba} \\ & \mathrm{BB} \end{aligned}$ | An obligation rated 'BB' is less vuinerable to nompayment than other speculative issues. However, it faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitment on the abligation. | Obligations rated Ba are judged to have speculative elements and are subject to substantial credit risk. | 'BB' ratings indicate an elevated vulnerability to default risk, particularly in the event of adverse changes in business or economic conditions over time; however, business or financial flexibility exists which supports the servicing of financial commitments. |
| $\begin{aligned} & \hline \mathbf{B} \\ & \mathbf{B} \\ & \mathbf{B} \end{aligned}$ | An obligation rated ' $B$ ' is more vulnerable to nonpayment than obligations rated ' $B B^{\prime}$ ', but the obiigor currently has the capacity to meet its financial commitment on the obligation. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingress to meet its financial commitment on the obligation. | Obligations rated B are considered speculative and are subject to high credit risk. | ' 8 ' ratings indicate that material default risk is present, but a limited margin of safety remains. Financial commitments are currently being met; however, capacity for continued payment is vulnerable to deterioration in the business and economic environment. |
| $\begin{aligned} & \mathrm{CCC} \\ & \mathrm{Caz} \\ & \mathrm{CCC} \end{aligned}$ | An obligation rated 'CCC' is currenthy vuinerable to nompayment, and is dependent upon favorable business, <br> financial, and economic conditions for the obligor to meet its financial commitment on the obligation. in the event of adverse business, financial, or economic conditions, the obligor is not likely to have the capacity to meet its financial commitment on the obligation. | Obligations rated Caa are judged to be of poor standing and are subject to very high credit risk. | Default is a real possibility. |
| CC Ca CC | An obligation rated 'CC' is currentty highly vulnerable to nonpayment. | Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of | Default of some kind appears probabie |

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|  |  | recovery of principal and interest. |  |
| :---: | :---: | :---: | :---: |
| C | $A^{\prime} C^{\prime}$ rating is assigned to obigations that are currently <br> highly vulnerable to nonpayment, obligations that have <br> payment arrearages altowed by the terms of the documents, or obiigations of an issuer that is the subject <br> of a bankruptcy petition or similar action which have not experienced a payment default. Among others, the 'C' <br> rating may be assigned to subordinated debt, preferred <br> stock or other obligations on which cash payments have been suspended in accordance with the instrument's terms. | Obligations rated C are the lowest rated class of bonds and are typically in default, with little prospect for recovery of principal or interest. | Default is imminent or inevitable, or the issuer is in standstill. Conditions that are indicative of a ' C ' category rating for an issuer include: <br> - the issuer has entered into a grace or cure period following non-payment of a material financial obligation; <br> - the issuer has entered into a temporary negotiated waiver or standstill agreement following a payment default on a material financial obligation; and <br> - Fitch Ratings otherwise betieves a condition of 'RD' or 'D' to be imminent or inevitable, including through the formal announcement of a coercive debt exchange. |
| $\begin{aligned} & \hline D \\ & \text { n.a. } \\ & D \end{aligned}$ | An obligation rated ' $D$ ' is in payment default. The ' D ' <br> rating category is used when payments on an obligation <br> are not made on the date due even if the applicable grace period has not expired, unless Standard \& Poor's believes that such payments will be made during such grace period. The ' $D$ ' rating also will be used upon the filing of a bankruptcy petition or the taking of a similar action if payments on an obligation are jeopardized. | Not Applicable | ' D ' ratings indicate an issuer that in Fitch Ratings' opinion has entered into bankruptcy filings, administration, receivership, liquidation or other formal winding-up procedure, or which has otherwise ceased business |
| Notes: <br> Sources: Standard \& Poor's, "Standard \& Poor's Ratings Definitions," December 1, 2008;Moody's Investors Service, "Moody's Ratings Symbois and Definitions," June, 2008; Fitch Ratings, "Definitions of Ratings and Other <br> Scales," March, 2009. <br> [1] S\&P ratings and definitions are for long-term issues. The S\&P ratings from ' $A A^{\prime}$ ' to ' $C C C$ ' may be modified by the addition of a plus ( + ) or minus ( - ) sign to show relative standing within the major rating categories. <br> [2] Moody's ratings and definitions are for long-term corporate obligations. "Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the fower end of that generic rating category." <br> [3] Fitch Ratings are long term issuer ratings. The modifiers " + " or "-" may be appended to a rating to denote relative status within major rating categories, Such suffixes are not added to the 'AAA' Long-term rating category, to categories below 'CCC', or to Long-Term IDR categories below 'B |  |  |  |

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## APPENDIX C

## Sample Rating Agency Criteria: S\&P

## RatingsDirecta

November 26, 2008

# Criteria | Corporates | Utilities: <br> Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities Industry 

## Primary Credit Analyst:

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Table Of Contents
Relationship Between Business And Financial Risks
Part 1--Business Risk Analysis
Part 2-Financial Risk Analysis

## Criteria | Corporates | Utilities:

Key Credit Factors: Business And Financial
Risks In The Investor-Owned Utilities Industry
(Editor's Note: Table 1 in this article is no longer current. It has been superseded by the table found in "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded, " published May 27, 2009, on RatingsDirect.)

Standard \& Poor's Ratings Services' analytic framework for companies in all sectors, including investor-owned utilities, is divided into two major segments: The first part is the fundamental business risk analysis. This step forms the basis and provides the industry and business contexts for the second segment of the analysis, an in-depth financial risk analysis of the company.

An integrated utility is often a part of a larger holding company structure that also owns other businesses, including unregulated power generation. This fact does not alter how we analyze the regulated utility, but it may affect the ultimate rating outcome because of any higher risk credit drag that the unregulated activities may have on the utility. Such considerations include the freedom and practice of management with respect to shifting cash resources among subsidiaries and the presence of ring-fencing mechanisms that may protect the utility.

## Relationship Between Business And Financial Risks

Prior to discussing the specific risk factors we analyze within our framework, it is important to understand how we view the relationship between business and financial risks. Table 1 displays this relationship and its implications for a company's rating.

Table 1
Prsiness Aud Financial Risiz Profic Matrix

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Whandand \& Poor's 2006.

Chart 1 summarizes the ratings process.

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## Chart 1

Scoming And Rating Detemination Process

\$ Standand \& Poor's 2008.

## Part 1-Business Risk Analysis

Business risk is analyzed in four categories: country risk, industry risk, competitive position, and profitability. We determine a score for the overall business risk based on the scale shown in table 2.

Table 2
Business Risk Measures

| Description | Rating equivalent |
| :--- | :--- |
| Excellent | AAA/AA |
| Strong | A |
| Satisfactory | BBB |
| Weak | BB |
| Vuinerabie | B/CCC |

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Analysis of business risk factors is supported by factual data, including statistics, but ultimately involves a fair amount of subjective judgment. Understanding business risk provides a context in which to judge financial risk, which covers analysis of cash flow generation, capitalization, and liquidity. In all cases, the analysis uses historical experience to make estimates of future performance and risk.

In the U.S., regulated utilities and holding companies that are utility-focused virtually always fall in the upper range (Excellent or Strong) of business risk profiles. The defining characteristics of most utilities--a legally defined service territory generally free of significant competition, the provision of an essential or near-essential service, and the presence of regulators that have an abiding interest in supporting a healthy utility financial profile-underpin the business risk profiles of the electric, gas, and water utilities.

1. Country risk and macroeconomic factors (economic, political, and social environments) Country risk plays a critical role in determining all ratings on companies in a given national domicile. Sovereign-related stress can have an overwhelming effect on company creditworthiness, both directly and indirectly.

Sovereign credit ratings suggest the general risk local entities face, but the ratings may not fully capture the risk applicable to the private sector. As a result, when rating a corporation, we look beyond the sovereign rating to evaluate the specific economic or country risks that may affect the entity's creditworthiness. Such risks pertain to the effect of government policies and other country risk factors on the obligor's business and financial environments, and an entity's ability to insulate itself from these risks.

## 2. Industry business and credit risk characteristics

In establishing a view of the degree of credit risk in a given industry for rating purposes, it is useful to consider how its risk profile compares to that of other industries. Although the industry risk characteristic categories are broadly similar across industries, the effect of these factors on credit tisk can vary markedly among industries. Chart 2 illustrates how the effects of these credit-risk factors vary among some major industries. The key industry factors are scored as follows: High risk ( $H$ ), medium/high risk ( $\mathrm{M} / \mathrm{H}$ ), medium risk ( $M$ ), low/medium risk ( $L / \mathrm{M}$ ), and low risk (L).

Chart 2


Industry strengths:

- Material barriers to entry because of government-granted franchises, despite deregulatory trends;
- Strategically important to national and regional economies; key pillar of the consumer and commercial economy;
- Improving management focus industry-wide on operating efficiency in recent years; and
- Cross-border growth opportunities in Europe and industrializing emerging markets.


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# Criteria | Corporates | Utilities: Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities 

 Industry
## Industry challenges/risks:

- Maturity, with a weak growth outlook in developed countries;
- Highly politicized and burdensome regulatory (i.e., rate setting and investment recovery) process; and
- Risks of "legacy cost drag" as wholesale and retail markets move toward greater deregulation.

Major global risk issues facing the utilities industry:

- Increased volatility in the regulatory environment and competitive landscape leading to greater uncertainty regarding adequacy of pricing and return on capital;
- Longer-term impact of, and ability to absorb, significant secular upturn in fuel costs, which is the industry's major operating expense;
- Ability to recover massive investment costs that will likely be necessary to replace aging industry infrastructure in a harsher cost and regulatory environment; and
- The debate over global warming will continue far beyond 2008. What the ultimate outcome will be is unclear, but growing legislation addressing carbon emissions and other greenhouse gases is probable in the near future. Utilities' ability to recover environmentally mandated costs in authorized rates and consumers' willingness to pay them could impact the industry's future credit strength.


## Industry business model and risk profile in transition

Regulated utilities are in many developed countries transitioning away from quasi-monopolies toward more open competitive environments.

The level of business and credit risk associated with the investor-owned regulated utilities has historically proven in most countries to be lower (risk) than for many other industries. This has been because of the existence of government policy and related regulation that created significant barriers to entry limiting competition, and regulatory rate setting designed to provide an opportunity to achieve a specific level of profitability. The credit quality of most vertically integrated utilities in developed countries has historically been, and remains, solidly investment grade. This, to reiterate, is primarily a function of the existence of protective regulation.

## The risks of, and rationale for, deregulation

The traditional protected and privileged utilities industry business model with its marked monopolistic characteristics is in many countries undergoing rransition to a more competitive and open framework. This transition process, known as deregulation or liberalization, is weakening the business and credit risk profile of the industry. While the impact of these changes may prove positive in the longer term for more efficient industry players, it is important to bear in mind that economic history is littered with the vestiges of industries and enterprises that once flourished under the protection of government-created barriers and other protections. The shift is being driven by introduction in many countries of policies to encourage the entrance of new competitors and to reduce the traditional regulatory protections and privileges enjoyed by incumbents. Historically, the regulated investor-owned utilities were usually granted exclusive franchises. Because of the significant risks associated with the capital-intense nature of the utility investment, including massive sunk/fixed costs and long-term break-even horizons, governments in many countries created legal and regulatory frameworks that granted exclusivity to one operator in a given geographic area. To offset the monopolistic pricing power this exclusivity created, a system of heavy regulation was typically developed, which included the setting of pricing. The model often set pricing on a "cost-plus-basis", i.e., the margin over cost allowing for a perceived fair return to shareholders of investor-owned utilities. One major weakness of this system is that it created little incentive for utilities to efficiently manage costs. In recent years as many governments have adopted more liberal open market economic philosophies and related
policies focused on the creation of greater competition-in an effort to foster improved economic growth and pricing efficiency throughout the economy-the traditional utility models in many countries have come under increasing political scrutiny and pressure.

A major public policy and political risk, as well as a credit risk, associated with deregulation of protected industries, is that existing incumbents often experience significant challenges in readjusting their management strategies, cultures, and expense basis to be able to compete effectively in the new environment.

The turmoil and bankruptcies in the U.S. in the nonregulated power marketing and trading arena between 2000 and 2002 arose subsequent to a major government initiative to deregulate the wholesale market. These failures, as well as other high-profile problems arising from deregulation elsewhere in the world, have given governments pause as to the desirability of a headlong rush into deregulation. In the U.S., for example, there is currently little impetus to carry deregulation any further.

## Regulation and deregulation in the U.S.

While considerable attention has been focused on companies in states that deregulated in the late 1990 s and the early part of this decade, and the related consequences of disaggregation and nonregulated generation, 27 states (plus four that formally reversed, suspended, or delayed restructuring) have retained the traditional regulated model, For utilities operating in those states, the quality of regulation and management loom considerably larger than markets, operations, and competitiveness in shaping overall financial performance. Policies and practices among state and federal regulatory bodies will be key credit determinants. Likewise, the quality of management, defined by its posture towards creditworthiness, strategic decisions, execution and consistency, and its ability to sustain a good working relationship with regulators, will be key. Importantly, however, it is virtually impossible to completely segregate each of these characteristics from the others; to some extent they are all interrelated.

## Fragmentation of original model emerges in the U.S.

- Traditional regulated, vertically integrated utilities (generation, transmission, and distribution);
- Transmission and distribution;
- Diversified;
- Transmission; and
- Merchant generation.

We view a company that owns regulated generation, transmission, and distribution operations as positioned between companies with relatively low-risk transmission and distribution operations and companies with higher-risk diversified activities on the business profile spectrum. What typically distinguishes one vertically integrated utility's business profile score from another is the quality of regulation and management, which are the two leading drivers of credit quality.

## Deregulation in the U.S. creates a new volatile industry subsector

The birth of large-scale, nonregulated power generators created the opportunity-and the need-for companies to market and broker power. Power marketers, independent power producers, and unregulated subsidiaries of utility companies offer power-supply alternatives to other utilities in the wholesale market as well as to large industrial customers. Power marketing operations have been formed by energy companies (many with experience in marketing natural gas), utility subsidiaries, and independents. As with the gas industry, electric power marketers expected to develop an efficient market by straddling the gulf between electricity generators and their customers, who have become "free agents" in the newly competitive environment.
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## Deregulation creates tiering of industry, business and credit risk profiles in Europe

The regional differences in market liberalization across Western Europe result in material variations in industry and business risk profiles for the utilities industry at the national level. The U.K. and Nordic markets, in particular, are substartially deregulated and open, and consequently present higher risks than other markets that are less open, including France and the Iberian market. Ratings therefore generally are lower in these more deregulated markets. The less-liberalized markets may face more regulatory risk going forward, particularly if efforts by the EU to advance the internal market by increasing the extent of market liberalization across the EU continue.

Legal action against companies that infringe on competition laws should be expected--particularly against those that move to prevent new entry and limit customer choice (for example, through the tying of markets and capacity hoarding) or collude with other incumbents to do so. The European Commission (EC) can fine companies that have violated antitrust laws up to $10 \%$ of their global annual turnover and, under certain conditions, impose structural remedies. Particular emphasis would be placed on increasing the effective unbunding of network and supply activities and on diminishing market concentration and barriers to entry.

The EC has publicly stated is intention to pursue, as a priority, abuses of the dominant position of vertically integrated companies (called vertical foreclosure). Behavioral remedies, such as energy reiease programs, are expected to be imposed by the EC for which such abuses, or collusion, are proved. The commission could also enforce structural measures when behavioral remedies are deemed insufficient.

## 3. Company competitive position and keys to competitive success

In analyzing a company's competitive position, we consider the following:

- Regulation;
- Markets;
- Diversification;
- Operations;
- Management, including growth strategy;
- Governance; and
- Profitability.

We are most concerned about how these elements contribute individually and in aggregate to the predictability and sustainability of financial performance, particularly cash flow generation relative to fixed obligations.

## Regulation.

Critical success factors include:

- Consistency and predictability of decisions;
- Support for recovery of fuel and investment costs;
- History of timely and consistent rate treatment, permitting satisfactory profit margins and timely return on investment; and
- Support for a reasonable cash return on investment.

Regulation is the most critical aspect that underlies regulated integrated utilities' creditworthiness. Regulatory decisions can profoundly affect financial performance. Our assessment of the regulatory environments in which a utility operates is guided by certain principles, most prominently consistency and predictability, as well as efficiency and timeliness. For a regulatory process to be considered supportive of credit quality, it must limit uncertainty in the
recovery of a utility's investment. They must also eliminate, or at least greatly reduce, the issue of rate-case lag, especially when a utility engages in a sizable capital expenditure program.

Our evaluation encompasses the administrative, judicial, and legislative processes involved in state and national government regulation, and includes the political environment in which commissions render decisions. Regulation is assessed in terms of its ability to satisfy the particular needs of individual utilities. Rate-setting actions are reviewed case by case with regard to the potential effect on credit quality.

Evaluation of regulation focuses on the ability of regulation to provide utilities with the opportunity to generate cash flow and earnings quality and stability adequate to:

- Meet investment needs;
- Service debt and maintain a satisfactory rating profile; and
- Generate a comperitive rate of return to investors.

To achieve this, regulation must allow for:

- Timely recognition of volatile cost components such as fuel and satisfactory returns on invested capital and equity;
- Ability to enter into long-term arrangements at negotiated rates without having to seck regulatory approval for each contract; and
- Ability to recover costs in new investment over a reasonable time frame.

Because the bulk of a utility's operating expenses relate to fuel and purchased power, of primary importance to rating stability is the level of support that state regulators provide to utilities for fuel cost recovery, particularly as gas and coal costs have risen. Utilities that are operating under rate moratoriums, or without access to fuel and purchased-power adjustment clauses, or face significant regulatory lag, also are subject to reduced operating margins, increased cash flow volatility, and greater demand for working capital. Companies that axe granted fuel true-ups may be required to spread recovery over many years to ease the pain for the consumer. In addition to fuel cost recovery filings, regulators will have to address significant rate increase requests related to new generating capacity additions, environmental modifications, and reliability upgrades. Current cash recovery and/or return by means of construction work in progress support what would otherwise sometimes be a significant cash flow drain and reduces the utility's need to issue debt during construction.

## Markets/market position.

Critical success factors include:

- A healthy and growing economy;
- Growth in population and residential and commercial customer base;
- An attractive business environment;
- An above-average residential base; and
- Limited bypass risk.


## The importance of diversification and size.

Critical success factors include:

- Regional and cross-border market diversification (mitigates economic, demographic, and political risk concentration);


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- Industrial customer diversification;
- Fuel supplier diversification;
- Retail, compared with wholesale;
- Regulatory regime diversification; and
- Generating facility diversification.

Operations (operating strategy, capability, and performance efficiency).
Critical success factors include:

- Low cost structure;
- Well-maintained assets;
- Solid plant performance;
- Adequate generating reserves, and compliance with environmental standards; and
- Limited environmental exposures.


## Management evaluation.

Utilities are complex specialized businesses requiring experienced and successful management teams to have a strong mix of the aforementioned disciplines. Critical elements of management success include:

- Commitment to credit quality;
- Operating efficiency and cost control;
- Maintaining a competitive asset base, i.e., power plant construction project management, and plant upkeep and renovation;
- Regulatory track record, process, and relationship management;
- M\&A experience in successfully identifying, executing, and integrating acquisitions;
- Credibility and strong corporate governance;
- Conservative financial policies, especially regarding non-regulated activities; and
- Ability and track record in repositioning and transforming business to not just survive, but prosper in a more open market environment.

Management is assessed for its ability to run and expand the business efficiently, while mitigating inherent business and financial risks. The evaluation also focuses on the credibility of management's strategy and projections, its operating and financial track record, and its appetite for assuming business and financial risk.

The management assessment is based on tenure, turnover, industry experience, financial track record, corporate governance, a grasp of industry issues, and knowledge of regulation, the impact of deregulation, of customers, and their needs. Management's ability and willingness to develop workable strategies to address system needs, and to execute reasonable and effective long-term plans are assessed. Management quality is also indicated by thoughtful balancing of multiple priorities; a record of credibility; and effective communication with the public, regulatory bodies, and the financial community.

We also focus on management's ability to achieve cost-effective operations and commitment to maintaining credit quality. This can be assessed by evaluating accounting and financial practices, capitalization and common dividend objectives, and the company's philosophy regarding growth and risk-taking.

## 4. Profitability/peer comparison

## Regulated.

Traditionally, the lower levels of risk in utilities because of the highly regulated environment has resulted in lower profitability and return on capital than in many other industrial sectors. In the regulated marketplace the level and margin of profitability has often primarily been a function of regulatory leeway, with the contribution of operating efficiency and revenue growth taking more of a back seat.

## Deregulated/iberalized environments.

In deregulated markets, cost efficiency and flexibility, and internal growth, are the major profitability drivers. The development of a robust risk management culture and infrastructure are also keys to creating stability of earnings, because the company no longer has recourse to the regulator to cover costs or losses-a recourse that usually protects from downside earnings surprises in the regulated sector.

Whether generated by the regulated or deregulated side of the business, profitability is critical for utilities because of the need to fund investment-generating capacity, maintain access to external debt and equity capital, and make acquisitions. Profit potential and stability is a critical determinant of credit protection. A company that generates higher operating margins and returns on capital also has a greater ability to fund growth internally, attract capital externally, and withstand business adversity. Earnings power ultimately attests to the value of the company's assets, as well. In fact, a company's profit performance offers a litmus test of its fundamental health and competitive position. Accordingly, the conclusions about profitability should confirm the assessment of business risk, including the degree of advantage provided by the regulatory environment.

## Part 2—Financial Risk Analysis

Having evaluated a company's competitive position, operating environment, and earnings quality, our analysis proceeds to several financial categories. Financial risk is portrayed largely through quantitative means, particularly by using financial ratios.

We analyze five risk categories: accounting characteristics; financial governance/policies and risk tolcrance; cash flow adequacy; capital structure and leverage; and liquidity/short-term factors. We then determine a score for overall financial risk using the following scale:

Table 3

| Finamcial Risk | Measures |
| :--- | :--- |
| Dascription | Rating equivalent |
| Minimal | AAA/AA |
| Modest | A |
| Hntermediate | BBB |
| Aggressive | BB |
| Highly leveraged | B |

The major goal of financial risk analysis is to determine the quality of cash resources from operations and other major sources available to service the debt and other financial liabilities, including any new debt. An integral part of this analysis is to form an understanding of the debt structure, including the mix of senior versus subordinated, fixed versus floating debt, as well as its maturity structure. It is also important to analyze and form an opinion of

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# Criteria | Corporates | Utilities: Key Credit Factors: Business And Financial Risks In The Investor-Owned Utilities <br> Industry 

management's financial policy, accounting elections, and risk appetite. Using cash flow analysis as a building block, it is further necessary to establish the company's liquidity profile and flexibility. While closely interrelated, the analysis of a company's liquidity differs from that of its cash flow as it also incorporates the evaluation of other sources and uses of funds, such as committed undrawn bank facilities, as well as contingent liabilities (e.g., guarantees, triggers, regulatory issues, and legal settlements).

## 1. Accounting characteristics

Financial statements and related footnotes are the primary source of information about a company's financial condition and performance. The analysis begins with a review of accounting characteristics to determine whether ratios and statistics derived from the statements adequately measure a company's performance and position relative to those of both its direct peer group and the universe of industrial companies. This assessment is important in providing a common frame of reference and in helping the analyst determine the quality of disclosure and the reliability of the reported numbers. We focus on the following areas:

- Analytical adjustments and areas of potential concern;
- Significant transactions and notable events that have accounting implications.
- Significant accounting and financial reporting policies and the underlying assumptions.
- History of nonoperating results and extraordinary charges or adjustments and underlying accounting treatment, disclosure, and explanation.


## 2. Financial governance/policies and risk tolerance

The robustness of management's financial and accounting strategies and related implementation processes is a key element in credit risk evaluation. We attach great importance to management's philosophies and policies involving financial risk.

Financial policies are also important because companies with more conservative balance sheets and the credit capacity to pursue the necessary investments or acquisitions gain an advantage. Overly aggressive capital structures can leave very little capacity to absorb unexpected negative developments and will certainly leave little capacity to make future strategic investments. Companies with the credit capacity to support strategic investments will be better positioned to both evolve with industry change and to withstand inevitable downturns.

Understanding management's strategy for raising its share price, including its financial performance objectives, e.g., return on equity, can provide invaluable insight about the financial and business risk appetite.

## 3. Cash flow adequacy

Cash-flow analysis is one of the most critical elements of all credit rating decisions. Although there usually is a strong relationship between cash flow and profitability, many transactions and accounting entries affect one and not the other. Analysis of cash-flow patterns can reveal a level of debt-servicing capability that is either stronger or weaker than might be apparent from earnings. Focusing on the source and quality/volatility of cash flow is also important (e.g., regulated/deregulated; generation/transmission/trading).

A review of cash flow historically, as well as needs on a forward-looking basis, should take into account levels of capital expenditures for new generation plants. In periods where elevated new construction occurs in anticipation of a rise in power demand, cash outflows will be high.

It is particularly important to evaluate capital-intensive businesses, such as utility companies, on the basis of how
much cash they generate and absorb. Debt service is an especially important use of cash flow.

## Cash-flow ratios.

Ratios show the relationship of cash flow to debt and debt service, and also to the company's needs. Because there are calls on cash flow other than repaying debt, it is important to know the extent to which those requirements will allow cash to be used for debt service or, alternatively, lead to greater need for borrowing. The most important cash flow ratios we look at for the investor-owned utilities are:

- Funds from operations (FFO)/Total debt;
- FFO/Income;
- Funds from operations/Total debt (adjusted for off-balance-sheet liabilities);
- EBITDA/Interest; and
- Net cash flow/Capital spending requirements.


## 4. Capital structure and leverage

For utilities, the long-term nature of capital commitments and extended breakeven periods on investment, make the type of financing required by these companies to finance these needs to be similar in many ways to the financing needs of other long-term asset-intensive businesses. Our analysts review projections of future CAPEX, debt, and FFO levels to make a determination of the likely level of leverage and debt over the medium term, and the companies' ability to sustain them. The valuation of the debt amortization scheduled is tied into projections of profitability breakeven, and the underlying assets becoming cash-flow-positive, are key components of the combined cash flow and leverage analysis.

## Capitalization ratios.

When analyzing a utility's balance sheet, a key element is analysis of capitalization ratios. The main factors influencing the level of debt are the level of capital expenditures, particularly construction expenditures, and the cost of debt. Companies with strong balance sheets will have more flexibility to further reduce their debt, and/or increase their dividends. The following are useful indicators of leverage:

- Total debt*/total debt + equity; and
- Total debt ${ }^{*}+$ off-balance-sheet liabilities/total debt + off-balance-sheet liabilities + equity.
*Power purchase agreement-adjusted total debt. Fully adjusted, historically demonstrated, and expected to consistently continue.

Debt leverage, and interest and amortization coverage ratios are the key drivers of the financial risk score.

## 5. Liquidity/working capital/short-term factors:

Our liquidity analysis starts with operating cash flow and cash on hand, and then looks forward at other actual and contingent sources and uses of funds in the short term that could either provide or drain cash under given circumstances.

A key source of liquidity is bank lines. Key factors reviewed are total amount of facilities; whether they are contractually committed; facility expiration date(s); current and expected usage and estimated availability; bank group quality; evidence of support/lack of support of bank group; and covenant and trigger analysis. Financial covenant analysis is critical for speculative-grade credits. We request copies of all bank loan agreements and bond terms and conditions for rated entities, and review supplemental information provided by issuers for listing of

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financial covenants and stipulated compliance levels. We review covenant compliance as indicated in compliance certificates, as well as expected future compliance and covenant headroom levels. Entities that have already tripped or are expected to trip financial covenants need to be subject to special scrutiny and are reviewed for their ability to obtain waivers or modifications need to be subject to special scrutiny and are reviewed for their ability to obtain waivers or modifications to covenants. Tripping covenants can have a double negative effect on a company's liquidity. It may preclude it from borrowing further under its credit line, and may also lead to a contractual acceleration of repayment and increased interest rates.

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## APPENDIX D



Note:
$\mathrm{L}=$ Low
$\mathrm{M}=$ Medium
$\mathrm{H}=\mathrm{High}$

## APPENDIX E

| S\&P RATING FACTORS FOR ELECTRIC UTILITIES |  |
| :---: | :---: |
| Transmission and Distribution Companies | Generation Companies |
| Regulation <br> - The nature of the rate-making structure, e.g., performance-based vs. cost-of-service <br> - Authorized return on equity <br> - Timely and consistent rate treatment <br> - Status of restructuring, e.g., residual obligation to provide power, which entails the purchase of electricity for resale <br> - FERC's evolving rules for regional transmission of organizations, independent system operators, and for-profit transcos <br> - Incentives to maintain existing delivery assets and invest in new assets <br> - Nature of distributor support that retains the status of provider of last resort | Regulation <br> - Status of restructuring, e.g., posture toward recovery of stranded costs <br> - Nature of regulatory scheme, e.g., price establishment through power exchange or economic dispatch vs. bilateral contracts <br> - Uncertainty concerning FERC's evolving rules for regional transmission organizations, independent system operators, and for-profit transcos, including independence and equal access |
| Markets <br> - Economic and demographic characteristics, including size and growth rates, customer mix, industrial concentrations, and cyclical volatility <br> - Location | Markets <br> - Generating capacity vs. demand <br> - Economic growth prospects |
| Operations <br> - Cost, reliability, and quality of service (usually measured against various benchmarks) <br> - Capacity utilization <br> - Projected capital improvements <br> - Nature of diversified business operations, if any | Operations <br> - Nature of generation, e.g., peaking, intermediate, or baseload <br> - Production inputs, including fuel costs, fuel diversity and labor <br> - Level of physical and financial hedging sophistication <br> - Nature of supply contracts <br> - Efficiency measures, such as plant capacity and availability factors and heat rates <br> - Technology of plants <br> - Asset concentration within portfolio of generating units <br> - Construction risk <br> - Possibility of environmental legislation <br> - Diversity of fuel sources and types <br> - Marketing prowess <br> - Access to transmission |
| Competitiveness <br> - Alternative fuel sources, such as gas and self-generation <br> - Location of new generation <br> - Potential for bypass | Competitiveness <br> - Relative costs of production, both total and variable <br> - Threat from new, low-cost entrants <br> - Alternatives to electricity, such as natural |

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| $\bullet$ Rate Structure | gas, technological innovations, and remote <br> site applications, including fuel cells and <br> microturbines <br> Plants' importance to transmission and <br> voltage support |
| :--- | :--- |
| Source: Standard \& Poor's, Corporate Rating Criteria, 2003, pg. 20 |  |

## APPENDIX F

## FitchRatings

U.S. Utilities, Power \& Gas Financial Peer Study June 2012


FitchRatings
U.S. Utilities, Power \& Gas
Financial Peer Study


2010. The debt/EBITDA ratio weakened to $4.4 x$ from $3.9 x$, while FFO/debt was virtually unchanged at $\mathbf{2 2 . 5} \%$ in 2011 compared with $22.6 \%$ in 2010 . The steady financial performance of the UPC group largely stems from the stable financial profile of the IUC and UDC operating subsidiaries.

## IUCs and UDCs

Interest coverage and leverage credit protection measures for the regulated IUC and UDC groups were stable or slightly improved in 2011 compared to 2010.
Within the 43-company IUC peer group, the 2011 simple averages of EBITDAlinterest and (FFO plus interest)/interest were 5.6 x and 5.7 x , respectively, compared with 5.3 x and $5.2 x$ in 2010. The ratio of debt to EBITDA was virtually unchanged at 3.7 x compared to $3.6 x$ in 2010 , while FFO/debt improved to $24.5 \%$ from $23.2 \%$.
Within the 42 -company UDC peer group, the 2011 EBITDA/interest and (FFO plus interest)/interest mean observations were 5.5 x and 5.4 x , respectively, compared with 5.3 x and 5.4 x in 2010. DebtJEBITDA was virtually unchanged at 3.3 x compared to 3.4 x in 2010, while FFO/debt declined to $25 \%$ from $\mathbf{2 6 . 3} \%$.
Fitch attributes the solid credit-protection measures of the state-regulated IUC and UDC utilities to the sustained low-interest rate environment that allows utilities to finance capex needs at attractive terms, low commodity prices, and stable earnings power provided by generally balanced jurisdictional rate design mechanisms. Cash flow-based credit measures are supported by tax benefits generated from bonus depreciation, and investment and production tax credits.
Mild weather and the persistently weak U.S. economic environment depressed power demand in 2011. Based on U.S: Energy Information Administration estimates, total consumption of electricity declined $2.3 \%$ in 2011, compared to a $4.7 \%$ increase in 2010. The decline in sales was primarily driven by a very mild winter, which decreased the use of electric heating. The drop in residential demand was particularly noticeable at $3.5 \%$. Fitch expects power demand to remain weak with customer growth of approximately $1 \%$ through 2013.
should not be construed as target ratios for the rating category. The medians reflect a single point in time, and in many cases are based on a small sampling.

Principal Adjustments Applied to Credit Ratios: The financial ratios that appear in this report, other than return on average common equity and common dividend payout, are calculated on an adjusted basis. Fitch adjusted the financial ratios to exclude nonrecurring items such as restructuring charges, asset impairments, and nonrecurring
 to exclude the effect of issuing utility tariff bonds, sometimes referred to as transition bonds or rate reduction bonds, where the instruments are serviced through a dedicated revenue stream (see note on page 18). Of the 143 companies included in the peer study, 30 are affected by tariff bond adjustments. These companies are footnoted. In many instances, debt is also adjusted to include off-balance sheet debt or debt equivalents or to exclude nonrecourse debt. Debt equivalents include major power plant leases that are treated as operating leases in the financial statements, but in most instances exclude power purchase agreements. The debt equivalent of power plant leases is based on the net present value of the lease payments. The rental expense is allocated to interest expense and depreciation and amortization. It is also important to note that Fitch's definition of EBIT and EBITDA excludes non-operating income.

Fitch made several other adjustments in calculating the financial ratios. Interest expense is calculated using gross interest expense before any credit for allowance for borrowed funds used during construction (AFUDC) and/or capitalized interest. Funds from operations (FFO) is defined as cash from operations before changes in working capital. Debt ratios include on-balance sheet leases, including those that may be reported as other liabilities and only detailed in footnotes. For further explanation of the financial ratios in this report, please refer to the definitions on pages 17-18.

Adjustments Affecting Hybrids: Lastly, financial ratios are adjusted to reflect the equity credit attributed to hybrid securities, which may be reported as either debt or preferred stock. The adjustments for hybrid securities are based on Fitch's existing sector-specific criteria for hybrid securities as outlined in the Fitch report "Treatment and Notching of Hybrids in Nonfinancial Corporate and REIT Credit Analysis," dated Dec. 15, 2011, which is available at www.fitchratings.com.

Based on the criteria, cumulative preferred and preference shares with an effective maturity greater than 5 years would receive $50 \%$ equity credit, while noncumulative preferred and preference shares would receive $100 \%$ equity. For deferrable and junior subordinated debt hybrid instruments and trust preferred securities with effective maturities greater than five years, $50 \%$ of the principal is allocated to debt and $50 \%$ to equity. Mandatorily convertible securities that are subordinated and will convert to common equity in less than three years will generally be treated as $100 \%$ equity. A similar instrument with three to five years until conversion would receive $50 \%$ equity credit. Synthetic units with a timing difference between the maturity of a debt instrument and a forward purchase of equity, for example, five-year debt combined with a three-year forward contract, will be treated as two separate instruments. Integrated electric utility companies are those that continue to own both electric generation assets and a distribution network within a single legal entity. The distribution network may provide electric service only or may be a combination of electic and gas. While he disirioution networks continue to be stale regulated, that is not necessarily the case for generation assets. In some jurisdictions, the generation assets have been deregulated, but have not been transfarred to a separate subsidiary.
The utility distribution peer group includes a mix of electric, gas, and combined electric and gas delivery systems. The electric distribution companies in this peer group include pure delivery companies with no supply obligation and others that may retain the provider-of-last-resort (POLR) obligation. Within this group, companies that pass-through mechanisms. The pass through will usually reduce the level of business risk

The competitive generating companies are entities that derive the majority of EBIT from wholesate electric generation, including affiliates of regulated utilities, or other nonregulated businesses.
The utility parent companies pear group includes both pure holding companies and parent operating companies with one or more diversified subsidiaries.
risk profiles of utility parent companies remain widely disparate, which often accounts for the rating discrepancy among companies with similar ratios. On the low the risk spectrum are utility parent companles that own one or more pure distribution companies with no commodity price risk, such as NSTAR and Consolidated Edison, Inc. At the high end of the risk spectrum are parent companies that derive a significant portion of earnings before interest and taxes (EBIT) from nonregulated businesses, which generally have greater eamings volatility. Acronym
IUC

UDC CGC

Integrated Electric Utility Operating Companies
Utility Distribution Companies
Competitive Generating Companies
Peer Medians by Rating Category （As of Dec．31．2011）

|  | Interest Coverage（ x ） |  |  |
| :---: | :---: | :---: | :---: |
| Peer | Operating EBiT／Interest Expense | Operating EBITDA／ Interest Expense | FFO＋ <br> Interest／ Interest Expense |


 Profitability（\％）Dividends



 Liquidity
\％Internal
Generatlon



気
「心人以





Integrated Utility Companies

Utility Distribution Companies
Competitive Generating Companies





Utility Parent Companies (As of Dec. 31, 2011)

| Utility Parent Companies | Interest Coverage (x) |  |  | Leverage |  |  | Capital Structure [\%) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \hline \text { Operating } \\ \text { EBITt } \\ \text { Interest } \\ \text { Expense } \\ \hline \end{array}$ | Operating EBITDA/ Interest Expense | FFO + Interest Interest Expense | Debt Operating EBITDA $(x)$ | FFOI Debt (\%) | Debld FFO $\qquad$ (x) | Total Debt/ Total Capital $(\%)$ | Total Hybrid Equityl Total Capltal (\%) | Common Equity/ Total Capital $(\%)$ |
| A+IDR |  |  |  |  |  |  |  |  |  |
| WGL Holdings, Inc. | 5.8 | 8.0 | 8.4 | 2.1 | 43.5 | 2.3 | 37.1 | 0.7 | 62.2 |
| A+ Median | 5.8 | 8.0 | 8.4 | 2.1 | 43.5 | 2.3 | 37.1 | 0.7 | 62.2 |
| A IDR |  |  |  |  |  |  |  |  |  |
| OGE Energy Corp. | 4.3 | 6.3 | 6.3 | 3.1 | 26.5 | 3.8 | 51.7 | 4.4 | 43.9 |
| Southern Company | 4.5 | 6.4 | 6.7 | 3.6 | 25.1 | 4.0 | 53.3 | 2.5 | 44.2 |
| A Median | 4.4 | 6.3 | 6.5 | 3.4 | 25.8 | 3.9 | 62.5 | 3.4 | 44.0 |
| A- IDR |  |  |  |  |  |  |  |  |  |
| AGL Resources, Inc. | 3.6 | 4.9 | 4.3 | 7.1 | 9.7 | 10.3 | 59.5 | 0.3 | 40.3 |
| Laclede Group, Inc. (The) | 4.7 | 6.3 | 6.2 | 2.6 | 32.0 | 3.1 | 41.7 | - | 58.3 |
| MDU Resources Group, Ine. | 4.0 | 7.7 | 7.3 | 1.9 | 42.9 | 2.3 | 35.4 | 0.2 | 64.4 |
| NextEra Energy, Inc.* | 3.0 | 4.3 | 4.7 | 4.3 | 19.8 | 5.0 | 56.9 | 3.1 | 39.9 |
| NSTAR LLC* | 4.5 | 6.4 | 5.9 | 3.3 | 23.2 | 4.3 | 54.7 | 0.5 | 44.8 |
| Wisconsin Energy Corporation | 3.4 | 4.6 | 4.8 | 4.2 | 19.5 | 5.1 | 54.6 | 2.8 | 42.6 |
| A-Median | 3.8 | 5.6 | 5.3 | 3.7 | 21.5 | 4.7 | 54.7 | 0.5 | 43.7 |
| BEB+ IDR |  |  |  |  |  |  |  |  |  |
| Consolidated Edison, Inc. | 3.7 | 5.2 | 5.5 | 3.5 | 25.1 | 4.0 | 48.3 | 0.5 | 51.2 |
| Dominion Resources, Inc. | 3.0 | 4.2 | 4.6 | 5.0 | 17.4 | 5.8 | 61.3 | 3.2 | 35.4 |
| Exelon Corporation | 5.6 | 7.3 | 7.1 | 2.3 | 36.2 | 2.8 | 48.4 | 0.9 | 50.8 |
| Iberdrola USA | 2.5 | 3.4 | 3.2 | 3.9 | 16.3 | 6.1 | 47.6 | 0.3 | 52.1 |
| MidAmerican Energy Holdings Company | 2.2 | 3.4 | 3.9 | 5.0 | 17.4 | 5.8 | 58.4 | 0.4 | 41.2 |
| National Fuel Gas Company | 5.3 | 8.1 | 8.4 | 1.7 | 55.2 | 1.8 | 37.1 | - | 62.9 |
| PG\&E Corp." | 2.7 | 5.2 | 6.3 | 3.6 | 28.0 | 3.6 | 52.6 | 0.5 | 46.9 |
| Public Service Enterprise Group Incorporated ${ }^{(1}$ | 6.0 | 7.8 | 6.6 | 2.1 | 35.2 | 2.8 | 40.9 | 0.0 | 59.1 |
| SCANA Corporation | 2.8 | 4.0 | 4.6 | 4.5 | 19.9 | 5.0 | 56.9 | 0.8 | 42.3 |
| Sempra Energy | 3.3 | 5.1 | 4.9 | 4.0 | 19.2 | 5.2 | 51.5 | 2.0 | 46.4 |
| Xcel Energy, Inc. | 3.0 | 4.5 | 4.7 | 3.7 | 22.0 | 4.5 | 53.3 | 1.1 | 45.6 |
| BEB+Median | 3.0 | 5.1 | 4.9 | 3.7 | 22.0 | 4.5 | 51.5 | 0.7 | 46.9 |
| BEB IDR |  |  |  |  |  |  |  |  |  |
| Ameren Corporation | 3.0 | 4.7 | 4.7 | 3.1 | 24.9 | 4.0 | 45.8 | 0.5 | 53.6 |
| American Electric Power Co., Inc. ${ }^{\text {a }}$ | 2.8 | 4.4 | 3.9 | 4.1 | 15.9 | 6.3 | 56.7 | 0.0 | 43.3 |
| DTE Energy Company ${ }^{\text {a }}$ | 3.0 | 4.8 | 5.1 | 3.3 | 25.6 | 3.9 | 50.5 | 1.3 | 48.2 |
| Edison International | 2.2 | 3.9 | 6.7 | 3.9 | 37.4 | 2.7 | 58.9 | 3.6 | 37.5 |
| FirstEnergy Corp.* | 2.0 | 3.4 | 3.4 | 5.0 | 14.5 | 6.9 | 58.0 | 0.1 | 42.0 |
| Northeast Utilities ${ }^{\text {a }}$ | 3.1 | 4.7 | 4.2 | 4.5 | 15.3 | 6.5 | 56.6 | 0.6 | 42.7 |
| Pepeo Holdings, Inc.* | 2.3 | 3.8 | 4.0 | 4.8 | 16.6 | 6.0 | 52.0 | - | 48.0 |
| PPL Corporation | 3.3 | 4.3 | 4.2 | 4.0 | 18.6 | 5.4 | 54.6 | 8.9 | 36.5 |
| Progress Energy Inc. | 2.1 | 3.0 | 3.7 | 5.9 | 15.1 | 6.6 | 57.0 | 0.8 | 42.2 |
| TECO Energy, Inc. | 3.0 | 4.6 | 4.6 | 3.2 | 24.1 | 4.1 | 57.5 | 0.0 | 42.4 |
| EBE Median | 2.9 | 4.3 | 4.2 | 4.1 | 17.6 | 5.7 | 56.7 | 0.6 | 42.6 | ${ }^{4}$ Excludes debt Continued on next page.

Source: Company reports, Fitch.

Utility Parent Companies (Continued) (As of Dec. 31, 2011)

|  | Interest Coverage ( x ) |  |  |
| :---: | :---: | :---: | :---: |
|  | Operating EBIT/ Interest | Operating EBITDA Interest $\qquad$ | FFO + <br> Interest Interest |
| Utility Parent Companies |  |  |  |

BEB-IDR
Black Hilla Corp. 1.6


| N |
| :--- |
| $\stackrel{\infty}{\circ}$ |
|  |


웅둥
61.0
61.0

| $c$ | Capital Structure (\%) | Liquidity |
| :---: | :---: | :---: | :---: | :---: |


|  | 흉윤 | ¢ | ¢0\% | N\% |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 够 |  |  |  | $\stackrel{\infty}{\dot{\circ}} \stackrel{\text { ® }}{\stackrel{1}{\circ}}$ | - |



-6ulpe qunejop 」anss -
Integrated Utility Companies
(As of Dec. 31, 2011)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Integrated Utitity Companies | $\begin{array}{r} \hline \text { Operating } \\ \text { EBITI } \\ \text { interest } \\ \text { Expense } \\ \hline \end{array}$ |  | FFO interest Interest Expense |  | FFO: Debt (\%) | Debt FFO $\qquad$ | Total Debt Total Capital $(\%)$ | Total Hybrid Equity/Total Capital $(\%)$ | Common Equityl Total Capital $(\%)$ | \% Internal Genaration | Operating Margin (\%) | ROE (\%) | Common Dividend Payout Ratio (\%) |
| A IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alabama Power Company | 4.9 | 7.0 | 7.1 | 2.9 | 30.5 | 3.3 | 51.0 | 5.1 | 43.9 | 126.3 | 26.6 | 13.2 | 109.3 |
| Florida Power \& Light Company* | 5.4 | 7.4 | 8.2 | 2.6 | 37.1 | 2.7 | 40.5 | - | 59.5 | 57.0 | 19.5 | 10.3 | 37.5 |
| Georgía Power Company | 5.4 | 7.3 | 7.3 | 3.3 | 26.5 | 3.8 | 49.2 | 1.5 | 49.4 | 81.4 | 23.3 | 12.9 | 95.7 |
| Mississippi Power Company | 4.2 | 6.7 | 8.0 | 6.0 | 17.5 | 5.7 | 54.6 | 0.7 | 44.7 | 14.8 | 12.0 | 10.5 | 80.9 |
| Oklahoma Gas \& Electric Company | 3.9 | 5.6 | 5.1 | 3.0 | 24.3 | 4.1 | 45.0 | - | 55.0 | 65.0 | 21.3 | 11.3 | - |
| Wisconsin Electric Power Company | 4.0 | 5.8 | 5.8 | 7.8 | 10.5 | 9.6 | 62.9 | 0.2 | 36.9 | 42.4 | 12.7 | 10.8 | 71.0 |
| A Medlan | 4.8 | 6.8 | 7.2 | 3.1 | 25.4 | 3.9 | 50.1 | 1.1 | 47.0 | 61.0 | 20.4 | 11.0 | 80.9 |
| A- ID ${ }^{\text {R }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Carolina Power \& Light Company | 4.3 | 6.8 | 8.0 | 3.2 | 32.3 | 3.1 | 46.5 | 0.3 | 53.2 | 44.6 | 19.5 | 10.0 | 114.0 |
| Gulf Power Company | 3.6 | 5.7 | 5.7 | 3.8 | 21.7 | 4.6 | 52.5 | 3.8 | 43.7 | 80.2 | 14.7 | 9.5 | 104.8 |
| Kentucky Utilities Company | 5.0 | 7.7 | 7.3 | 3.4 | 23.8 | 4.2 | 40.2 | - | 59.8 | 115.0 | 22.8 | 6.5 | 69.7 |
| Louisville Gas \& Electric Company | 5.5 | 8.8 | 7.3 | 2.9 | 25.0 | 4.0 | 38.7 | - | 61.3 | 124.0 | 17.7 | 7.1 | 66.9 |
| MidAmerican Energy Company | 2.7 | 4.8 | 7.9 | 4.1 | 34.6 | 2.9 | 49.0 | 0.2 | 50.8 | 136.1 | 12.3 | 10.3 | N.M |
| Northern States Power Company - MN | 3.3 | 5.2 | 5.5 | 3.2 | 27.1 | 3.7 | 47.9 | - | 52.1 | 82.4 | 15.8 | 9.8 | 66.0 |
| Norlhern States Power Company - WI | 4.5 | 7.3 | 7.2 | 2.5 | 34.3 | 2.9 | 45.5 | - | 54.5 | 75.7 | 12.2 | 10.0 | 64.7 |
| Southern California Edison Co. | 4.2 | 7.0 | 10.8 | 2.5 | 55.7 | 1.8 | 47.4 | 5.2 | 47.4 | 63.9 | 20.1 | 12.6 | 47.9 |
| A-Median | 4.3 | 6.9 | 7.3 | 3.2 | 29.7 | 3.4 | 46.9 | 2.1 | 52.6 | 81.3 | 16.7 | 9.9 | 66.5 |
| BBB+IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Florida Power Corporation | 2.8 | 3.4 | 4.4 | 5.7 | 17.6 | 5.7 | 51.2 | 0.2 | 48.6 | 31.0 | 16.0 | 6.5 | 163.5 |
| Ohio Power Company | 3.8 | 6.0 | 5.1 | 3.0 | 22.8 | 4.4 | 50.5 | - | 49.5 | 129.9 | 17.6 | 12.2 | 140.1 |
| Pacific Gas \& Electric Company* | 2.8 | 5.4 | 6.5 | 3.5 | 29.1 | 3.4 | 51.9 | 0.5 | 47.6 | 64.5 | 13.2 | 7.0 | 86.2 |
| Public Service Company of Colorado | 4.3 | 6.0 | 5.8 | 3.1 | 25.6 | 3.9 | 44.7 | - | 55.3 | 97.9 | 18.7 | 9.4 | 68.0 |
| South Carolina Electric \& Gas Co. | 3.1 | 4.5 | 5.0 | 4.0 | 22.3 | 4.5 | 49.9 | 1.4 | 48.7 | 57.3 | 23.2 | 8.6 | 67.0 |
| Tampa Electric Company | 3.7 | 5.6 | 6.0 | 2.5 | 35.1 | 2.9 | 48.0 | - | 52.0 | 125.4 | 20.9 | 10.9 | 102.6 |
| Union Electric Company | 3.3 | 5.3 | 5.7 | 3.3 | 26.9 | 3.7 | 47.9 | 0.5 | 51.5 | 113.8 | 20.6 | 7.1 | 140.4 |
| Virginia Electric and Power Company | 4.4 | 6.4 | 7.1 | 3.4 | 27.7 | 3.6 | 48.0 | 0.8 | 51.3 | 68.9 | 22.3 | 9.3 | 69.2 |
| BEB+ Median | 3.5 | 5.5 | 5.8 | 3.4 | 26.2 | 3.8 | 49.0 | 0.5 | 50.4 | 83.4 | 19.7 | 9.0 | 94.4 |
| BEB IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Black Hills Power, Inc. | 3.3 | 5.0 | 4.3 | 3.5 | 19.2 | 5.2 | 45.1 | - | 54.9 | 126.8 | 21.5 | 8.4 | - |
| Detroit Edison Company ${ }^{\text {a }}$ | 3.9 | 6.6 | 6.0 | 2.7 | 27.5 | 3.6 | 52.0 | - | 48.0 | 73.7 | 19.6 | 10.7 | 69.8 |
| Monongahela Power Company | 3.4 | 5.2 | 4.7 | 4.3 | 16.6 | 6.0 | 66.7 | - | 33.3 | 135.0 | 13.3 | N.M | - |
| NorthWestern Corporation | 2.9 | 4.6 | 5.0 | 4.2 | 20.5 | 4.9 | 56.3 | - | 43.7 | 93.7 | 14.9 | 11.1 | 55.9 |
| Pacificorp | 2.8 | 4.3 | 4.9 | 4.1 | 21.9 | 4.6 | 48.7 | 0.1 | 51.2 | 72.0 | 23.6 | 7.6 | 99.1 |
| Public Service Company of Okiahoma | 4.1 | 5.8 | 6.5 | 2.9 | 32.4 | 3.1 | 52.8 | - | 47.2 | 218.6 | 17.9 | 14.3 | 58.1 |
| Public Service Company of New Hampshire' | 3.9 | 6.1 | 4.5 | 3.6 | 15.8 | 6.3 | 48.1 | - | 51.9 | 38.4 | 18.2 | 10.0 | 59.0 |
| Southwestern Public Service Company | 3.1 | 4.7 | 4.8 | 3.2 | 24.4 | 4.1 | 48.1 | - | 51.9 | 54.5 | 11.8 | 8.8 | 71.1 |
| Westar Energy, Inc. | 2.8 | 4.4 | 4.3 | 3.9 | 19.2 | 5.2 | 53.5 | 0.3 | 46.2 | 46.2 | 23.9 | 8.9 | 60.3 |
| B8E Median | 3.3 | 5.0 | 4.8 | 3.6 | 20.5 | 4.9 | 52.0 | 0.2 | 48.0 | 73.7 | 18.2 | 8.9 | 60.3 |
| *Excludes debt, revenue, amortization, and interest expense associated with the issue of utility tariff bonds, sometimes referred to as rate-reduction bonds or securitization bonds. IDR - Issuer default rating. N.M. - Not meaningful. Continued on next page. <br> Source: Company reports, Fitch. |  |  |  |  |  |  |  |  |  |  |  |  |  |


Integrated Utility Companies (Continued) (As of Dec. 31, 2011)

| Integrated Utility Companies | Interest Coverage ( x ) |  |  | Leverage |  |  | Capltal Structura (\%) |  |  | Liquidily | Profitability (\%) |  | Dlvidends <br> Common Dividend Payout <br> Ratio (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Operating Interest Expense | Operating EBITDA Expense | FFO+ Interest Interest Expense | Operating EBITDA (x) | $\begin{gathered} \text { FFOI } \\ \text { Debt } \\ \text { ( } \% \text { ) } \end{gathered}$ | $\begin{gathered} \text { Debt } \\ \text { FFO } \\ (\mathbf{x}) \end{gathered}$ | $\begin{array}{r} \text { Total } \\ \text { Debt } \\ \text { Total } \\ \text { Capital } \\ \hline \end{array}$ | Total Hybrid Equity/Total Capital | Common Equity Total Capital | \% Internal Generation | Operating Margin | ROE |  |
| BBE-IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Appalachian Power Company | 2.0 | 3.3 | 3.1 | 5.6 | 11.4 | 8.8 | 57.9 | - | 42.1 | 101.9 | 13.6 | 5.6 | 83.9 |
| Anizona Pubic Service Company | 3.0 | 4.7 | 4.7 | 2.8 | 27.9 | 3.6 | 45.4 | 1.5 | 53.1 | 100.4 | 23.4 | 8.7 | 68.2 |
| Consumers Energy Company* | 3.8 | 5.7 | 5.1 | 3.0 | 24.3 | 4.1 | 50.0 | 0.3 | 49.8 | 103.9 | 15.7 | 11.0 | 80.4 |
| Daylon Power \& Light Company | 7.6 | 10.8 | 9.4 | 2.0 | 38.6 | 2.6 | 40.0 | 0.5 | 59.5 | 65.2 | 19.1 | 14.0 | 114.6 |
| Empire District Electric Company | 3.2 | 4.7 | 5.0 | 3.6 | 23.1 | 4.3 | 50.4 | - | 49.6 | 104.9 | 22.5 | 8.1 | 49.1 |
| Indiana Michigan Power Company | 2.2 | 3.4 | 4.4 | 5.5 | 18.1 | 5.5 | 61.5 | - | 38.5 | 186.9 | 14.8 | 8.6 | 50.3 |
| Indianapolis Power \& Light Company | 3.6 | 6.4 | 6.0 | 2.8 | 28.5 | 3.5 | 56.6 | 1.6 | 41.8 | 60.5 | 18.4 | 13.2 | 79.4 |
| Kentucky Power Company | 2.7 | 4.1 | 3.8 | 3.6 | 18.3 | 5.5 | 54.7 | - | 45.3 | 109.1 | 13.6 | 9.3 | 66.7 |
| Southwestern Electric Power Company | 2.4 | 3.5 | 3.5 | 4.7 | 15.1 | 6.6 | 53.1 | - | 46.9 | 69.5 | 18.3 | 9.3 | 2.5 |
| Beb-Median | 3.0 | 4.7 | 4.7 | 3.6 | 23.1 | 4.3 | 53.1 | 1.0 | 46.9 | 101.9 | 18.3 | 9.3 | 68.2 |
| BE+ IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nevada Power Company d/bla NV Energy | 1.9 | 3.0 | 2.8 | 5.0 | 12.1 | 8.3 | 55.5 | - | 44.5 | 90.0 | 21.9 | 4.7 | 75.0 |
| Sierra Pacific Power Company dfb/a NV Energy | 2.4 | 3.9 | 3.5 | 4.4 | 14.8 | 6.8 | 55.9 | - | 44.1 | 42.7 | 19.6 | 6.2 | 190.0 |
| Tucson Electric Power Company | 2.5 | 4.1 | 3.8 | 4.0 | 17.3 | 5.8 | 64.4 | - | 35.6 | 75.9 | 19.8 | 11.1 | - |
| BE+ Median | 2.4 | 3.9 | 3.5 | 4.4 | 14.8 | 6.8 | 66.9 | - | 44.1 | 75.9 | 19.8 | 6.2 | 75.0 |
| *Excludes debt, revenue, amortization, and interest expense associated with the issue of utility tariff bonds, sometimes referred to as rate reduction bonds or securitization bonds. IDR - Issuer default rating Source: Company reports, Fitch. |  |  |  |  |  |  |  |  |  |  |  |  |  |

Utility Distribution Companies
（As of Dec．31，2011）

|  | Intere | Coverage（ x ） |  |  | arage |  | Capit | tal Structure（\％） |  | Liquidity | Profitabillity | （\％） | Dividends |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Utility Distribution Companies | Oporating EEIT／ Interest Expanse | Operating EBITDA／ Interest Expense | FFO Interest Interest Expense | $\begin{array}{r} \text { Dabt } \\ \text { Operating } \\ \text { EBITDA }(x) \\ \hline \end{array}$ | FFOI Debt （\％） | Debt FFO <br> （x） | $\begin{array}{r}\text { Total Debt＇} \\ \text { Total } \\ \text { Capltal } \\ \hline\end{array}$ | Total Hybrid <br> Equityl <br> Total <br> Capital |  | \％Internal Generation | Operating $\qquad$ | ROE | Common Dlvidend Payout Ratio（\％） |
| A＋IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NSTAR Electric ${ }^{\text {a }}$ | 5.3 | 7.3 | 5.9 | 2.6 | 25.2 | 4.0 | 43.9 | 0.5 | 55.6 | 122.3 | 20.0 | 11.5 | 68.3 |
| Washington Gas Light Company | 4.1 | 6.3 | 7.1 | 2.7 | 36.0 | 2.8 | 40.3 | 0.8 | 58.9 | 97.8 | 12.6 | 6.9 | 107.4 |
| A＋Medlan | 4.7 | 6.8 | 6.5 | 2.7 | 30.8 | 3.4 | 42.1 | 0.7 | 57.2 | 110.0 | 16.3 | 9.2 | 87.8 |
| A IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nicor Gas Company | 4.6 | 10.5 | 12.8 | 2.8 | 39.9 | 2.5 | 59.8 | － | 40.2 | 106.6 | 7.2 | 7.8 | 164.0 |
| San Diego Gas \＆Electric Co． | 4.3 | 6.7 | 7.4 | 3.5 | 27.3 | 3.7 | 51.6 | 1.8 | 46.7 | 47.7 | 22.4 | 12.6 | － |
| Southern California Gas Company | 6.3 | 10.6 | 10.8 | 1.6 | 56.6 | 1.8 | 37.9 | 0.3 | 61.7 | 73.6 | 12.7 | 14.0 | 17.4 |
| A Median | 4.6 | 40.5 | 10.8 | 2.8 | 39.9 | 2.5 | 51.6 | 1.0 | 46.7 | 73.6 | 12.7 | 12.6 | 90.7 |
| A－IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Central Hudson Gas \＆Electric Corp． | 3.3 | 4.5 | 6.3 | 3.6 | 32.8 | 3.0 | 50.6 | 1.1 | 48.3 | 96.4 | 13.6 | 9.9 | 97.7 |
| Lacleda Gas Company | 3.9 | 5.4 | 5.5 | 3.3 | 25.5 | 3.9 | 51.6 | － | 48.4 | 180.6 | 10.9 | 12.8 | 86.7 |
| UGI Utilities，Inc． | 4.7 | 5.9 | 5.8 | 2.5 | 32.2 | 3.1 | 47.1 | － | 52.9 | 122.2 | 17.6 | 14.5 | 94.3 |
| A－Median | 3.9 | 5.4 | 5.8 | 3.3 | 32.2 | 3.1 | 50.6 | 8.1 | 48.4 | 122.2 | 13.6 | 12.8 | 94.3 |
| BEB＋IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AEP Texas Central Company＊ | 3.8 | 6.1 | 4.6 | 2.5 | 23.5 | 4.3 | 38.6 | － | 61.4 | 40.8 | 28.9 | 73.2 | 9.1 |
| AEP Texas Narth Company | 3.5 | 5.9 | 5.2 | 3.1 | 23.1 | 4.3 | 55.9 | － | 44.1 | 68.8 | 27.6 | 12.6 | 37.5 |
| American Transmission Systems，Inc． | 3.4 | 5.4 | 4.2 | 3.4 | 17.5 | 5.7 | 48.5 | － | 51.5 | （4．6） | 36.6 | 9.4 | 297.5 |
| Atmos Energy Corp． | 3.0 | 4.4 | 4.7 | 3.6 | 23.6 | 4.2 | 53.2 | － | 46.8 | 73.6 | 11.1 | 9.4 | 59.6 |
| Central Maine Power Company | 5.2 | 6.4 | 6.9 | 2.7 | 34.6 | 2.9 | 36.1 | 0.2 | 63.7 | 42.0 | 31.8 | 10.4 | － |
| Consolidated Edison Company of New York，Inc． | 3.9 | 5.4 | 5.8 | 3.4 | 28.1 | 3.8 | 48.8 | 0.5 | 50.6 | 125.5 | 19.9 | 9.7 | 89.6 |
| Delmarva Power \＆Light Company | 3.3 | 5.3 | 5.4 | 3.9 | 21.4 | 4.7 | 51.8 | － | 48.2 | 51.5 | 11.4 | 8.4 | 84.5 |
| New York State Electric \＆Gas Corp． | 2.6 | 4.1 | 4.9 | 3.2 | 29.8 | 3.4 | 49.6 | 0.2 | 50.2 | 77.5 | 12.1 | 9.4 | 126.3 |
| Orange \＆Rockland Utilities，Inc． | 3.3 | 4.6 | 5.4 | 3.8 | 25.4 | 3.9 | 53.4 | － | 46.6 | 136.2 | 13.3 | 10.0 | 80.4 |
| PECO Energy Company | 4.4 | 5.8 | 6.5 | 2.7 | 34.6 | 2.9 | 43.6 | 2.5 | 53.9 | 96.9 | 17.7 | 13.2 | 90.4 |
| Potomac Electric Power Company | 2.1 | 3.8 | 4.0 | 4.4 | 17.8 | 5.6 | 53.1 | － | 46.9 | 63.7 | 10.2 | 6.8 | 25.3 |
| Public Service Company of North Carolina，Incorporated | 3.8 | 5.5 | 6.3 | 2.8 | 34.0 | 2.9 | 35.8 | － | 64.2 | 97.6 | 20.3 | 7.4 | 63.3 |
| Public Service Electric \＆Gas Company ${ }^{\text {a }}$ | 4.4 | 6.6 | 6.3 | 2.7 | 30.0 | 3.3 | 47.9 | － | 52.1 | 97.5 | 15.3 | 11.5 | 57.6 |
| Southwest Gas Corporation | 3.5 | 6.4 | 5.9 | 2.8 | 27.6 | 3.6 | 50.6 | （0．0） | 49.5 | 53.8 | 13.4 | 9.4 | 42.8 |
| BEE＋Medlan | 3.5 | 5.5 | 5.4 | 3.1 | 25.8 | 3.9 | 49.2 | 0.2 | 60.4 | 71.2 | 16.5 | 9.8 | 80.4 |
| BBEIDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Attantic City Electric Company＊ | 2.3 | 4.1 | 4.1 | 3.9 | 19.3 | 5.2 | 51.6 | － | 48.4 | 98.6 | 10.0 | 5.2 | － |
| Baltimore Gas and Electric Company＇ | 2.9 | 4.8 | 4.3 | 3.4 | 20.1 | 5.0 | 43.0 | 7.5 | 49.5 | 46.6 | 11.1 | 5.8 | 69.7 |
| CenterPoint Energy Houston Electric LLC＊ | 3.2 | 5.0 | 4.7 | 3.0 | 24.7 | 4.0 | 42.1 | － | 57.9 | 100.3 | 26.2 | 41.9 | － |
| Connecticut Light \＆Power Company | 3.4 | 5.0 | 4.5 | 4.0 | 17.4 | 5.7 | 52.6 | 1.1 | 46.3 | 62.1 | 18.2 | 10.4 | 97.2 |
| Jersey Central Power \＆Light Co．＊ | 3.3 | 5.3 | 3.7 | 3.1 | 16.4 | 6.1 | 43.2 | － | 56.8 | （59．8） | 14.5 | 5.8 | 347.2 |
| Metropolitan Edison Company | 3.0 | 5.9 | 3.4 | 3.2 | 12.4 | 8.1 | 55.1 | － | 44.9 | （99．0） | 12.7 | 7.2 | 338.2 |
| Oncor Electric Delivery Company＇ | 3.2 | 5.1 | 4.6 | 3.3 | 21.9 | 4.6 | 43.3 | － | 56.7 | 76.5 | 35.6 | 5.2 | 39.5 |
| Potomac Edison Co． | 4.2 | 6.1 | 6.6 | 3.9 | 23.9 | 4.2 | 62.5 | － | 37.5 | 132.5 | 11.9 | 11.7 | － |
| PPL Electric Ulilities Corporation | 3.6 | 5.0 | 4.1 | 3.5 | 17.9 | 5.6 | 44.7 | 6.5 | 48.8 | 64.9 | 18.4 | 9.7 | 53.2 |
| West Penn Power Company | 5.7 | 8.3 | 7.6 | 3.0 | 26.2 | 3.8 | 52.1 | － | 47.9 | 86.3 | 11.4 | 10.1 | 71.4 |
| Western Massachusetts Eleciric Company ${ }^{*}$ | 3.9 | 5.4 | 5.1 | 4.2 | 18.2 | 5.5 | 51.9 | － | 48.1 | 33.6 | 21.6 | 10.5 | 60.5 |
| 日日成 Medlan | 3.3 | 5.1 | 4.5 | 3.4 | 19.3 | 5.2 | 51.6 | 6.5 | 48.4 | 64.9 | 14.5 | 9.7 | 70.6 |
| ＂Excludes debt，revenue，amortization，and interest expe Source：Company reports，Fitch． | ociated with | issue of utility | bonds，so | etimes refer | as rat | eduction | bonds or secur | uritization bonds | s. IDR - Iss | default rating | Continued on | $\text { next } p$ |  |

Utility Distribution Companies (Continued)
(As of Dec. 31, 2011)
Amb-IDR Illinois Company
Commonwealth Edison Company
Michigan Consolidated
Pennsyivania Electric Company
Pennsylvania Power Company
BEB-Median
BB+ Median
IDR - issuer default rating.
Source: Company reports, Fitch.
Global Power Utilities with Utility Tariff Bonds - Unadjusted Credit Measures (As of Dec. 31, 2011)

| Company Name | Interest Coverage ( x ) |  |  | Leverage |  |  | Capital Structure (\%) |  |  | Liguidity | Profitabillty (\%) |  | Dividends <br> Common <br> Dividend <br> Payout <br> Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Operating EBITInterest Expense | Operating Interest Expense |  | $\begin{array}{r} \text { Debt } \\ \text { Operating } \\ \text { EBITDA }(x) \end{array}$ | $\begin{array}{r} \text { FFO/ } \\ \text { Dabt (\%) } \end{array}$ | $\begin{array}{r} \text { Debt } \\ \text { FFO }(\mathrm{x}) \end{array}$ | $\begin{array}{r} \text { Total } \\ \text { DebuTotal } \\ \text { Capltal } \end{array}$ | Total Hybrld EquityiTotal Capital | Common Equity Capotal Capital | \% Internal Generation | $\begin{gathered} \text { Operating } \\ \text { Margin } \\ \hline \end{gathered}$ | ROE |  |
| AEP Texas Central Company | 2.0 | 4.0 | 3.5 | 4.3 | 14.4 | 7.0 | 66.2 |  | 33.8 | 40.8 | 30.6 | 73.2 | 9.1 |
| Ameren Corporation | 3.0 | 4.8 | 4.7 | 3.3 | 23.8 | 4.2 | 46.9 | 0.5 | 52.6 | 143.0 | 18.1 | 6.6 | 72.3 |
| American Electric Power Co., Inc. | 3.1 | 4.9 | 4.5 | 4.0 | 17.8 | 5.6 | 55.3 | - | 44.7 | 102.0 | 19.3 | 13.7 | 46.3 |
| Allantic City Electric Company | 2.0 | 4.0 | 3.9 | 4.3 | 16.8 | 5.9 | 59.7 | - | 40.3 | 98.6 | 11.0 | 5.2 | - |
| Baltimore Gas and Electric Company | 2.7 | 4.9 | 4.4 | 3.8 | 18.2 | 5.5 | 49.2 | 6.7 | 44.1 | 46.6 | 11.5 | 5.8 | 69.7 |
| CMS Energy Corporation | 2.4 | 3.7 | 3.6 | 4.7 | 14.8 | 6.8 | 70.4 | 0.4 | 29.3 | 104.4 | 15.4 | 14.3 | 50.8 |
| CenterPoint Energy Houston Electric LLC | 2.2 | 4.4 | 4.2 | 4.0 | 18.3 | 5.5 | 60.5 | - | 39.5 | 100.3 | 26.7 | 41.9 |  |
| CenterPoint Energy, Inc. | 2.2 | 3.7 | 3.9 | 4.2 | 18.6 | 5.4 | 68.5 | - | 31.5 | 93.8 | 15.4 | 38.6 | 24.8 |
| Consumers Energy Company | 3.7 | 5.8 | 5.1 | 3.0 | 24.2 | 4.1 | 50.9 | 0.2 | 48.9 | 103.9 | 15.8 | 11.0 | 80.4 |
| DTE Energy Company | 2.9 | 4.9 | 5.1 | 3.4 | 24.9 | 4.0 | 53.1 | 0.9 | 46.0 | 97.7 | 16.0 | 10.4 | 54.7 |
| Detroit Edison Company | 3.5 | 6.3 | 5.8 | 2.8 | 26.9 | 3.7 | 55.3 | - | 44.7 | 73.7 | 19.7 | 10.7 | 69.8 |
| Dominion Resources, Inc. | 3.3 | 4.5 | 5.0 | 5.3 | 16.5 | 6.1 | 62.5 | 3.0 | 34.5 | 49.1 | 19.9 | 12.0 | 80.2 |
| FirstEnergy Corp. | 2.3 | 3.8 | 3.9 | 4.9 | 15.5 | 6.5 | 56.6 | - | 43.4 | 90.3 | 13.0 | 8.1 | 99.5 |
| Florida Power \& Light Company | 5.4 | 7.4 | 8.2 | 2.7 | 35.5 | 2.8 | 42.0 | - | 58.0 | 57.0 | 19.6 | 10.3 | 37.5 |
| Jersey Central Power \& Light Co. | 3.0 | 5.0 | 3.6 | 3.3 | 15.7 | 6.4 | 46.8 |  | 53.2 | (59.8) | 14.9 | 5.8 | 347.2 |
| NSTAR Electric | 5.0 | 7.7 | 6.4 | 2.4 | 28.4 | 3.5 | 45.2 | 0.5 | 54.3 | 122.3 | 19.5 | 11.5 | 68.3 |
| NSTAR LLC | 4.3 | 6.7 | 6.2 | 3.0 | 25.6 | 3.9 | 55.6 | 0.5 | 43.9 | 116.3 | 18.7 | 13.5 | 65.4 |
| NextEra Energy, Inc. | 3.3 | 4.8 | 5.1 | 4.6 | 18.6 | 5.4 | 58.8 | 3.0 | 38.2 | 46.7 | 22.4 | 13.1 | 47.8 |
| NorthWestern Corporation | 3.1 | 4.9 | 5.3 | 4.2 | 21.0 | 4.8 | 56.4 | - | 43.6 | 93.7 | 14.9 | 11.1 | 55.9 |
| Northeast Utilities | 3.2 | 5.1 | 4.5 | 4.3 | 16.2 | 6.2 | 57.2 | 0.6 | 42.2 | 65.0 | 17.6 | 10.1 | 49.4 |
| Oncor Electric Delivery Company | 3.0 | 5.0 | 4.6 | 3.3 | 21.6 | 4.6 | 45.6 | - | 54.4 | 76.5 | 35.1 | 5.2 | 39.5 |
| Pepco Holdings, Inc. | 2.4 | 4.0 | 4.2 | 4.9 | 16.2 | 6.2 | 53.7 | - | 46.3 | 43.3 | 10.1 | 6.0 | 94.9 |
| PG8E Corp. | 2.8 | 5.9 | 7.0 | 3.4 | 30.0 | 3.3 | 53.4 | 0.5 | 46.1 | 64.6 | 13.0 | 7.2 | 83.4 |
| Pacific Gas \& Electric Company | 2.9 | 6.1 | 7.3 | 3.3 | 31.2 | 3.2 | 52.7 | 0.5 | 46.8 | 64.5 | 13.0 | 7.0 | 86.2 |
| Public Service Company of New Hampshire | 4.1 | 7.6 | 5.8 | 3.2 | 19.5 | 5.1 | 50.1 | - | 49.9 | 38.4 | 17.6 | 10.0 | 59.0 |
| Public Service Electric \& Gas Company | 3.7 | 6.0 | 5.8 | 2.8 | 28.6 | 3.5 | 52.9 | - | 47.1 | 97.5 | 15.7 | 11.5 | 57.6 |
| Public Service Enterprise Group Incorporated | 5.8 | 7.8 | 6.7 | 2.2 | 33.5 | 3.0 | 44.1 | - | 55.9 | 128.2 | 24.7 | 15.1 | 46.1 |
| Tucson Electric Power Company | 2.6 | 4.1 | 3.9 | 4.1 | 17.0 | 5.9 | 64.8 | - | 35.2 | 75.9 | 19.8 | 11.1 | - |
| Union Electric Company | 3.3 | 5.3 | 5.7 | 3.6 | 24.8 | 4.0 | 50.0 | 0.5 | 49.5 | 113.8 | 20.6 | 7.1 | 140.4 |
| Western Massachusetts Electric Company | 3.7 | 5.7 | 5.5 | 3.8 | 20.5 | 4.9 | 53.2 | - | 46.8 | 33.6 | 21.1 | 10.5 | 60.5 |
| Source: Company reports, Fitch. |  |  |  |  |  |  |  |  |  |  |  |  |  |

obligations, less utility tariff bond debt plus current portion of long-term debt and capitalized lease obligations, less nonrecourse debt.
Denominator: Operating income before nonrecurring items plus above-the-line state and federal income taxes, if applicable, plus depreciation and amortization, plus rental expense. FFO/Debt capital.
Numerator: Net cash flow from operations, as reported, before changes in working
Denominator: Total long- and short-term debt, including the debt component of hybrid securities, off-balance sheet debt or debt equivalents, and capitalized lease obligations,
 obligations, less nonrecourse debt.

## Debt/FFO

Numerator: Total long- and short-term debt, including the debt component of hybrid securities, off-balance sheet debt or debt equivalents, and capitalized lease obligations, less utility tariff bond debt plus current portion of long-term debt and capitalized lease obligations, less nonrecourse debt.
Denominator: Net cash flow from operations, as reported, before changes in working capital.
Debt as Percentage of Total Capitalization
Numerator: Total long- and short-term debt, including the debt component of hybrid securities, off-balance sheet debt or debt equivalents, and capitalized lease obligations, less utility tariff bond debt plus current portion of long-term debt and capitalized lease obligations, less nonrecourse debt.
Denominator: Total long- and short-term debt, inciuding the debt component of hybrid securities, off-balance sheet debt or debt equivalents, and capitalized lease obligations, less utility tariff bond debt plus current portion of long-term debt and capitalized lease obligations, less nonrecourse debt, plus the equity portion of hybrid securities plus common equity, plus minority interest.
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Denominator: Beginning-of-year common equity plus end-of-year common equity divided by two.

> Common Dividend Payout
Numerator: Common dividends paid.
Denominator: Earnings available for common shareholders.
Note: The above ratios are adjusted to exclude the effect of issuing utility tariff bonds, sometimes referred to as rate reduction bonds or transition bonds. The adjustments affect the calculations of EBIT, EBITDA, interest expense, debt, FFO, and internal cash generation. The income statement adjustments have the effect of reducing EBITDA by the amount of payments to the utility tariff bond trust, which is roughly equivalent to the

 utility tariff bonds is also excluded from debt in calculating leverage ratios and the debt amortization is added back to FFO and when calculating ratios using those measures.
Denominator: Total long- and short-term debt, including the debt component of hybrid securities, off-balance sheet debt or debt equivalents, and capitalized lease obligations, less utility tariff bond debt plus current portion of long-term debt and capitaized lease obligations, less nonrecourse debt, plus equity portion of hybrid securities plus common equity, plus minority interest.

## Common Equity as Percentage of Total Capitalization

Numerator: Total common equity.
Denominator: Total long- and short-term debt, including the debt component of hybrid securities, off-balance sheet debt or debt equivalents, and capitalized lease obligations, less utility tariff bond debt plus current portion of long-term debt and capitalized lease obligations, less nonrecourse debt, plus equity component of hybrid securities plus common equity, plus minority interest.

## Percentage of Internal Cash Generation

Numerator: Cash from operations, as reported before changes in working capital, minus preferred/preference and common dividends.
Denominator: Gross capital expenditures plus investments in nuclear decommissioning funds.

## Operating Margin

Numerator: Operating income before nonrecurring items plus above-the-line state and federal income taxes, if applicable.
Denominator: Total operating revenue.
Return on Average Common Equity
Numerator: Earnings available for common shareholders.
U.S. Utilities, Power \& Gas Financial Peer Study
June 22, 2012
Corporate Ratio Definitions (Continued)

## Hybrid Equity as Percentage of Total Capitalization

## Numerator: Equity portion of hybrid securities.



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June 22, 2012

$$
\begin{array}{ll}
\text { New York } & \text { London } \\
\text { One State Street Plaza } & 30 \text { North Colonnade } \\
\text { New York, NY 10004 } & \text { Canary Wharf } \\
\text { USA } & \text { London E14 5GN } \\
+12129080500 & \text { UK } \\
+180075 \text { FITCH } & +442035301000
\end{array}
$$

# Testimony of William J. Chambers 

Appendix Page 11 of 13

## APPENDIX G



Testimony of William J. Chambers
Appendix Page 12 of 13

## APPENDIX H

Yields on 10-Year U.S. Corporate Bonds by Credit Rating


Yield Spreads on 10-Year U.S. Corporate Bonds by Credit Rating


Source: Bloomberg. Spread is measured against 10 -Year Treasury Note.

Testimony of William J. Chambers
Appendix Page 13 of 13

## APPENDIX I

## Default Rates by S\&P Credit Rating

| U.S. Corporate Average Cumulative Default Rates By Rating Modifier$(1981-2011)(\%)$ |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Years After Rating Assigned |  |  |
| Rating | 5 | 10 | 15 |
| AAA | 0.43 | 0.90 | 1.32 |
| AA+ | 0.33 | 0.90 | 1.61 |
| AA | 0.50 | 1.14 | 1.60 |
| AA- | 0.50 | 1.12 | 1.41 |
| A+ | 0.78 | 1.90 | 3.35 |
| A | 0.76 | 2.15 | 3.11 |
| A- | 1.01 | 2.55 | 3.33 |
| BBB+ | 1.81 | 4.08 | 6.05 |
| BBB | 2.12 | 4.97 | 7.13 |
| BBB- | 3.76 | 8.19 | 11.81 |
| BB + | 5.77 | 11.55 | 15.10 |
| BB | 8.75 | 15.79 | 18.82 |
| BB- | 11.96 | 21.29 | 26.09 |
| B+ | 17.74 | 27.43 | 32.53 |
| B | 24.56 | 31.88 | 35.93 |
| B- | 32.42 | 38.79 | 41.08 |
| CCC/C | 51.09 | 56.51 | 60.00 |
| Sources: Standard \& Poor's Global Fixed Income Research and Standard \& Poor's CreditPro ${ }^{\text {® }}$ |  |  |  |

The Dayton Power and Light Company Case No. 12-426-El-SSO
Actual and Projected Financial Ratios Scenario: As-Filed
2011-2017
Data: Historical and Forecasted
Type of Filing: Original
Work Paper Reference No(s):: WJC-I.A

(C) Line $8 /\left(-1^{*}\right.$ Line 4) from WJC-1.A.
ine 22 Line 8 from WJC-1.A.
(D) (Line 13 - Line 4) /(-1 * Line 4) from WJC-1.A.
(G) Line 22 / (Line $20+$ Line 26) from WJC-1.A.
(I) Equal to (Funds From Operations - Dividends paid to DPL Inc + Issuance of pref. stock) / Capital Expenditures. (Line 13-Line 16 + Line 17)/Line 15 from WJC-1.A. (K) Equal to Operating Income / Total Revenue. Line 3 / Line 2 from WJC-1.A.
(L) Equal to (Net Income + Issuance of pref. stock) / Average Common Shareholder's Equity. (Line $6+$ Line 17) / Line 25 from WJC-1.A (M) Equal to Dividends paid to DPL Inc / (Net Income + Issuance of pref. stock). Line 16 / (Line $6+$ Line 17) from WJC-1.A.
Data: Historical and Forecasted
Type of Filing: Original
Work Paper Reference No(s).: WJC-1.B; WJC-1.C; WJC-1.D; WJC-11

| Data: <br> Type Work | Historical and Forecasted of Filing: Original Paper Reference No (s).: WJC-1.B; WJC-1.C | 1.D; WJC-11 |  |  |  |  |  | Witness Responsible: | WIC-1.A Page 1 of 1 J. Chambers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line |  |  |  |  |  |  |  |  |  |
| No. | Description | 2011 | 2013 | 2014 | 2015 | 2016 | 2017 | Source |  |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) |  |
| 1 | Statements of Income |  |  |  |  |  |  |  |  |
| 2 | Total Revenue | \$ |  |  |  |  |  | Line 7 from WJC-1.B. |  |
| 3 | Operating Income | \$ |  |  |  |  |  | Line 22 from WJC-1.B. |  |
| 4 | Gross Interest Expense | \$ |  |  |  |  |  | Line 26 from WJC-1.B. |  |
| 5 | Depreciation and Amortization | \$ |  |  |  |  |  | Line 18 from WJC-1.B. |  |
| 6 | Net Income | \$ |  |  |  |  |  | Line 35 from WJC-1.B. |  |
| 7 |  |  |  |  |  |  |  |  |  |
| 8 | Operating EBITDA | \$ |  |  |  |  |  | Line $3+$ Line 5. |  |
| 9 |  |  |  |  |  |  |  |  |  |
| 10 | Statement of Cash Flows |  |  |  |  |  |  |  |  |
| 11 | Net Cash Provided by Operating Activities | \$ |  |  |  |  |  | Line 7 from WJC-1.D. |  |
| 12 | Change in Certain Assets and Liabilities | \$ |  |  |  |  |  | Line 5 from WJC-1.D. |  |
| 13 | Funds From Operations | \$ |  |  |  |  |  | Line 11 - Line 12. |  |
| 14 |  |  |  |  |  |  |  |  |  |
| 15 | Capital Expenditures | \$ |  |  |  |  |  | See Below. |  |
| 16 | Dividends paid to DPL Ine | \$ |  |  |  |  |  | -1 * Line 12 from WJC-1.D. |  |
| 17 | Issuance of pref. stock | \$ |  |  |  |  |  | Line 13 from WJC-1.D. |  |
| 18 |  |  |  |  |  |  |  |  |  |
| 19 | Balance Sheet |  |  |  |  |  |  |  |  |
| 20 | Short-Term Debt | \$ |  |  |  |  |  | Line 25 from WJC-I.C. |  |
| 21 | Long-Term Debt | \$ |  |  |  |  |  | Line 38 from WJC-I.C. |  |
| 22 | Total Debt | \$ |  |  |  |  |  | Line $20+$ Line 21. |  |
| 23 |  |  |  |  |  |  |  |  |  |
| 24 | Common Shareholder's Equity | \$ |  |  |  |  |  | Line 36 from WJC-I.C. |  |
| 25 | Average Common Shareholder's Equity | \$ |  |  |  |  |  | See Below. |  |
| 26 | Total Capitalization | \$ |  |  |  |  |  | Line 39 from WJC-L.C. |  |

$\frac{\text { Notes \& Sources: }}{2011 \text { data from DP }}$
2011 data from DP\&L Financial Statements from 2011 DPL Inc. Annual Report. All other sources described in column (I).
15 Change in Line 10 from WJC-1.C. 2012 PPE calculated as average 2011 and 2013 PPE.
25 (Line $24_{1}+$ line $24_{\text {II- }}$ ) $/ 2.2013$ uses an imputed 2012 value of $\$ 1,434$ calculated from Internal Documents. See WJC-11.
Data: Forecasted
Type of Filing: Orıgnal
Work Paper Reference No(s): WP-12 Proforma Financials Cost of Debt and CLJ-1- FILING with Detail.xlsx, 1 Page 1 of
Data: Forecasted
Type of Filing: Orgnal
Work Paper Reference No(s): WP-12 Proforma Financials Cost of Debt and CLJ-1-FILING with Detail.xlsx,
Additional delail for financial integrity $9.28 .12 \times \mathrm{xlsx}$
Projected Statements of Income (unaudited) ( $\$$ io millions)
Scenario: As-Filed
2013-2017

| Line No. | escripti | 2013 | 2014 | 2015 | 2016 | 2017 | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) |
| 1 | Operating Revenues |  |  |  |  |  |  |
| 2 | Retail | \$ |  |  |  |  | Internal Documents. |
| 3 | Recovery of Non-bypassable Charge | \$ |  |  |  |  | Internal Documents. |
| 4 | Wholesale | \$ |  |  |  |  | Internal Documents. |
| 5 | RTO Capacity and Other RTO Revenues | \$ |  |  |  |  | Internal Documents. |
| 6 | Other Revenues | \$ |  |  |  |  | Internal Documents. |
| 7 | Total Revenues | \$ |  |  |  |  | Sum(Line 2 - Line 6). |
| 8 |  |  |  |  |  |  |  |
| 9 | Fuel and Purchased Power |  |  |  |  |  |  |
| 10 | Fuel Costs | \$ |  |  |  |  | Internal Documents. |
| 11 | Purchased Power | \$ |  |  |  |  | Internal Documents. |
| 12 | Total Fuel and Purchased Power | \$ |  |  |  |  | Line $10+$ Line 11. |
| 13 |  |  |  |  |  |  |  |
| 14 | Gross Margin | \$ |  |  |  |  | Line 7-Line 12. |
| 15 |  |  |  |  |  |  |  |
| 16 | Operating Expenses |  |  |  |  |  |  |
| 17 | Operation and Maintenance | \$ |  |  |  |  | Internal Documents. |
| 18 | Depreciation and Amortization | \$ |  |  |  |  | Internal Documents. |
| 19 | General Taxes | 5 |  |  |  |  | Internal Documents. |
| 20 | Total Operating Expenses | \$ |  |  |  |  | Sum(Line 17-Line 19). |
| 21 |  |  |  |  |  |  |  |
| 22 | Operating Income | \$ |  |  |  |  | Line 14 - Line 20. |
| 23 |  |  |  |  |  |  |  |
| 24 | EBITDA | \$ |  |  |  |  | Line 18 + Line 22. |
| 25 |  |  |  |  |  |  |  |
| 26 | Gross Interest Expense | \$ |  |  |  |  | Internal Documents. |
| 27 | Other Interest Expense | \$ |  |  |  |  | Internal Documents. |
| 28 | Total Interest Expense | \$ |  |  |  |  | Line $26+$ Line 27. |
| 29 | Other Income (Deductions) | \$ |  |  |  |  | Internal Documents. |
| 30 |  |  |  |  |  |  |  |
| 31 | Earnings Before Income Tax | \$ |  |  |  |  | Line $22+$ Line $28+$ Line 29. |
| 32 |  |  |  |  |  |  |  |
| 33 | Income Tax | \$ |  |  |  |  | Line 31 * $35.8 \%$. |
| 34 |  |  |  |  |  |  |  |
| 35 | Net Income | \$ |  |  |  |  | Line 31 - Line 33. |


Data: Forecasted
The Dayton Power and Light Company
Projected Statement of Cash Flows (unaudited) ( $\$$ in millions) Scenario: As-Filed
$2013-2017$

The Dayton Power and Light Company
Case No. 12-426-EL-SSO
Actual and Projected Financial R Scenario: Pro Forma Debt Adjustment (Base Case) 2011-2017 Data: Historical and Forecasted
Type of Filing: Original
Wage 1 of 1
Witness Responsible: William J. Chambers
Work Paper Reference No(s):: WJC-2.A
Leverage

|  | Capital Structure |  |
| :---: | :---: | :---: |
|  |  |  |
| Debt/ | Total Debt/ | $\begin{array}{c}\text { Common } \\ \text { Equity/ }\end{array}$ |
| FFO | Total Capital | Total Capital |
| (F) | (G) | (H) |

Line $8 /(-1$ * Line 4) from WIC-2.A.
(Line 13 - Line 4) / ( $1^{*}$ Line 4) from WJC-2.A.
Line 22 / Line 8 from WJC-2.A.
(G) Line $22 /$ (Line $20+$ Line 26) from WJC-2.A.
Line 24 (Line 20 ( / WJC-2.A.
(K) Equal to (Net Income + Issuance of pref. stock) / Average Common Shareholder's Equity. (Line $6+$ Line 17) / Line 25 from WJC-2.A.
(L) Equal to Dividends paid to DPL Inc / (Net Income + Issuance of pref. stock). Line $16 /$ (Line $6+$ Line 17) from WJC-2.A.
The Dayton Power and Light Company
Case No. 12-426-EL-SSO
Required Data for Financial Ratio Calculat

\footnotetext{
Data: Historical and Forecasted
WJC-2.A
Page 1 of 1 Witness Responsible: William J. Chambers

| I.ine <br> No. | Description | 2011 | 2013 | 2014 | 2015 | 2016 | 2017 | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) |
| 1 | Statements of Income |  |  |  |  |  |  |  |
| 2 | Total Revenue | \$ |  | - |  |  |  | Line 7 from WJC-2.B. |
| 3 | Operating Income | \$ |  |  |  |  |  | Line 22 from WJC-2.B. |
| 4 | Gross Interest Expense | \$ |  |  |  |  |  | Line 30 from WJC-2.B. |
| 5 | Depreciation and Amortization | \$ |  |  |  |  |  | Line 18 from WJC-2.B. |
| 6 | Net Income | \$ |  |  |  |  |  | Line 39 from WJC-2.B. |
| 7 |  |  |  |  |  |  |  |  |
| 8 | Operating EBITDA | \$ |  |  |  |  |  | Line $3+$ Line 5. |
| 9 |  |  |  |  |  |  |  |  |
| 10 | Statement of Cash Flows |  |  |  |  |  |  |  |
| 11 | Net Cash Provided by Operating Activities | \$ |  |  |  |  |  | Line 7 from WJC-2.D. |
| 12 | Change in Certain Assets and Liabilities | \$ |  |  |  |  |  | Line 5 from WJC-2.D. |
| 13 | Funds From Operations | \$ |  |  |  |  |  | Line 11-Line 12. |
| 14 |  |  |  |  |  |  |  |  |
| 15 | Capital Expenditures | \$ |  |  |  |  |  | See Below. |
| 16 | Dividends paid to DPL Inc | \$ |  |  |  |  |  | -1 * Line 14 from WJC-2.D. |
| 17 | Issuance of pref. stock | \$ |  |  |  |  |  | Line 15 from WJC-2.D. |
| 18 |  |  |  |  |  |  |  |  |
| 19 | Balance Sheet |  |  |  |  |  |  |  |
| 20 | Short-Term Debt | \$ |  |  |  |  |  | Line 25 from WJC-2.C. |
| 21 | Long-Term Debt | \$ |  |  |  |  |  | Line 38 from WJC-2.C. |
| 22 | Total Debt | \$ |  |  |  |  |  | Line $20+$ Line 21. |
| 23 |  |  |  |  |  |  |  |  |
| 24 | Common Shareholder's Equity | \$ |  |  |  |  |  | Line 36 from WJC-2.C. |
| 25 | Average Common Shareholder's Equity | \$ |  |  |  |  |  | See Below. |
| 26 | Total Capitalization | \$ |  |  |  |  |  | Line 39 from WJC-2.C. |

2011 data from DP\&L Financial Statements from 2011 DPL Inc. Annual Report, adjusted for the additional $\$ 278 \mathrm{M}$ long term debt. Sce WJC-11. All other sources described in column (I)
15 Change in Line 10 from WJC-2.C. 2012 PPE calculated as average 2011 and 2013 PPE.
25 (Line $24_{1}+$ previous year Line $24_{\mathrm{t}-1}$ ) 2.2013 uses an imputed 2012 value of $\$ 1,156$ calculated from Internal Documents. See WJC-11.
Data: Forecasted
The Dayton Power and Light Company
Projected Statement of Cash Flows (unaudited) ( $\$$ in millions) ala Debt Adjustment (Base Case)
2013-2017

| Data: F Type o Work P | recasted <br> Filing: Original <br> Paper Reference No(s).: WP-12 Proforma Financials | $\mid C L J-1-\mathrm{FI}$ | tail. xls | WJC-2 |  |  | Witness Responsible: William | WJC-2.D <br> Page 1 of 1 <br> J. Chambers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line |  |  |  | ance at |  |  |  |  |
| No. | Description | 2013 | 2014 | 2015 | 2016 | 2017 | Source |  |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) |  |
| 1 |  |  |  |  |  |  |  |  |
| 2 | Net Income | \$ |  |  |  |  | Line 39 from WJC-2.B. |  |
| 3 | Depreciation and Amortization | \$ |  |  |  |  | Line 18 from WJC-2.B. |  |
| 4 | Change in Deferred taxes | \$ |  |  |  |  | See Below. |  |
| 5 | Change in Certain Current Assets and Liabilities | \$ |  |  |  |  | Imputed value from Internal documents. |  |
| 6 | Other |  |  |  |  |  |  |  |
| 7 | Net cash provided by operating activities | \$ |  |  |  |  | Sum (Line 2 - Line 6). |  |
| 8 |  |  |  |  |  |  |  |  |
| 9 | Net cash used for investing activities | \$ |  |  |  |  | Internal Documents. |  |
| 10 |  |  |  |  |  |  |  |  |
| 11 | Original Issuance (retirement) of short-term debt | \$ |  |  |  |  | Internal Documents. |  |
| 12 | Actual Issuance (retirement) of short-term debt | \$ |  |  |  |  | See Below. |  |
| 13 | Original Dividends paid to DPL Inc | \$ |  |  |  |  | Intemal Documents. |  |
| 14 | Actual Dividends paid to DPL Inc | \$ |  |  |  |  | See Below. |  |
| 15 | Issuance of pref. stock | \$ |  |  |  |  | Internal Documents. |  |
| 16 | Other | \$ |  |  |  |  | Internal Documents. |  |
| 17 | Net cash used for financing activities | \$ |  |  |  |  | Line $12+$ Line 14 + Line $15+$ Line 16. |  |
| 18 |  |  |  |  |  |  |  |  |
| 19 | Cash and Cash Equivalents |  |  |  |  |  |  |  |
| 20 | Net Change | \$ |  |  |  |  | Line $7+$ Line $9+$ Line 17. |  |
| 21 | Balance at beginning of period | \$ |  |  |  |  | Sec Below. |  |
| 22 | Cash and cash equivalents at end of period | \$ |  |  |  |  | Line $20+$ Line 21. |  |
|  | Notes \& Sources: |  |  |  |  |  |  |  |
| 4 | Change in line 29 from WJC-2.C. 2012 value ave | d 2013 value |  |  |  |  |  |  |
| 12 | Line 11 unless Line 22 falls below \$10M and Line | Then increase | ine 22 | 0M. |  |  |  |  |
| 14 | Equal to Line 13 unless Line 22 falls below $\$ 10 \mathrm{M}$ | al amount of | debt. D | lower | Line 22 | 10M | riginal issuance of short-term debt. |  |
| 21 | Line 22 from previous year. 2013 value from Inte |  |  |  |  |  |  |  |

## The Dayton Power and Light Company <br> Case No. 12-426-EL-SSO Actual and Projected Financial R <br> Scenario: Pro Forma Debt Adjustment with No Switching Tracker 2011-2017

Data: Historical and Forecasted
Type of Filing: Original
Work Paper Reference No(s).: WJC-3.A

(C) Line $8 /\left(-1^{*}\right.$ Line 4) from WJC-3.A.
(D) $\quad($ Line $13-$ Line 4) $/(-1 *$ Line 4) from WJC-3.A.
(E) Line 22 / Line 8 from WJC-3.A.
(F) Line $22 /$ Line 13 from WJC-3.A.
(G) Line $22 /$ (Line $20+$ Line 26 ) from WJC-3.A.
(H) Line 24 / (Line $20+$ Line 26) from WJC-3.A.
(I) Equal to (Funds From Operations - Dividends paid to DPL Inc + Issuance of pref. stock) / Capital Expenditures. (Line 13-Line 16+Line 17) / Line 15 from WJC-3.A. (J) Equal to Operating Income / Total Revenue. Line 3 / Line 2 from WJC-3.A.
(K) Equal to (Net Income + Issuance of pref. stock) / Average Common Shareholder's Equity. (Line $6+$ Line 17) / Line 25 from WJC-3.A.
(L) Equal to Dividends paid to DPL Inc / (Net Income + Issuance of pref. stock). Line $16 /$ (Line $6+$ Line 17) from WJC-3.A.
Required Data for Financial Ratio Calculations ( $\$$ in millions) Scenario: Pro Forma Debt Adjustment with No Switching Tracker

[^18]Data. Forecasted


요
WJC-3.C
Page 1 of 1
The Dayton Power and Light Compary Case No. 12-426-EL-SSO
Projected Balance Sheet (unaudited) (\$ in millions)
Scenario: Pro Forma Debt Adjus tment with No Switching Tracker
$2013-2017$ 103 :201


 | Line |
| :--- |
| No. |
| (A) |

The Dayton Power and Light Company
Projected Statement of Cash Flows (unaudited) ( $\$$ in millions)
Scenario: Pro Forma Debt Adjustment with No Switching Tracker 2013-2017
Data: Historical and Forecasted
Type of Filing: Original
Work Paper Reference $\mathrm{No}(\mathrm{s})$.: WJC-4.A
Actual and Projected Financial Ratios Scenario: Pro Forma Debt Adjustment with No SSR 2011-2017

Data: Historical and Forecasted
Type of Filing: Original
The Dayton Power and Light Company
Required Data for Financial Ratio Calculations (\$ in millions) na Debt Adjustment with No SSR
2011-2017

| Data: <br> Type <br> Work | Historical and Forecasted <br> of Filing: Original <br> Paper Reference No(s).: WJC-4.B; WJC-4.C | D.D WJC-11 |  |  |  |  |  | Witness Responsible | $\begin{array}{r} \text { WJC-4 A } \\ \text { Page } 1 \text { of } 1 \\ \text { J. Chambers } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line |  |  |  |  |  |  |  |  |  |
| No. | Description | 2011 | 2013 | 2014 | 2015 | 2016 | 2017 | Source |  |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) |  |
|  | Statements of Income |  |  |  |  |  |  |  |  |
| 2 | Total Revenue | \$ |  |  |  |  |  | Line 7 from WJC-4.B. |  |
|  | Operating Income | \$ |  |  |  |  |  | Line 22 from WJC-4.B. |  |
|  | Interest Expense | \$ |  |  |  |  |  | Line 30 from WJC-4.B. |  |
| 5 | Depreciation and Amortization | \$ |  |  |  |  |  | Line 18 from WJC-4.B |  |
| 6 | Net Income | \$ |  |  |  |  |  | Line 39 from WJC-4.B. |  |
| 7 |  |  |  |  |  |  |  |  |  |
|  | Operating EBITDA | \$ |  |  |  |  |  | Line $3+$ Line 5 . |  |
| 9 |  |  |  |  |  |  |  |  |  |
|  | Statement of Cash Flows |  |  |  |  |  |  |  |  |
| 11 | Net Cash Provided by Operating Activities | \$ |  |  |  |  |  | Line 7 from WJC-4.D. |  |
| 12 | Change in Certain Assets and Liabilities | \$ |  |  |  |  |  | Line 5 from WJC-4.D. |  |
| 13 | Funds From Operations | \$ |  | * |  |  |  | Line 11-Line 12. |  |
| 14 |  |  |  |  |  |  |  |  |  |
| 15 | Capital Expenditures | \$ |  |  |  |  |  | See Below, |  |
| 16 | Dividends paid to DPL Inc | \$ |  |  |  |  |  | -1* Line 14 from WJC-4.D. |  |
| 17 | Issuance of pref. stock | \$ |  |  |  |  |  | Line 15 from WJC-4.D. |  |
| 18 |  |  |  |  |  |  |  |  |  |
| 19 | Balance Sheet |  |  |  |  |  |  |  |  |
| 20 | Short-Term Debt | \$ |  |  |  |  |  | Line 25 from WJC-4.C. |  |
| 21 | Long-Term Debt | \$ |  |  |  |  |  | Line 38 from WJC-4.C. |  |
| 22 | Total Debt | \$ |  |  |  |  |  | Line $20+$ Line 21. |  |
| 23 |  |  |  |  |  |  |  |  |  |
| 24 | Common Shareholder's Equity | \$ |  |  |  |  |  | Line 36 from WJC-4.C. |  |
| 25 | Average Common Shareholder's Equity | \$ |  |  |  |  |  | See Below. |  |
| 26 | Total Capitalization | \$ |  |  |  |  |  | Line 39 from WJC-4.C. |  |

$\frac{\text { Notes \& Sources: }}{2011 \text { data from D }}$
2011 data from DP\&L Financial Statements from 2011 DPL Inc. Annual Report, adjusted for the additional $\$ 278 \mathrm{M}$ long term debt. See WJC-11. All other sources described in column (1).
Change in Line 10 from WJC-4.C. 2012 PPE calculated as average 2011 and 2013 PPE.
25 (Line $24_{\mathrm{t}}+$ previous year Line $24_{\mathrm{t}-1}$ ) $/ 2.2013$ uses an imputed 2012 value of $\$ 1,156$ calculated from Intemal Documents. Sec WJC- 11 .
Data: Forecasted


The Dayton Power and Light Company
 2013-2017

Projected Statement of Cash Flows (unaudited) ( $\$$ in millions) Scenario: Pro Forma Debt Adjustment with No SSR
2013-2017 Scenario: Pro Forma Debt Adjustment with No SSR
2013-2017

[^19]The Dayton Power and Light Company Case No. 12-426-EL-SSO
Data: Historical and Forecasted
Type of Filing: Original
Work Paper Reference No(s).: WJC-5.A

|  |  | Interest Coverage |  |
| :---: | :---: | :---: | :---: |
| Line |  | Operating <br> EBITDA/ <br> Interest <br> Expense | FFO + <br> Interest/ <br> Interest <br> Expense |
| No. | Year | (B) | (D) |
|  |  |  |  |
| 1 | 2011 |  |  |
| 2 | 2013 |  |  |
| 3 | 2014 |  |  |
| 4 | 2015 |  |  |
| 5 | 2016 |  |  |
| 6 | 2017 |  |  |

Notes \& Sources:
Line $8 /\left(-1^{*}\right.$ Line 4) from WJC-5.A.
(Line 13 - Line 4) / ( $-1^{*}$ Line 4) from WJC-5.A.
Line 22 / Line 8 from WJC-5.A.
Line 22 / Line 13 from WJC-5.A.
Line 22 / (Line $20+$ Line 26) from WJC-5.A.
(I) Equal to (Funds From Operations - Dividends paid to DPL Inc + Issuance of pref. stock) / Capital Expenditures. (Line 13 - Line $16+$ Line 17) / Line 15 from WJC-5.A. Equal to Operating Income / Total Revenue. Line 3 / Line 2 from WJC-5.A.
(K) Equal to (Net Income + Issuance of pref. stock) / Average Common Shareholder's Equity. (Line 6+Line 17) / Line 25 from WJC-5.A
(L) Equal to Dividends paid to DPL Inc / (Net Income + Issuance of pref. stock). Line 16 / (Line $6+$ Line 17) from WJC-5.A.
The Dayton Power and Light Company
Required Data for Financial Ratio Calcula

[^20] Scenario: Pro Forma Debt 2011 - 2017 Scenario: Pro Forma Deltit Adjustment with No Switching Tracker $\mathcal{E}^{\boldsymbol{\&}}$ No SSR

The Dayton Power aud Light Company
 w3c-5.c Winess Responsible: William J. Chambers

 Internal Documents.
Internal Documents. Intenal Docurments. Sura(Line 2 - Line 6 ).
Intemal Documents.
Intemal Documents. Internal Documens
Line $10+$ Line 11. Intemal Documents. Internal Documents.
Intemal Docurnents. Surn(Line 14 - Line 16). Line $7+$ Line $12+$ Line 17 . Intemal Documents.
Intemal Documnents. Intemal Documents.
Sum of Line 12 from WIC.-5.D. Internal Docurnemis.
Sum(Line 23 - Line 26) Internal Documents. Intermal Documents.
Internal Dccumnents.
Internal Documents.
Internal Documents.
Sum(Line 29 - Line 31).
Line $27+$ Line 32 . See Below Internal Documents.
LT Debt from Internal Sum(Line 36 - Line 38). Line $33+$ Line 39.
(G)


[^21]Data: Forecasted
14

$\begin{array}{ll}2013 & 2014 \\ \text { (C) } & \text { (D) }\end{array}$

## $\frac{2015}{(\mathrm{E})} \ldots \frac{2016}{(\mathrm{~F})}$


14 and Line $(5$ from WJC-5.D): 2013 value calculated using an innputed 2012 value from Internal $D$
Scenario: Pro Forma Deht Adjustment with No Switching Tracker \& No SSR 2013-2017

[^22]The Dayton Power and Light Company
Case No. 12-426-EL-SSO
Projected Statement of Cash Flows (unaudite
Data: Historical and Forecasted
Type of Filing: Original
Work Paper Reference No(s).: WJC-1; WJC-2; WJC-3; WJC-4; WJC-5
The Dayton Power And Light Company
Case No. 12-426-EL-SSO
Operating EBITDA / Interest Expense Ratio
By Scenario


Notes \& Sources: $\quad$ Lind Light Company ratios from WJC-1, WJC-2, WJC-3, WJC-4, and WJC-5
2011 Fitch Median Utility BBB- from Fitch Ratings, U.S. Utilities, Power \& Gas Financial Pecr Study, June 2012, at 12. Excludes Dayton Power and Light Company. Range represents $+i$-one standard deviation.

The Dayton Power and Iight Company ratios from WJC-1, WJC-2, WJC-3, WJC-4, and WJC-5.
20 [1 Fitch Median Utility BBB- from Fitch Ratings, U.S. Utilities, Power \& Gas Financial Peer S
20[ Fitch Median Utility BBB- from Fitch Ratings, U.S. Utilities, Power \& Gas Financial Peer Study, June 2012, at 12 . Excludes Dayton Power and Light Company.
Range represents $+/$ one standard deviation.
$\bullet$

The Dayton Power And Light Company
Case No. 12-426-EL-SSO
Debt / Operating EBITDA
By Scenario

> Type of Filing; Original
Data: Historical and Forecasted
Work Paper Reference No(s).: WJC-1; WJC-2; WJC-3; WJC-4; WJC-5
Notes \& Sources:
2011 Fitch Median Utility BBB- from Fitch Ratings, U.S. Utilities, Power \& Gas Financial Peer Study, June 2012, at 12. Excludes Dayton Power and Light Company.

[^23]$\bullet$
The Dayton Power And Light Company Case No. 12-426-EL-SSO
Debt / FFO
By Scenario
$\mathrm{c} 9-\mathrm{OCM}$
Witness Responsible: William J. Chambers


[^24]2011 Fitch Median Utility BBB- from Fitch Ratings, U.S. Utilities, Power \& Gas Financial Peer Study, June 2012, at 12 . Excludes Dayton Power and Light Company.
2011 Fitch Median Utility BBB- from Fitch Ratings, U.S. Utilities, Power \& Gas Financial Peer Study, June 2012, at I2. Excludes Dayton Power and Light Company
Range represents $+/$ one standard deviation.
Data: Historical and Forecasted
Work Paper Reference No(s).: WJC-1; WJC-2; WJC-3; WJC-4; WJC-5
Type of Filing: Original
Type of Filing: Original

| $\square$ |
| :--- |
| $\pm$ |
| $\pm$ |

The Dayton Power and Light Company ratios from WJC-1, WJC-2, WJC-3, WJC-4, and WJC-5.
?
The Dayton Power And Light Company Case No. 12-426-EL-SSO

Data: Historical and Forecasted
WJC-1; WJC-2; WJC-3; WJC-4; WJC-5



2011 Fitch Median Utility BBB- from Fitch Ratings, U.S. Utilities, Power \& Gas Financial Peer Study, June 2012, at L2. Excludes Dayton Power and Light Company, Range represents $+/$ - one standard deviation.
-
The Dayton Power And Light Company
WJC-6.F
Wage 1 of 1



[^25]$\bullet$

Notes \& Sources:
The Dayton Power and Light Company Dividends equal to Line 12 from WJC-1.D, and Line 14 from WJC-2.D, WJC-3.D, WJC-4.D, and WJC-5.D.
-

$\frac{\text { Notes \& Sources: }}{\text { The Dayton Power }}$
The Dayton Power and Light Company Short Term Debt equal to Line 25 from WJC-I.C. WJC-2.C, WJC-3.C, WJC-4.C, and WJC-5.C.
The Dayton Power And Light Company
Case No. 12-426-EL-SSO

\[

$$
\begin{gathered}
\text { Median: } \\
\text { Mean: }
\end{gathered}
$$
\]

WJC-9 Witness Responsible: William J. Chambers Total Capitalization Dobt to Capital

|  |  |
| :---: | :---: |
| -00-000000000 | - |

$\begin{array}{cc}\$ 0.0 & \$ 2,677.5 \\ \$ 22.9 & \$ 903.2 \\ \$ 2,864.8 \\ \$ 2,281.4\end{array}$

$\$ 0.8$
$\$ 30.8$


$\frac{\text { Notes \& Sources: }}{\text { No Bloomberg data for DPL or DP\&L. DPL Acquired by AES in } 2011 .}$

[B] Tickers from JDM-6.
[C] Long-term S\&P Credit Ratings from Thomson One, as of ©ct. 1,2012 .
[D] Data from Bloomberg on $6 / 29 / 2012$, except for CV which is from Bloomberg on 3/30/2012. Data in millions.
 (suon! in u! spiliop zioz/
 [J] Book Value of Total Debt for $6 / 30 / 2012$. Data from Capital IQ. Data for CV from SEC-Edgar, $10 Q$, on $3 / 31 / 2012$ (dollars in millions).

Data: Historical
Type of Fling: Original
The Daytan Fower and Ligbt Company
Case No. 12-426-EL-SSO
Fitch 2011 BBB- Integrated Utility Company Financial Ratios

| Data: Historical <br> Type of Fuling: Original Work Paper Reference No(s): WJC-1; WJC-2 |  |  |  |  |  |  |  |  |  |  | Witue | sponsib | $\begin{array}{r} \text { WIC-10 } \\ \text { Page } 1 \text { of } 1 \\ \text { illian J. Cbambers } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Interest Coverage ( x ) |  |  | Leverage |  |  | Capital Structure |  |  | Liquidity | Profitability |  | Dividends |
| Line No. $\quad$ Integrated Utility Company | Operating EBIT/ Interest Expense | Operating <br> EBITDA/ <br> Interest <br> Expense | $\mathrm{FFO}+$ <br> Interes $V$ <br> Interest <br> Expense | Debt Operating EBTIDA | FFO/Debt | $\begin{gathered} \text { Debt/ } \\ \text { FFO } \\ \hline \end{gathered}$ | Total Debt/ <br> Total Capital | Total Hybrid Equity/Total Capital | Common Equityl Total Capital | Internal <br> Generation | Operating Margin | ROE | Common <br> Dividend <br> Payout <br> Ratio |
| (A) (B) | (C) | (D) | (E) | (F) | (G) | (H) | (1) | (J) | (K) | (L) | (M) | (N) | (0) |
| 1 Appalachian Power Company | 2.00 | 3.30 | 3.10 | 5.60 | 0.11 | 8.80 | 57.9\% | - | 42.1\% | 1.02 | 13.6\% | 5.6\% | 0.84 |
| 2 Arizona Public Service Company | 3.00 | 4.70 | 4.70 | 2.80 | 0.28 | 3.60 | 45.4\% | 1.5\% | 53.1\% | 1.00 | 23.4\% | 8.7\% | 0.68 |
| 3 Consumers Energy Company | 3.80 | 5.70 | 5.10 | 3.00 | D. 24 | 4.10 | 50.0\% | 0.3\% | 49.8\% | 1.04 | 15.7\% | 11.0\% | 0.80 |
| 4 Empire District Electric Company | 3.20 | 4.70 | 5.00 | 3.60 | 0.23 | 4.30 | 50.4\% | - | 49.6\% | 1.05 | 22.5\% | 8.1\% | 0.49 |
| 5 Indiana Michigan Power Company | 2.20 | 3.40 | 4.40 | 5.50 | 0.18 | 5.50 | 61.5\% | - | 38.5\% | 1.87 | 14.8\% | 8.6\% | 0.50 |
| 6 Indianapolis Power \& Light Company | 3.60 | 6.40 | 6.00 | 2.80 | 0.29 | 3.50 | 56.6\% | 1.6\% | 41.8\% | 0.61 | 18.4\% | 13.2\% | 0.79 |
| 7 Kentucky Power Company | 2.70 | 4.10 | 3.80 | 3.60 | 0.18 | 5.50 | 54.7\% | - | 45.3\% | 1.09 | 13.6\% | 9.3\% | 0.67 |
| 8 Southwestern Electric Power Company | 2.40 | 3.50 | 3.50 | 4.70 | 0.15 | 6.60 | 53.1\% | - | 46.9\% | 0.70 | 18.3\% | 9.3\% | 0.03 |
| 9 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10 Non-DP\&L Median | 2.85 | 4.40 | 4.55 | 3.60 | 0.21 | 4.90 | 53.9\% | 1.5\% | 46.1\% | 1.03 | 17.0\% | 9.0\% | 0.67 |
| 11 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 DP\&L Pro Forma Debt Adjustment | - | 8.73 | 8.19 | 2.60 | - | 3.16 | 51.7\% | - | 0.47 | 0.75 | 19.1\% | 14.9\% | 1.20 |

1-8 $\begin{aligned} & \text { Notes \& Sources: } \\ & \text { From Fitch Ratings, U.S. Utilities, Power \& Gas Financial Peer Study, June 2012, at 12. Includes all firms from BBB-1DR list except Dayton Power \& Light Company }\end{aligned}$

The Dayton Power and Light Company
Calculation of Additional Debt to Set Pro Forma Debt Ratio Equal to 50 Percent as of 12/31/2012
Data: Historical and Forecasted WJC-11
Type of Filing: Original
Work Paper Reference No(s).: WJC-2.B; WJC-2.D; Witness Responsible: William J. Chambers

 | Line |
| :--- |
| No. |
| (A) |
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |

## Notes \& Sources:

(C) Equal to (E), except Common Shareholder's Equity. Common Shareholder's Equity for (C) calculated as $\$ 139.0$ net income less $\$ 51.0$ dividend.
See WP-12 Proforma Financials Cost of Debt and CLJ-1- FILING with Detail.xlsx
(D) Equal to (C), except Long Term Debt increases by $\$ 277.9$ million and Common Share (D) Equal to (C), except Long Term Debt increases by $\$ 277.9$ million and Common Shareholder's
(E) WP-12 Proforma Financials Cost of Debt and CLJ-1- FLLING with Detail.xlsx
(F) Equal to (D), except Common Shareholder's Equity, which also includes 2013 retained earnings
of $\$ 79.4$, calculated as $\$ 130.4$ net income (WJC-2.B) less $\$ 51.0$ dividend (WJC-2.D).
Debt Ratio equal to (Short Term Debt + Long Term Debt) / Total Capitalization.
The Dayton Power and Light Company
Case No. 12-426-EL-SSO
ROE Ratios of Comparable Fir

| Credit Raling |  |  | $\qquad$ |  |  | WJC-12.A <br> Page 1 of I <br> ponsible: Witliam J. Chambers |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Projected |
| Fitch | S\&P | Moodvs |  |  |  | 2009 | 2010 | 2011 | 2012 | 2013 | $2015-2017$ |
| BBB ${ }^{\text {d }}$ | ввв 4 | Baal | 117\% | 9.7\% | 6.6\% |  |  |  |
| BBB + | BBR | Baal | 20.4\% | 13\% | 10.2\% | 10.0\% | 9.5\% | 9.5\% |
| BBB | bbe | A3 | 12\% | 10.0\% | 7.2\% | 75\% | 9.0\% | 10.5\% |
| ввв ${ }^{\text {- }}$ | A- | Easi | B. $8 \%$ | 10.1\% | 9.4\% |  |  |  |
| BBB 4 | B88- | Gas2 | 96\% | $88 \%$ | 8.6\% |  |  |  |
| BBB | B88 | A 3 | 9.2\% | 11.4\% | 10.9\% |  |  |  |
| BBB- | 8BB- | Baa2 | 7.2\% | 9.2\% | 72\% |  |  |  |
| BBB- | A. | A3 | 5.3\% | 10.9\% | 95\% |  |  |  |
| bbi | Bbs. | Baa2 | 8.7\% | 10.6\% | 8.4\% |  |  |  |
| 888 | B8B ${ }^{\text {- }}$ | Baal | 10.1\% | 112\% | 107\% |  |  |  |
| 日日B | BR8- | Baal | . | 174\% | 02\% |  |  |  |
| 88B | BBB | Baal | 9.5\% | 96\% | 11.\%\% | 9.5\% | 9.5\% | 50.0\% |
| ввв | A. | Baal | 8.6\% | 8 $2 \%$ | 7.6\% |  |  |  |
| BRE | BBb | Basl | 97\% | 88\% | 14.4\% |  |  |  |
| BB8 | A. | Ban 2 | 96\% | 109\% | 10.0\% |  |  |  |
| BRB | A. | Baal | 7.2\% | 8.2\% | 8.8\% |  |  |  |
| BBB | в8в | Вaa2 | 7.9\% | 8.8\% | 8.9\% | 85\% | 80\% | 8.5\% |
| BBB- | BBB | Baa2 | 6.1\% | $4 \% \%$ | 57\% |  |  |  |
| BBB- | BBB | Baal | 7.4\% | 92\% | 8 $7 \%$ | 9.0\% | 9.5\% | 9.0\% |
| BBB- | B8B- | Baa2 | $78 \%$ | 10.9\% | 11.0\% | $130 \%$ | 13.0\% | 12.5\% |
| BBB- | beb- | Baa2 | 7.3\% | 7.5\% | 8.1\% | 75\% | 8.0\% | 9.0\% |
| BBB. | BBB | Вяя2 | 13.9\% | 7.5\% | 8.7\% |  |  |  |
| BbB- | BBb- | Baa 2 | 150\% | 15.8\% | 13.\% |  |  |  |
| BBE- | BBB | Bas2 | 5.8\% | 8.0\% | 93\% |  |  |  |
| BBB- | BBB | Baa 3 | 8.2\% | 8.9\% | 93\% |  |  |  |
| BB+ | BB+ | Baa3 | 5.1\% | 69\% | 47\% | $80 \%$ | 8.0\% | 9.0\% |
| BB+ | B8+ | Ban 3 | 7.7\% | 73\% | $61 \%$ |  |  |  |
| B8+ | B8+ | Baa3 | 14.8\% | 16.0\% | 11\% | 10.0\% | 11.0\% | 14.0\% |
|  |  | Minimum: | 5.1\% | 49\% | 0.2\% | 7.5\% | 8.0\% | 85\% |
|  | 25 L | Percentik: | 7.4\% | 8 $2 \%$ | 7.5\% | 8.0\% | 8.0\% | 90\% |
|  |  | Melian: | 8.7\% | 9.4\% | 88\% | 9.0\% | 9.5\% | 9.5\% |
|  |  | Average: | 9.4\% | 10.0\% | 8.8\%\% | 92\% | 95\% | 10.2\% |
|  | 75th | Percemile: | $99 \%$ | $10 \%$ | $10.3 \%$ | $10.0 \%$ | $95 \%$ | 105\% |
|  |  | Maximum: | 20.4\% | 17.4\% | 14.4\% | 13.0\% | 13.0\% | 14.0\% |
| B88- | BB8- | Bà2 | 18.0\% | 20\% | $14 \%$ |  |  |  |


Notes \& Sources
Credr tating from WJC-12.C.
ROE $=$ Net Income $/($ (Book Equity year, + Book Equity yens.1.) $) / 2$ ) forn WJC-12C.
Projections fiom ValueLine. ROE $=$ Return on Common Equity.


Compaty, Indiana Michigan Power Compary, Renucky Power Company, and Southwe
The Dayton Power and Light Company Case No. 12-426-EL-SSO
ROE By Credit Rating

| Data: Historical <br> Type of Filing: Original <br> Work Paper Reference No(s): |  |  |  |  |  | ss Resp | ble: W | WJC-12.B Page 1 of 1 J. Chambers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Credit Rating | Fitch |  |  |  |  |  |  |  |
|  | 25 th Percentile ROE |  |  |  | 75th Percentile ROE |  |  |  |
|  | 2009 | 2010 | 2011 | Average | 2009 | 2010 | 2011 | Average |
| BBB+ | 8.4\% | 9.5\% | 7.2\% | 8.4\% | 11.8\% | 11.0\% | 9.7\% | 10.8\% |
| BB8 | 8.5\% | 8.8\% | 8.4\% | 8.5\% | 9.6\% | 10.9\% | 10.7\% | 10.4\% |
| BBB- | 7.0\% | 7.5\% | 8.5\% | 7.7\% | 9.7\% | 9.7\% | 9.8\% | 9.7\% |
| BB + | 6.4\% | 7.1\% | 5.4\% | 6.3\% | 11.3\% | 11.7\% | 8.6\% | 10.5\% |
|  |  |  | S\&P |  |  |  |  |  |
|  |  | 25th Pe | le ROE |  |  | 75th Pe | le ROE |  |
| Credit Rating | 2009 | 2010 | 2011 | Average | 2009 | 2010 | 2011 | Average |
| A- | 7.2\% | 8.2\% | 8.8\% | 8.1\% | 8.8\% | 10.9\% | 9.5\% | 9.7\% |
| BBB + | 9.5\% | 9.4\% | 8.1\% | 9.0\% | 10.5\% | 11.2\% | 10.8\% | 10.8\% |
| BBB | 7.5\% | 8.2\% | 8.7\% | 8.1\% | 11.6\% | 9.5\% | 10.0\% | 10.4\% |
| BBB- | 7.3\% | 9.6\% | 7.5\% | 8.1\% | 8.7\% | 14.6\% | 10.4\% | 11.2\% |
| BB+ | 6.4\% | 7.1\% | 5.4\% | 6.3\% | 11.3\% | 11.7\% | 8.6\% | 10.5\% |
|  |  |  | Moody |  |  |  |  |  |
|  |  | 25th P | le ROE |  |  | 75th Per | le ROE |  |
| Credit Rating | 2009 | 2010 | 2011 | Average | 2009 | 2010 | 2011 | Average |
| A3 | 7.2\% | 10.4\% | 8.3\% | 8.7\% | 10.7\% | 11.1\% | 10.2\% | 10.7\% |
| Baal | 8.6\% | 8.9\% | 7.9\% | 8.5\% | 10.1\% | 10.9\% | 10.6\% | 10.6\% |
| Baa2 | 7.2\% | 7.8\% | 8.3\% | 7.8\% | 9.6\% | 10.8\% | 9.7\% | 10.0\% |
| Baa | 7.1\% | 7.2\% | 5.8\% | 6.7\% | 9.9\% | 10.7\% | 9.7\% | 10.1\% |

Notes \& Sources:
'Average' calculated as the average of the 2009, 2010, and 2011 ROEs, by Credit Rating.
The Dayton Power and Light Company
Net Income and Book Equity of Comparable Firms

| Data: Historical |  |  |  |  |  |  |  |  |  | JC-12.C |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type of Filing: Original |  |  |  |  |  |  |  |  |  | ge 1 of 1 |
| Work Paper Reference No(s).: |  |  |  |  |  |  | tness Res | onsible: | itliam J. | Chambers |
|  |  | dit Rating |  |  | el Income |  |  | Book L | uity |  |
| Compary Name | Fitch | S\&P | Moochs | 2009 | $\underline{2010}$ | 2011 | 2008 | $\underline{2009}$ | 2010 | 2011 |
| Fiorida Power Corporation | BEB4 | BBB + | BaxI | \$462 | \$453 | \$314 | \$3,399 | \$4,490 | \$4,890 | \$4,675 |
| Ohio Power Company | BBB 4 | BBB | Baal | 5578 | \$542 | 5465 | \$2,422 | \$3,235 | \$4,655 | \$4,450 |
| Pacific Gas \& Electric Company | B8B4 | BBB | A3 | \$1,250 | \$1,121 | 5845 | \$9,529 | \$10,927 | \$11,463 | \$12,126 |
| Public Service Co. of Colorado | BBB + | A. | Baat | \$323 | \$400 | \$397 | \$3,578 | \$3,746 | \$4,138 | \$4,306 |
| South Carolina Electric \& Gas Company | BBB + | Bbe + | Bas2 | 5281 | \$290 | \$306 | \$2,704 | \$3,162 | \$3,437 | \$3,665 |
| Tampa Electric Company | BBB+ | BBE+ | A3 | \$192 | \$243 | \$235 | \$2,091 | \$2,104 | \$2,158 | \$2,154 |
| Union Electric Company | BBB + | BBE- | Baa2 | \$265 | \$369 | \$290 | \$3,449 | \$3,944 | \$4,073 | \$3,957 |
| Vigginia Electric and Power Company | BBE | A. | ${ }^{13}$ | \$356 | \$852 | \$822 | \$6,274 | \$7,173 | \$8,507 | \$8, 250 |
|  |  |  |  |  |  |  |  |  |  |  |
| Black Hills Power Inc. | BBE | BBB- | Bas2 | \$23 | \$31 | \$27 | \$25s | \$278 | \$309 | 5336 |
| The Detroit Edison Company | BBB | BRB+ | Haal | \$376 | 5441 | 5437 | \$3,556 | \$3,873 | \$4,009 | \$4,136 |
| Monongahela Power Company | BBB | B8B- | Baal | 50 | \$51 | \$1 | so | \$0 | \$591 | \$550 |
| NorthWestern Corporation | BBB | ввв | Baal | 573 | \$77 | \$93 | \$764 | \$787 | \$820 | \$859 |
| Pacticorp | BBB | A- | Baal | \$542 | \$566 | 5555 | 53,946 | \$6,607 | 57,270 | \$7,271 |
| Public Service Company of Oktahorna | BBB | ebs | Haal | \$76 | 573 | \$125 | \$748 | \$812 | 5842 | \$893 |
| Public Service Company of New Hampshire | BBB | A. | Baaz | \$66 | \$90 | \$100 | \$634 | 5727 | 5926 | \$1,078 |
| Soulhwestern Public Seruce Company | BBB | A. | Baal | \$68 | \$78 | \$90 | 5930 | \$950 | \$962 | \$1,077 |
| Westar Energy, Inc. | B日B | bBE | Baa2 | \$175 | \$204 | \$230 | \$2,186 | \$2,245 | 52,383 | 52,769 |
| Appalachian Power Company | bbs- | BB | Ваа2 | \$156 | \$137 | \$163 | \$2,377 | \$2,772 | \$2,822 | 52,936 |
| Arizona Public Service Company | BBE- | BrB | Baal | \$251 | 5336 | \$336 | \$3,339 | \$3,445 | \$1,825 | \$3,943 |
| Consurners Energy Company | BRB- | BBB- | Haaz | \$293 | 5434 | \$467 | \$3,705 | \$3,814 | \$4,136 | \$4.350 |
| Empire District Electric Company | BBB- | brb- | Baa2 | \$4] | \$47 | \$55 | \$529 | \$600 | \$658 | \$694 |
| Indıana Michigan Power Company | BBB- | BbB | Baaz | \$216 | 5126 | \$150 | \$1,435 | \$1,673 | \$1,694 | \$1,761 |
| Indianapolis Power \& Light Company | BBb- | BBB- | Baa2 | \$113 | \$120 | \$105 | \$750 | \$753 | \$759 | \$782 |
| Kentucky Power Company | BBB- | bbb | $\mathrm{Ha3}^{2}$ | \$24 | \$35 | 542 | \$398 | \$432 | 5446 | S460 |
| Southwestern Electric Power Company | BBB- | 日BB | Baas | \$114 | \$143 | 5161 | \$1,249 | \$1,524 | \$1,667 | \$1,813 |
| Nevada Power Company | B8 ${ }^{+}$ | 88+ | Baa ${ }^{\text {a }}$ | \$134 | \$186 | \$133 | \$2,62s | \$2,650 | \$2,762 | \$2,849 |
| Sierra Pacific Power Company | BR + | BB+ | Baa3 | \$73 | \$72 | \$60 | \$878 | \$1,009 | \$973 | \$975 |
| Tucson Electric Power Company | $\mathrm{BB}+$ | B8+ | Ba3 ${ }^{\text {a }}$ | 591 | S108 | S85 | \$584 | \$643 | 5710 | 5825 |
|  |  |  | Minamum | 50 | 831 | \$1 | 50 | \$0 | \$309 | \$336 |
|  |  | 25th | Percentle. | \$73 | 578 | \$92 | \$750 | \$779 | \$837 | 5884 |
|  |  |  | Median: | \$165 | \$164 | \$162 | 52,138 | \$2,175 | \$2,271 | \$2,461 |
|  |  |  | Average | \$236 | \$272 | \$253 | \$2,369 | \$2,656 | \$2.925 | \$3,016 |
|  |  |  | Percentile | \$301 | \$408 | \$351 | 53,412 | \$3.763 | \$4,089 | \$4,178 |
|  |  |  | Maximum: | \$1,250 | \$1,121 | \$845 | 59,529 | \$10,927 | \$11.463 | \$12,126 |
| The Dayton Power and Light Company | B8B- | BDB- | Baaz | \$259 | \$278 | \$193 | \$1,475 | \$1,403 | \$1,380 | \$1,358 |

[^26]
## BEFORE THE

## PUBLIC UTILITIES COMMISSION OF OHIO

THE DAYTON POWER AND LIGHT COMPANY

CASE NO. 12-426-EL-SSO
CASE NO. 12-427-EL-ATA
CASE NO. 12-428-EL-AAM
CASE NO. 12-429-EL-WVR
CASE NO. 12-672-EL-RDR

ELECTRIC SECURITY PLAN (ESP) DIRECT TESTIMONY OF CLAIRE E. HALE

[^27]
## BEFORE THE

## PUBLIC UTILITIES COMMISSION OF OHIO

ELECTRIC SECURITY PLAN (ESP)<br>TESTIMONY OF<br>CLAIRE E. HALE

## ON BEHALF OF <br> THE DAYTON POWER AND LIGHT COMPANY

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III. RELIABILITY PRICING MODEL ..... 12
IV. SCHEDULES AND WORKPAPERS ..... 14
v. CONCLUSION. ..... 17

## I. INTRODUCTION

Q. Please state your name and business address.
A. My name is Claire E. Hale. My business address is 1065 Woodman Drive, Dayton, OH 45432.
Q. By whom and in what capacity are you employed?
A. I am employed by The Dayton Power and Light Company ("DP\&L" or "Company") as a Rate Analyst.
Q. How long have you been in your present position?
A. I assumed my present position in January 2011.
Q. What are your responsibilities in your current position and to whom do you report?
A. In my current position, I am responsible for assisting in the development, analyses, revision, and administration of the Company's tariff schedules, rate designs, and policies. I have responsibility for the Transmission Cost Recovery Rider and the Reliability Pricing Model Rider. I report to the Supervisor of Regulatory Operations.
Q. Will you describe briefly your educational and business background?
A. I received a Bachelor of Science degree in Mathematics from The Ohio State University in June 2008. Prior to my position at DP\&L, I was a Technical Analyst at Accenture. There I worked on the Service Oriented Architecture Team providing client support on middleware applications.
Q. What is the purpose of your testimony?
A. The purpose of my testimony is to support and explain the Company's Transmission Cost Recovery Rider (TCRR) and its Reliability Pricing Model (RPM) Rider. Specifically, I will describe the separation of market-based and non-market-based transmission-related costs into two TCRR riders, the bypassable TCRR-B and the non-bypassable TCRR-N. I will also explain how these riders will be implemented during the ESP.

## Q. What is Case No. 12-672-EL-RDR?

A. Case No. 12-672-EL-RDR is the complete TCRR filing for the proposed TCRR-N rates. This filing is intended to provide all schedules and workpapers that are required by OAC §4901:1-36-03 for developing and implementing a TCRR rate.
Q. What Schedules and Workpapers are you supporting?
A. I am supporting the following Schedules and Tariffs in Case No. 12-426-EL-SSO:

Schedule 2A, 2A-1, 2A-2 - TCRR Rate Adjustments
Schedule 2C-RPM Rate Adjustments
Schedule 7C - TCRR-N Rates
Tariff Sheet No. T14 Transmission Cost Recovery Rider - Non-Bypassable (TCRR-N)

Tariff Sheet No. T15 Transmission Cost Recovery Rider - Bypassable (TCRR-B)
Tariff Sheet No. G27 PJM RPM Rider
Additionally, I am supporting all of the Schedules, Workpapers, and Tariffs in Case No. 12-672-EL-RDR.

## II. TRANSMISSION COST RECOVERY

## Q. Please describe the Company's current methodology for cost recovery of transmission and transmission-related costs.

A. The Company currently has Tariff Sheet No. T15 Transmission Cost Recovery Rider (TCRR), which was originally approved by the Commission on May 27, 2009 in Case No. 09-256-EL-UNC. This rider recovers all transmission and transmission-related costs, net of certain transmission-related revenues, charged to the Company by PJM, the approved regional transmission organization (RTO) of which DP\&L is a member. This rider is bypassable and reconciled annually, with filings made in February for rates effective in May. The current TCRR rates in effect were approved by the Commission in Case No. 12-524-EL-RDR on April 25, 2012 for rates effective May 2012 - April 2013.
Q. Please describe how the Company proposes to continue cost recovery of transmission and transmission-related costs.
A. The Company plans to separate the cost components of the TCRR into market-based and non-market-based subsets and to recover these costs separately. A similar construct was approved by the Commission for FirstEnergy Corporation and Duke Energy Ohio in Case Nos. 10-388-EL-SSO and 11-2641-EL-RDR, respectively. A new rider, TCRR-N, will be established that will recover network integration transmission services (NITS), Regional Transmission Expansion Plan (RTEP), and other non-market-based FERC/RTO charges. The current TCRR will become TCRR-B and will include the remaining ancillary and market-based charges from PJM that are billed directly to the load-serving entity (LSE) in proportion to the load being served.

## Q. Why is it reasonable to implement NITS through a non-bypassable charge?

A. Currently the Company charges NITS costs to standard service offer (SSO) customers, while CRES providers pay DP\&L (through PJM) for NITS to deliver energy to the retail customers that they serve. NITS, therefore, already functions as a non-bypassable charge. With the proposed TCRR-N, these charges will be paid by the Company to PJM for all shopping and SSO load, and therefore will be recovered from all customers in the Company's non-bypassable rider.

## Q. What other charges will be included in the TCRR-N?

A. As stated above, the Company also proposes to recover RTEP and other non-marketbased costs via this rider. These costs are billed to the Company under tariffs approved by FERC and recover operational costs for various services provided through PJM. Therefore it is reasonable that these costs should be billed to DP\&L for all shopping and SSO load and recovered on a non-bypassable basis. I have reviewed each PJM bill line item and determined that, in addition to NITS and RTEP, the following charges are non-market-based and should be included in the TCRR-N: PJM Scheduling, System Control, and Dispatch Service; Transmission Owner Scheduling, System Control, and Dispatch Service; Reactive Supply and Voltage Control; Black Start Service; NERC and RFC; Expansion Cost Recovery; Load Response Charge Allocation; Generation Deactivation; and Michigan-Ontario Interface Phase Angle Regulators. Additionally, Firm Point-ToPoint credits to customers in the AEP zone, Non-Firm Point-To-Point credits, and Incremental Capacity Transfer Rights credits are non-market-based and should be included in the TCRR-N. Since the PJM environment changes frequently, there may be
new non-market-based costs that are billed to the Company by FERC or PJM. To the extent that these new fees or charges are appropriate for inclusion in the TCRR-N, DP\&L will seek approval from the PUCO for recovery of these charges.

## Q. How will the non-bypassable charge TCRR-N benefit customers?

## A. When the Company becomes responsible for these costs for all customers, DP\&L

 removes the requirement for wholesale or retail suppliers to include them in their product. Excluding these costs should lower the generation price that suppliers charge to their customers. Additionally, moving these costs to a non-bypassable charge should cause less variation in the price to compare, making it easier for customers to compare offers from alternative retail electric generation suppliers.
## Q. Is TCRR-N supported by statute?

A. Yes. TCRR-N is founded in ORC $\S 4928.05(\mathrm{~A})(2):$
"[C]ommission authority under this chapter shall include the authority to provide for the recovery, through a reconcilable rider on an electric distribution utility's distribution rates, of all transmission and transmission-related costs, including ancillary and congestion costs, imposed on or charged to the utility by the federal energy regulatory commission or a regional transmission organization, independent transmission operator, or similar organization approved by the federal energy regulatory commission."

In addition, it is authorized by ORC $\$ 4928.143(\mathrm{~B})(2)(\mathrm{g})$.

## Q. Can you please expand on why Rider TCRR-B is reasonable within the ESP environment?

A. As explained in Witness Seger-Lawson's testimony, DP\&L will employ a Competitive Bidding Process (CBP) to supply an increasing portion of the Company's SSO load throughout the blending period. For purposes of this testimony, unless otherwise modified, the term "SSO load" refers to only DP\&L's retail load obligation. All marketbased services from PJM will be included in the CBP and wholesale suppliers will become the LSE for their portion of the competitively bid load. DP\&L will also continue to provide ancillary and market-based services through PJM for the remaining SSO load that it serves through the TCRR-B. Because responsibility for these services will shift from DP\&L to winning bidders as more of DP\&L's SSO load is included in the CBP, DP\&L proposes to include TCRR-B in the rate blending process. This appropriately phases out DP\&L's market-based tariff during the ESP, and more importantly, guarantees that the total blended SSO rate is a reasonable blend of comparable products.

## Q. When and how will the new riders TCRR-B and TCRR-N initially be implemented?

A. The separation of TCRR costs will begin January 1, 2013, at which point TCRR-N and TCRR-B will supersede the current TCRR. At that time, the current TCRR rate will be adjusted down to remove the non-market-based costs. In order to calculate the level of these non-market-based costs, the market-based charges shown in Case No. 12-524-EL-RDR are set to zero, which creates a non-market-based rate that can then be removed from the total proposed TCRR rate. The remaining rate, TCRR-B, will be included in the rate blending process. With regard to the non-market-based costs, DP\&L
includes in this application the appropriate schedules and workpapers, pursuant to OAC §4901:1-36-03, to set new rates for TCRR-N for the period January 1, 2013 - May 31, 2013. These rates were reset for January 1, 2013 to reflect the applicable forecasted costs and sales for all distribution load.

## Q. Will the sum of the TCRR-B rates and the TCRR-N rates be equal to the current TCRR rate? Why or why not?

A. No. While the TCRR-B rate is created directly off of the TCRR rate, the TCRR-N rate must now be calculated on all distribution load. The cost for each customer class per kWh or kW can vary depending on the type of customers included in the calculation. Therefore the non-market-based charges included in the TCRR-N must be forecasted and allocated across classes and energy/demand differently than when these same charges were forecasted and allocated on a bypassable basis in the TCRR.

## Q. When and how will TCRR-N be trued-up?

A. DP\&L plans to place all PJM-related riders on the same annual audit schedule, which will match up with the RPM June $1^{\text {st }}-$ May $31^{\text {st }}$ delivery year. Therefore DP\&L proposes to file a true-up application on March 15 each year with rates effective on a bills-rendered basis beginning June 1. As before, the annual true-up process for Rider TCRR-N will be subject to audit by the PUCO. This annual filing, beginning March 15 , 2013 for rates effective June 1, 2013, is intended to meet all of the requirements in OAC §4901:1-36-03 and will reconcile the applicable jurisdictional costs and revenues from PJM with the rider revenue received from customers. Projected costs for each true-up period will be categorized based on energy, demand, or reactive demand. An adjustment
for previous under- or over-collection will be applied proportionately to the energy and demand costs. Total energy costs will be allocated to each tariff class based on forecasted energy components, while demand and reactive demand costs will be allocated to tariff classes based on the Company's 1 or 12 Coincident Peak (CP) as applicable. Finally, these costs will be divided by the applicable projected distribution billing determinants ( $\mathrm{kWh}, \mathrm{kW}, \mathrm{kVar}$ ) per tariff class to create TCRR-N rates for each class.

## Q. When and how will TCRR-B be trued-up?

A. Because TCRR-B recovers prudently incurred ancillary service costs, this rate will continue to be adjusted throughout the blending period to account for known and measurable changes in costs. DP\&L will continue to employ its existing true-up methodology but on a seasonal quarterly basis.

## Q. Can you describe the TCRR-B true-up process in more detail?

Yes. DP\&L will forecast allocated charges from PJM as well as its share of projected SSO sales for each quarterly period. Additionally, DP\&L will calculate any over- or under-recovery from the previous periods. The PJM charges and over- or under-recovery will be classified as demand or energy components and then allocated across tariff classes by the Company's 1 or 12 CP or by projected sales. These allocated costs will be divided by the DP\&L-supplied portion of the forecasted SSO billing determinants to result in TCRR-B demand and energy rates per tariff class. Lastly, these rates will be multiplied by the applicable ESP blend percent. This calculation ensures that SSO customers are appropriately charged the blended amount for this legacy ESP rate. Finally, the TCRR-B will be implemented on a bills-rendered basis and will be subject to an annual audit by
the PUCO.
Q. How will the charges and credits that DP\&L receives from PJM change with a CBP, and what impact will that have on the TCRR-B calculations?
A. DP\&L classifies its market-based charges from PJM in two categories: load-based and generator-based. These categories describe how and why these charges are billed to DP\&L and consequently how DP\&L assigns these costs to customers. The winning bidders of the CBP will be billed directly by PJM for any load-based costs in proportion to the amount of load that they serve. As an increasing percentage of SSO load is served via CBP, the amount of load-based costs billed to DP\&L for the remaining SSO load should decrease proportionately. Because DP\&L acts as the LSE for SSO load that it continues to serve and for DPL Energy Resources (DPLER) customers, any load-based charges will continue to be allocated to SSO customers using a Retail/DPLER ratio. The Retail/DPLER energy ratio is calculated by SSO MWh / (SSO MWh + DPLER MWh), while the Retail/DPLER demand ratio is determined by SSO MW / (SSO MW + DPLER MW). As more SSO load is included in the CBP, this ratio will be adjusted, assigning fewer and fewer costs to SSO load.

Conversely, DP\&L's generator-based charges from PJM will not decrease inherently with the blending percent. These charges are billed to DP\&L based on the Company's monthly generation levels, which will not change with the implementation of a CBP (all else being equal). This is because DP\&L currently bids in all its generation to the PJM market and buys back what is required to serve its SSO and DPLER load. The difference either becomes wholesale sales or purchased power. With the implementation of a CBP,

DP\&L will purchase $10 \%$ less from the market for SSO load and should therefore increase its wholesale sales by the same amount. Generator-based charges are currently allocated to SSO customers using a Retail/Wholesale ratio that is calculated by SSO MWh / (SSO MWh + DPLER MWh + Wholesale MWh). As explained above, as more SSO load is included in the CBP, retail sales will decrease and wholesale sales should increase. This formula effectively reduces the Retail/Wholesale allocator by the same percent as the CBP load. Applying this reduced allocator to the generator-based charges properly assigns costs to SSO customers based on a diminishing proportion of SSO load served by the utility.

## Q. Do any charges in the TCRR-B require a different or additional allocator?

A. Yes. The charges related to the purchase of Financial Transmission Rights (FTR), including FTR Auction charges/credits as well as Transmission Congestion credits, will additionally be allocated based on a new LSE allocator for the period January - May 2013. DP\&L purchased FTRs in April 2012 for the June 2012 - May 2013 delivery year based on the Company's total SSO and DPLER load. These charges remain with the FTR holder and will not reduce with a CBP. Currently DP\&L allocates these charges/credits using the Retail/DPLER energy split, and then shares this FTR risk/reward with SSO customers at a Shareholder/Customer split of 25/75. Although the level of FTR charges/revenues will not change until the 2013 FTR Auction, a lower proportion of these charges/revenues will be applicable to SSO customers after the implementation of the CBP. Therefore, for the period of January - May 2013, DP\&L will use a LSE/SSO allocator to determine the level of SSO FTR charges/revenues to pass through to customers. This allocator is calculated by [SSO MWh + DPLER MWh] /
[(SSO MWh / 90\%) + DPLER MWh]. The SSO FTR charges/revenues will then be calculated by multiplying the total FTR charges/revenues by the Retail/DPLER energy allocator, the $75 \%$ share, and the LSE/SSO allocator to provide the appropriate level of FTR risk and reward that will be shared with customers. Beginning June 2013, DP\&L will purchase FTRs at a reduced level to correspond with DP\&L's reduced SSO load. For each period thereafter, the amount of SSO load that DP\&L serves will reduce at the start of each PJM delivery year and therefore with the FTR holding period as well. Consequently, the LSE/SSO allocator will no longer be needed as of June 2013, as the Retail/DPLER energy allocator will suffice.

## Q. Is there a simple way to see how these allocators will work?

A. Yes. Please refer to the simplified numeric example provided in Exhibit CEH-1 attached to my testimony. This example illustrates how the Retail/DPLER, Retail/Wholesale, and LSE/SSO allocators are calculated and used to assign charges or credits to SSO customers.

## Q. Is DP\&L forecasting any other changes to the TCRR-B rate?

A. The rate should continue to decrease with the Company's portion of the SSO load, barring any unforeseen changes in the market-based products or costs. Beginning June 2016, 100\% of DP\&L's SSO load will be served via CBP. At that point DP\&L's TCRR-B rate will be set to zero. The final true-up of any remaining over- or underrecovery will be included in the Reconciliation Rider, Tariff Sheet No. D29, as discussed by Company Witness Rabb.

## III. RELIABILITY PRICING MODEL

## Q. Please describe the Company's current methodology for recovery of capacityrelated costs.

A. The Company currently has Tariff Sheet No. G27 PJM Reliability Pricing Model (RPM) Rider, which was originally approved by the Commission on May 27, 2009 in Case No. 09-256-EL-UNC, and was made a separate rider by Order of the Commission on November 18, 2009. This rider recovers capacity-related costs, net of capacity-related revenues, charged to the Company by PJM. Currently this rider is bypassable and reconciled annually. The RPM rates currently in effect were approved by the Commission in Case No. 12-524-EL-RDR on April 25, 2012 for rates effective May 2012 - April 2013.
Q. Please describe the role of capacity and the RPM rider during the ESP.
A. Winning bidders of the CBP will provide capacity for their portion of the competitively bid load. DP\&L will also continue to provide capacity through the PJM RPM market for the remaining SSO load that it serves. Therefore, as discussed in Company Witness Seger-Lawson's testimony, the RPM rider will be included as part of the rate blending process. Because the RPM rider recovers prudently incurred capacity costs, this rate will continue to be adjusted throughout the blending period to account for known and measurable changes in costs. DP\&L will continue to employ its existing true-up methodology but on a seasonal quarterly basis. To initially implement the RPM Rider in the ESP, the current RPM rates will be multiplied by the applicable ESP blend percentage. The resulting rate will then be included in the rate blending process on a
bills-rendered basis and will remain bypassable.

## Q. How does DP\&L propose to true-up the RPM rider?

As in its current true-up methodology, DP\&L will forecast allocated charges and credits from PJM as well as its share of projected SSO sales for each quarterly period. Additionally, DP\&L will calculate any over- or under-recovery from the previous periods. The netted PJM RPM charges and credits and over- or under-recovery will be allocated across tariff classes by the Company's 5 CP . These allocated costs will then be divided by the DP\&L-supplied portion of the forecasted SSO billing determinants by tariff class to result in RPM rates per tariff class. The final step to producing tariffed rates will be to multiply the rates by the applicable blend percent. Similar to the other true-up riders, the RPM Rider will be subject to an annual audit by the PUCO.
Q. Can you describe in more detail how the capacity-related charges and credits from PJM will be handled in the RPM rider going forward?
A. Yes. DP\&L anticipates that RPM charges may increase/decrease in response to two factors: the RPM price, and DP\&L's monthly load. After a drop to $\$ 16.46$ in the 20122013 delivery year, the RPM clearing price increases to approximately $\$ 27.73$ and $\$ 125.94$ for the 2013-2014 and 2014-2015 delivery years, respectively. This price has a direct impact on the level of capacity charges assessed to SSO customers, and DP\&L will experience increased charges as the price rises. Conversely, as an increasing portion of the SSO load is included in the CBP, DP\&L's SSO load obligation will decrease, and therefore the amount of capacity-related charges which it receives from PJM should decrease as well. Because DP\&L will continue to act as the LSE for both SSO load and

## IV. SCHEDULES AND WORKPAPERS

Q. Are you responsible for Schedules 2A, 2A-1, 2A-2, and 2C? If so, what is contained in those schedules?
A. Yes. Schedule 2A-1 calculates the rate adjustment required to remove any non-marketbased products from the TCRR rate as it is shown in Case No. 12-524-EL-RDR. Schedule 2A-2 shows how this adjustment affects the max charge rates for TCRR. Schedule 2A summarizes the results of Schedule 2A-1 to show the total adjustment to the TCRR rate. Schedule 2C shows that the Company is not proposing any adjustments to its PJM RPM Rider rate.
Q. What is the source of the information shown on Schedules $2 \mathrm{~A}, 2 \mathrm{~A}-1,2 \mathrm{~A}-2$, and 2 C ?
A. The information on these schedules was developed from Case No. 12-524-EL-RDR, which references both accounting records and Company projections.
Q. Can you describe the process that you used to calculate the figures shown on Schedule 2A-1?
A. Yes. I started with Schedule C-3a from Case No. 12-524-EL-RDR, which shows the development of the base TCRR rates. Then I classified each line item as market-based or non-market-based, since this classification determines whether they remain in the bypassable TCRR-B rate or if they will move to the non-bypassable TCRR-N. All market-based charges, with the exception of the Synchronous Condensing charge, were then set to zero, leaving only the projected non-market-based costs. The resulting rate is the adjustment that is used to reduce the proposed TCRR rate to the market-based TCRR-B rate.
Q. Why is an exception made for the Synchronous Condensing charge?

The Synchronous Condensing charge is treated differently due to a change in its billing
classification. In the TCRR, this line item is classified as a Reactive Demand component because it compensates synchronous condensers for their reactive-based services. However, it is billed to DP\&L on a real-time load (energy) basis. With the separation of costs into the TCRR-B and TCRR-N, the primary share of DP\&L's reactive charge, Reactive Supply and Voltage Control, will essentially function as a distribution charge for reactive demand. Leaving the nominal Synchronous Condensing charge as a bypassable reactive demand charge is simply redundant. Therefore it is more reasonable to eliminate the kVar charge in the TCRR-B and move Synchronous Condensing to an Energy component in that rider. To illustrate this adjustment in Schedule 2A-1, this line item is shown as a charge that will be removed from the Reactive Demand rate (by increasing the non-market-based adjustment) and added to the Energy rate (by reducing the non-market-based adjustment).

## Q. Are the results of the calculation reasonable?

A. Yes. This schedule shows what portion of the current TCRR rate is due to non-marketbased charges. Simultaneously it makes an adjustment for the re-classification of PJM's Synchronous Condensing charge. By making this modification and removing the non-market-based portion, the remaining rate reflects only the fully bypassable, market-based charges.

## Q. Are you responsible for Schedule 7C? If so, what is shown on that schedule?

A. Yes. Schedule 7C shows the proposed TCRR-N rate by tariff class. These rates are calculated via the schedules submitted in Case No. 12-672-EL-RDR.
Q. Are you responsible for all of the Schedules and Workpapers in Case No. 12-672-EL-RDR? If so, what is contained on those schedules?
A. Yes, it does.

# The Dayton Power and Light Company 

Case Nos. 12-426-EL-SSO, 12-672-EL-RDR
TCRR and RPM Allocator Examples
Data: For Illustrative Purposes Only
Exhibit CEH-1
Type of Filing: Revised
Page 1 of 1
Work Paper Reference No(s).: None
Witness Responsible: Clairc E. Hale

## FOR ILLUSTRATIVE PURPOSES ONLY

| Line | Description | Aliocators \& Charges Prior to Compctitive Bidding (CB) |  | Allocators \& Charges Post Competitive Bidding |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (A) | (B) | (C) | (D) | (E) | (F) |
| 1 | Load(MWh) ${ }^{1}$ | Prior to CB | Source | Post CB | Source |
| 2 | SSO Load | 100 | Illustrative | 90 | 90\% * $\mathrm{Col}(\mathrm{C})$ |
| 3 | DPLER Load | 50 | Ilhustrative | 50 | $\mathrm{Col}(\mathrm{C})$ |
| 4 | Wholesale Load | 20 | Hlustrative | 30 | $\mathrm{Col}(\mathrm{C})+[\mathrm{Col}(\mathrm{C})$ Line $2-\mathrm{Col}(\mathrm{E})$ Line 2 $]$ |
| 5 |  |  |  |  |  |
| 6 | Total Charges at \$1/MWh |  |  |  |  |
| 7 | Load-Based Charges | \$150.00 | Line $2+$ Line 3 | \$140.00 | Line 2 - Line 3 |
| 8 | Generator-Based Charges | \$170.00 | Sum (Lines 2 thru 4) | \$170.00 | Sum (Lines 2 thru 4) |
| 9 | FTR Charges ${ }^{2}$ | \$150.00 | Line $2+$ Line 3 | \$150.00 | $\mathrm{Col}(\mathrm{C})$ Line $2+\mathrm{Col}(\mathrm{C})$ Line 3 |
| 10 |  |  |  |  |  |
| 11 | Allocators |  |  |  |  |
| 12 | Retai/DPLER | 66.7\% | Line $2 /$ (Line $2+$ Line 3) | 64.3\% | Line 2 / (Line 2 + Line 3) |
| 13 | Retail/Wholesale | 58.8\% | Line 2 / Sum (Lines 2 thru 4) | 52.9\% | Line 2 / Sum (Lines 2 thru 4) |
| 14 | LSE/SSO | 100.0\% | (Line $2+$ Line 3)/[(Line 2/100\%) + Line 3] | 93.3\% | (Line $2+$ Line 3) $/[($ Line $2 / 90 \%)+$ Line 3] |
| 15 | Customer Share | 75.0\% | Commission Order in Case No. 09-256-EL-UNC, Dated May 27, 2009, Page 5, Paragraph (17) | 75.0\% | Commission Order in Case No. 09-256-EL-UNC, Dated May 27, 2009, Page 5, Paragraph (17) |
| 16 |  |  |  |  |  |
| 17 | Allocated Charges |  |  |  |  |
| 18 | Load-Based Charges | \$100.00 | Line 7* Line 12 | \$90.00 | Line 7 * Line 12 |
| 19 | Generator-Based Charges | \$100.00 | Line 8* Line 13 | \$90.00 | Line 8* Line 13 |
| 20 | FTR Charges | \$75.00 | Line 9* Line 12 * Line 14 * Line 15 | \$67.50 | Line 9 * Line 12 * Line 14 * Line 15 |
| 21 |  |  |  |  |  |
| 22 | ${ }^{1}$ The same illustrative example can be used with MW for SSO and DPLER Load. |  |  |  |  |
| 23 | ${ }^{2}$ FTR Charges will not change with the implementation of a CB Process since they are purchased in April for the June - May Delivery Year. |  |  |  |  |

# BEFORE THE <br> PUBLIC UTILITIES COMMISSION OF OHIO 

THE DAYTON POWER AND LIGHT COMPANY<br>CASE NO. 12-426-EL-SSO<br>CASE NO. 12-427-EL-ATA<br>CASE NO. 12-428-EL-AAM<br>CASE NO. 12-429-EL-WVR<br>CASE NO. 12-672-EL-UNC

ELECTRIC SECURITY PLAN (ESP) DIRECT TESTIMONY OF PHILIP R. HERRINGTON

- MANAGEMENT POLICIES, PRACTICES, AND ORGANIZATION
- OPERATING INCOME
- RATE BASE
- ALLOCATIONS
- RATE OF RETURN
- RATES AND TARIFFS

O OTHER

## BEFORE THE

## PUBLIC UTILITIES COMMISSION OF OHIO

> ELECTRIC SECURITY PLAN (ESP) DIRECT TESTIMONY OF

PHILIP R. HERRINGTON

ON BEHALF OF THE DAYTON POWER AND LIGHT COMPANY

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## I. INTRODUCTION

Q. Please state your name and business address.
A. My name is Phil Herrington. My business address is 1065 Woodman Drive, Dayton, Ohio 45432.
Q. By whom and in what capacity are you employed?
A. I am President and Chief Executive Officer of DPL Inc., the parent company of The Dayton Power and Light Company ("DP\&L" or "Company"), and President and Chief Executive Officer of DP\&L.
Q. How long have you been in your present position?
A. I assumed my present position in March 2012. Prior to that, I was President of AES Global Wind Generation.
Q. Will you describe briefly your educational and business background?
A. I received a B.S. degree in Chemical Engineering from the University of California at Santa Barbara in 1985 and a Masters in Business Administration from the University of Southern California Marshall School of Business in 1997. Before joining AES, I spent seventeen years at Edison Mission Energy, a subsidiary of Califormia based Edison International, in various leadership positions in development, asset management and engineering involving technologies including natural gas, wind and geothermal power generation. Prior to that, I was a project manager with Monsanto Chemical's engineering group, and before then, served as a naval officer aboard nuclear submarines.
Q. What are the purposes of this testimony?
A. The purposes of this testimony are to: (1) provide an overview of DP\&L's Electric Security Plan ("ESP") filing; and (2) demonstrate that DP\&L's ESP filing promotes the policies of the State of Ohio.

## II. OVERVIEW OF FILING

Q. Will you provide an overview of DP\&L's ESP filing?
A. Yes. DP\&L proposes an ESP pursuant to Ohio Rev. Code § 4928.143. Under DP\&L's ESP, DP\&L's base generation rate would be a blend of DP\&L's existing base generation rates and rates set through a competitive bidding process. The blending percentages that DP\&L proposes are:

| Date | Existing Rates | Competitive Bid |
| :--- | :---: | :---: |
| January 1, 2013 - May 31, 2014 | $90 \%$ | $10 \%$ |
| June 1, 2014 - May 31, 2015 | $60 \%$ | $40 \%$ |
| June 1, 2015 - May 31, 2016 | $30 \%$ | $70 \%$ |
| June 1, 2016 | $0 \%$ | $100 \%$ |

DP\&L's Rate Blending Plan is sponsored by Company Witness Dona Seger-Lawson.
DP\&L's competitive bidding plan is sponsored by Company Witness Robert Lee.
Q. Does DP\&L seek a nonbypassable charge that would permit DP\&L to stabilize and provide continuity regarding retail electric service?
A. Yes, DP\&L seeks a nonbypassable Service Stability Rider (SSR) of $\$ 120$ million per year during the ESP period to permit it to provide stable electric service. In the Commission's recent decision in AEP's ESP case, the Commission set a "reasonable revenue target that would allow AEP-Ohio an opportunity to earn somewhere within the seven to eleven percent range. ${ }^{11}$ As explained in the testimony of Company Witness William Chambers (who sponsors DP\&L's request for the SSR), an annual $\$ 120$ million SSR would give DP\&L an opportunity to earn a reasonable ROE.

## Q. Can you describe the interests that DP\&L considered as DP\&L established the terms and conditions of its ESP?

A. Yes. In considering the terms and conditions of the ESP filing, DP\&L sought to balance the interests of customers, non-customer intervenors, and the Company. The goal of the filing is to allow DP\&L the opportunity to maintain its financial integrity with the opportunity to earn a reasonable rate of return, while balancing the interests of other intervening parties. DP\&L's ESP filing strikes an appropriate balance among those interests, since it will allow DP\&L to maintain its financial integrity (as explained in Company Witness Chambers' testimony) while providing for competitive bidding on a timeline that is faster than the timeline authorized under the Market Rate Offer (MRO) statute (Ohio Rev. Code $\S 4928.142$ ).
Q. Does DP\&L's ESP filing address the transfer of generation assets?

[^28]A. Yes. As explained in Company Witness Sobecki's testimony, DP\&L agrees make a separate application by December 31, 2013 to accomplish the transfer of its generation assets. In this subsequent application, DP\&L expects to request that the Commission authorize DP\&L to transfer its generation assets by no later than December 31, 2017.

## Q. Does DP\&L's ESP filing promote competition?

A. Yes. As explained in the testimony of Company Witness Dona Seger-Lawson, DP\&L's ESP filing contains six new provisions that will make it easier for CRES providers to do business in DP\&L's certified territory.
Q. Does DP\&L's ESP filing pass the "more favorable in the aggregate" test required by Ohio Revised Code §4928.143(C)(1)?
A. Yes. Company Witness Jeff Malinak supports the Company's determination that this ESP plan is more favorable in the aggregate that what would otherwise apply under an MRO.

## III. ADVANCEMENT OF STATE POLICIES

Q. Are you familiar with the state policies contained in Ohio Revised Code § 4928.02?
A. Yes, I have studied the policies and I am familiar with them.
Q. Does DP\&L's ESP filing advance those policies, and if so, how?
A. Yes, it does. As described below, DP\&L's ESP filing advances many of the ORC $\S 4928.02$ policies. There are some policies in ORC $\S 4928.02$ that are unrelated to DP\&L's ESP filing (e.g., those relating to transmission and distribution) that my
testimony does not address; DP\&L's ESP filing is consistent with those policies, as the filing does not adversely affect the achievement of those policies.
Q. Section 4928.02(A) states that it is the policy of the state to:
"Ensure the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service."

Does DP\&L's ESP advance that policy, and if so, how?
A. Yes. Through the ESP, DP\&L will procure generation to satisfy a portion of its Standard Service Offer (SSO) obligations through a competitive bidding process. DP\&L's customers should thus be assured of receiving reasonably priced retail electric service. Further, since only those suppliers that satisfy the financial and managerial criteria of DP\&L's Competitive Bidding Process (CBP) will be allowed to bid, the consumer can be assured that the generation will be adequate, reliable, safe, efficient and nondiscriminatory.
Q. Section 4928.02 (B) states that it is the policy of the state to:
"Ensure the availability of unbundied and comparable retail electric service that provides consumers with the supplier, price, terms, conditions, and quality options they elect to meet their respective needs."

Does DP\&L's ESP advance that policy, and if so, how?
A. Yes. Through DP\&L's ESP, SSO customers will receive generation through the CBP from the lowest bidder. Further, customers will retain the right to select any generation supplier from which they wish to buy.
Q. Section 4928.02(H) states that it is the policy of the state to:
"Ensure effective competition in the provision of retail electric service by avoiding anticompetitive subsidies flowing from a noncompetitive retail electric service to a competitive retail electric service or to a product or service other than retail electric service, and vice versa, including by prohibiting the recovery of any generation-related costs through distribution or transmission rates."

Does DP\&L's ESP advance that policy, and if so, how?
A. Yes. DP\&L's ESP filing advances this policy because DP\&L's filing describes its plan to transfer DP\&L's generation assets into a separate affiliate.
Q. Section 4928.02(I) states that it is the policy of the state to:
"Ensure retail electric service consumers protection against unreasonable sales practices, market deficiencies, and market power."

Does DP\&L's ESP advance that policy, and if so, how?
A. Yes. By conducting a competitive bidding process in which all qualified bidders are permitted to bid, DP\&L's ESP should ensure that its customers receive the best available market price. Further, the CBP will be conducted in accordance with Commission rules, and will be managed by an independent third party auction manager, so that there should be no unreasonable sales practices, market deficiencies or exercise of market power.
Q. Section 4928.02(L) states that it is the policy of the state to:

[^29]A. Yes. DP\&L's ESP protects at-risk populations by ensuring that they will receive the best available market price.
Q. Section $4928.02(\mathrm{~N})$ states that it is the policy of the state to:
"Facilitate the state's effectiveness in the global economy. In carrying out this policy, the commission shall consider rules as they apply to the costs of electric distribution infrastructure, including, but not limited to, line extensions, for the purpose of development in this state."

Does DP\&L's ESP advance that policy, and if so, how?
A. Yes. DP\&L's ESP will facilitate Ohio's effectiveness in the global economy by ensuring that Ohio businesses have access to market-based generation. In addition, competitive retail enhancements funded through DP\&L's ESP will reduce administrative barriers and transaction costs that potentially affect the opportunities for CRES providers to encourage customers to switch to competitive suppliers. The overall design of the ESP, which allows DP\&L to smoothly transition to market-based pricing, will have a positive influence on economic development initiatives in the state, enhancing Ohio's ability to compete in the global economy.

## IV. CONCLUSION

Q. Does this conclude your direct testimony?
A. Yes, it does.

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## PUBLIC UTILITIES COMMISSION OF OHIO

## THE DAYTON POWER AND LIGHT COMPANY

CASE NO. 12-426-EL-SSO
CASE NO. 12-427-EL-ATA
CASE NO. 12-428-EL-AAM
CASE NO. 12-429-EL-WVR
CASE NO. 12-672-EL-RDR

ELECTRIC SECURITY PLAN (ESP)

DIRECT TESTIMONY
OF ALDYN W. HOEKSTRA

- MANAGEMENT POLICIES, PRACTICES, AND ORGANIZATION
- OPERATING INCOME
- RATE BASE
- ALLOCATIONS
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## BEFORE THE

## PUBLIC UTILITIES COMMISSION OF OHIO

## ELECTRIC SECURITY PLAN (ESP)

DIRECT TESTIMONY<br>OF ALDYN W. HOEKSTRA

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## I. INTRODUCTION

Q. Please state your name and business address.
A. My name is Aldyn W. Hoekstra and my business address is 1065 Woodman Drive, Dayton, Ohio, 45432.
Q. By whom and in what capacity are you employed?
A. I am employed by The Dayton Power and Light Company ("DP\&L" or "Company") as Vice President, Merchant Portfolio Strategy.
Q. How long have you been in your present position?
A. I assumed my present position in July 2012.
Q. What are your responsibilities in your current position and to whom do you report?
A. In my current position, I report to the Senior Vice President, Competitive Market Services, and I have responsibility for managing the Company's Commercial Structuring function, which includes commodity pricing, deal structuring, portfolio management and term trading, portfolio analytics and business planning responsibilities.
Q. Will you describe briefly your educational and business background?
A. I received a Bachelor of Science degree in Industrial Engineering from Purdue University in 1987 and a Master of Science degree in Engineering-Economic Systems from Stanford University in 1988. I have over 20 years of industry and consulting experience, focusing on North American energy markets, strategy and economics. Prior to joining DP\&L, I spent over 15 years as a consulting energy economist with various firms, as well as 5
Q. Have you previously provided testimony before the Public Utilities Commission of Ohio ("PUCO" or the "Commission"), any other state commission, or the Federal Energy Regulatory Commission ("FERC")?
A. I have not previously provided testimony before the PUCO, but I have sponsored testimony before the California Public Utilities Commission (CPUC) and Public Utilities Commission of Nevada (PUCN) in the following matters:

- CPUC Application Nos. 90-08-066, 90-08-067, 90-09-001: Certificate of Public Convenience and Necessity for the California-Oregon Transmission Project; Testimony on behalf of Toward Utility Rate Normalization (1990)
- PUCN Docket Nos. 02-12046 through 02-12054: Applications of MGM Mirage, et. al., to purchase energy, capacity and/or ancillary services from a provider of new electric resources; Testimony on behalf of Sempra Energy Solutions (2003)
- PUCN Docket Nos. 02-12053 and 02-12054: Applications of MGM Mirage and Victoria Partners to purchase energy, capacity and/or ancillary services from a provider of new electric resources; Affidavit on behalf of MGM Mirage and Victoria Partners (2003)
- CPUC Rulemaking No. 06-02-012: Order Instituting Rulemaking to Develop Additional Methods to Implement the California Renewables Portfolio Standard Program; Testimony on behalf of the Alliance for Retail Energy Markets (2006)


## Q. What is the purpose of your testimony?

A. The purpose of my testimony is to support the baseline volumes for DP\&L distribution sales and DP\&L Standard Service Offer (SSO) sales used for the projections of financial and rate impacts supported by other DP\&L witnesses.

## Q. What Workpapers are you supporting?

A. I am supporting Workpaper 8A "Distribution Sales Baseline Volumes" and Workpaper
8B "SSO Sales Baseline Volumes."

## II. WORKPAPERS

Q. Are you responsible for Workpaper 8A? If so, please describe what is provided on
Workpaper 8A.
A. Yes. Workpaper 8A "Distribution Sales Baseline Volumes" shows actual, weathernormalized distribution sales volumes on the DP\&L system for calendar year 2011, differentiated by customer revenue class, and displayed as an annualized total and also by month.
Q. What is the source of the information shown on Workpaper 8A?
A. The information on Workpaper 8A contains historical distribution sales data obtained from the Company's accounting records, kept in the ordinary course of business, as adjusted to account for the impact on weather-sensitive customer usage of differences between actual weather conditions during 2011 and long-term average weather conditions, specifically Heating Degree Days (HDD) and Cooling Degree Days (CDD).
Q. How was the information contained on Workpaper 8A developed?
A. The information on Workpaper 8A was developed by adjusting recorded 2011 distribution sales through the use of statistical regression equations that the Company uses to adjust actual sales data for weather-sensitive customers based on the difference between normal and actual HDDs and CDDs.
Q. How is the information on Workpaper 8A used in the Company's filing?


#### Abstract

A. The information on Workpaper 8A is used by Company Witness Jackson for projections of the financial impacts of the Company's filing, by Company Witness Rabb to establish the rates for the Reconciliation Rider and to demonstrate how the Competitive Bidding Rate will be set, by Company Witness Parke to develop the Service Stability Rider, and by Company Witness Hale to establish the rates for the Transmission Cost Recovery Rider - Non-bypassable.


Q. Is the information provided on Workpaper 8A reasonable?
A. Yes, the distribution sales volumes shown in Workpaper 8 A reflect actual, weathernormalized distribution sales for the most recently-completed calendar year of 2011. As a result, these annualized and weather-normalized distribution sales baseline volumes provide a reasonable basis for the projections of financial and rate impacts of the Company's Application which are supported by other DP\&L witnesses.

## Q. Are you responsible for Schedule Workpaper 8B? If, yes, please describe what is provided on Workpaper 8B.

A. Yes. Workpaper 8B "SSO Sales Baseline Volumes" shows annualized SSO sales volumes, consistent with the distribution sales volumes shown on Workpaper 8A, differentiated by customer revenue class, and displayed as an annualized total and also by month.
Q. What is the source of the information shown on Workpaper 8B?
A. The information on Workpaper 8B was developed from the annualized and weathernormalized distribution sales volumes shown on Workpaper 8A, as adjusted to remove sales to customer accounts that were known to have switched from SSO service to retail electric generation service from a Competitive Retail Electric Service (CRES) provider as of August 30, 2012, the date Workpaper 8B was prepared. The identification of accounts known to have switched to CRES providers as of that date was obtained from the Company's customer information records, kept in the ordinary course of business.

## Q. How was the information contained on Workpaper 8B developed?

A. The information on Workpaper 8 B was developed by subtracting, from the distribution sales volumes shown on Workpaper 8A, the most recent 12 months' usage for accounts that had switched to CRES service as of August 30, 2012.

## Q. How is the information on Workpaper 8B used in the Company's filing?

A. The information on Workpaper 8 B is used by Company Witness Jackson for projections of the financial impacts of the Company's filing, by Company Witness Rabb to demonstrate how the Competitive Bidding Rate will be set, and by Company Witness Parke to demonstrate how the Competitive Bid True-up rate will be established on Schedule 7B.

## Q. Is the information provided in Workpaper 8B reasonable?

A. Yes, the SSO sales baseline volumes shown on Workpaper 8B reflect annualized and weather-normalized sales to the customer accounts that are being served under DP\&L's SSO tariff based on actual currently-known customer switching. As a result, these annualized and weather-normalized SSO sales baseline volumes provide a reasonable basis for the projections of financial and rate impacts of the Company's Application which are supported by other DP\&L witnesses.

## III. CUSTOMER SWITCHING

Q. What was the level of customer switching from the Standard Service Offer (SSO) tariff to Competitive Retail Electric Service ("CRES") suppliers in DP\&L's service territory as of the date Workpaper 8B was prepared?
A. As of August 30, 2012, the percentage of DP\&L distribution load, expressed on an annualized forward-looking basis as a percentage of the overall distribution sales volumes shown on Workpaper 8B, that has switched from the SSO tariff to CRES suppliers is:

- Residential $24.7 \%$
- Non-residential $84.0 \%$
- Total System: 61.7\%.
Q. In the most recent quarterly PUCO summary of switch rates from electric distribution utilities (EDU) shows that $18.37 \%$ of residential load, $\mathbf{8 3} \%$ of nonresidential load, and $\mathbf{5 8 . 5 7 \%}$ of overall load had switched from DP\&L to a CRES provider as of June 30, 2012. The data from this PUCO switching report is lower than the switching statistics you provided above-are both sets of numbers correct?
A. Yes, both sets of numbers are correct.
Q. If both sets of numbers are correct, how do you reconcile the differences between them?
A. The switching rates provided above as of August 30, 2012 include the annualized usage of customer accounts that were known to have switched to CRES service even if that CRES service may not have actually started. Thus, these numbers reflect switching rates expressed on an annualized, forward-looking basis, consistent with the baseline volumes for DP\&L distribution sales and DP\&L Standard Service Offer (SSO) sales provided in Workpaper 8A and Workpaper 8B, respectively. In contrast, DP\&L switching rates found in the quarterly PUCO report dated June 30, 2012 are based solely on sales billed in the month of June 2012. This data is reported as required by the PUCO. Therefore, the historical, backward-looking switching rates in the PUCO quarterly reports is a ratio derived by dividing CRES supplier sales from DP\&L distribution sales for billed meter reads that DP\&L recorded throughout the month of June 2012.
Q. What is the basis for the large switching level in non-residential customer load?
A. The switching level for non-residential customers is already high relative to residential switching because of early switching in non-residential sectors as a result of direct sales efforts by CRES providers since the current ESP was implemented in 2009.
Q. Does DP\&L expect switching rates to remain at the levels as of August 30, 2012?
A. No, DP\&L expects switching to increase as more residential and small commercial customers switch from the SSO tariff in the current environment of low market prices, whether in the form of "organic" switching by individual customer choice, or in the form of government aggregation.


## Q. What level of customer switching does DP\&L project over the term of the filed Electric Security Plan ("ESP")?

A. DP\&L projects that by the end of 2012 customer switching will increase to an annualized rate of $\square \%$ among residential customers, $\square \%$ among non-residential customers and \% overall for the DP\&L system, Projected switching rates at the end of subsequent years of the ESP term are provided in the table below.

Realized \& Projected Annualized Switching in DP\&L Territory*

| *as of year end | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Residential | $12.8 \%$ |  |  |  |  |  |  |
| Non-Residential | $77.8 \%$ |  |  |  |  |  |  |
| Overall | $53.0 \%$ |  |  |  |  |  |  |

## Q. What is the basis for DP\&L's expectation of increased residential switching?

A. These projected switching rates are based on an analysis of current and historical switching levels in the DP\&L service territory, combined with future projections that reflect these historical trends and projections of how the marketplace is expected to change over the ESP term. For example, increased competition for residential customers has led to an increase in the entry of additional third-party CRES suppliers into the residential marketplace, and simultaneously an increased level of switching among residential customer load. DP\&L's projection of increased residential switching is in part due to this observed increase in marketing and sales efforts directed towards residential customers, and an expectation that it will continue if the Company's ESP proposal in this case is approved as filed.
Q. Are you aware of any other factors that could provide additional opportunities for customer switching?
A. Yes, I believe that increased switching in the residential and small commercial sectors will be driven in part through increases in opt-out governmental aggregation programs conducted by communities that pass ballot initiatives to implement them. The chart below provides the forecasted growth in aggregation-derived and organically switched load as compared to the corresponding decline in load remaining on the SSO tariff. The chart
shows how switching is projected to increase due to the effects of communities
implementing opt-out government aggregation programs.

| Total Expected Aggregation Load (GWh) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2013 | 2014 | 2015 | 2016 | 2017 |
| Load Already Aggregated as of 8/30/2012 | 40 | 40 | 40 | 40 | 40 |
| Projected Cumulative Residential Switched Load due to Aggregation |  |  |  |  |  |
| Total |  |  |  |  |  |

1 IV. CONCLUSION
Q. Does this conclude your direct testimony?

3 A. Yes, it does.

## BEFORE THE

## PUBLIC UTILITIES COMMISSION OF OHIO

# THE DAYTON POWER AND LIGHT COMPANY 

CASE NO. 12-426-EL-SSO
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CASE NO. 12-428-EL-AAM
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ELECTRIC SECURITY PLAN (ESP) DIRECT TESTIMONY OF CRAIG L. JACKSON

- MANAGEMENT POLICIES, PRACTICES, AND ORGANIZATION
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## BEFORE THE

## PUBLIC UTILITIES COMMISSION OF OHIO

## ELECTRIC SECURITY PLAN (ESP) DIRECT TESTIMONY OF

## CRAIG L. JACKSON

ON BEHALF OF THE DAYTON POWER AND LIGHT COMPANY

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## I. INTRODUCTION

Q. Please state your name and business address.
A. My name is Craig Jackson and my business address is 1065 Woodman Drive, Dayton, Ohio, 45432.
Q. By whom and in what capacity are you employed?
A. I am employed by The Dayton Power and Light Company ("DP\&L" or "Company") as Senior Vice President and Chief Financial Officer.
Q. How long have you been in your present position?
A. I assumed my present position in May 2012.
Q. What are your responsibilities in your current position and to whom do you report?
A. In my current position, I report to the Company's President and Chief Executive Officer and have direct responsibility and oversight for the Company's accounting, tax, financial planning, treasury, risk management, and internal audit functions.
Q. Will you describe briefly your educational and business background?
A. I received a Bachelor of Science degree in Business Administration from Bloomsburg University in 1996. I also earned a Master of Business Administration degree in Finance from Wright State University in 2001.

I joined DP\&L in February 2000 as a Financial Analyst, Corporate Modeling. In December 2002, I accepted the position of Team Leader, ISO Settlements, with PPL Corporation. In June 2004, I returned to DPL as Manager, Financial Planning and
A. The financial results include the impact of customers that have switched as of August 30, 2012; however, the results do not include incremental organic switching after August 30, 2012. To the extent that additional switching occurs beyond the level at August 30, 2012, DP\&L's earnings and return on equity will be negatively impacted, unless the proposed switching tracker (described below) is adopted.

## Q. Explain the Company's justification for the service stability rider (SSR).

A. The amount and duration of the service stability rider is critical for the Company to maintain its financial integrity and to have the opportunity to earn a reasonable rate of return as described by Company Witness Chambers' testimony in this case. As shown on Exhibit CLJ-2, Line 45, the exclusion of the service stability rider would be disastrous for the Company as it would result in $\square$ (reaching $\square$ in 2017). Furthermore, if additional retail switching occurs beyond the August 30, 2012 level, then the $\square$ earnings profile will deteriorate further.

## III. FINANCIAL STATEMENTS

Q. Does DP\&L's Application comply with Ohio Administrative Code § 4901:1-35-03, and if so, how?
A. Yes. In seeking approval of the Electric Security Plan ("ESP"), the Company must meet certain filing requirements as described in OAC $\S 4901: 1-35-03$. These include the requirement that the Company provide pro forma financial projections for the filing period (2013-2017) as well as calculations of its projected return on equity for each year of the ESP. The code also requires balances sheet and income statement information along with the methodology and assumptions for these projections. DP\&L satisfies these requirements by providing financial projections including balance sheet, income
statements, cash flow statements and return on equity projections for every year of the ESP period (2013 through 2017). The projections are included in Exhibit CLJ-2, CLJ-3 and CLJ-4.

## Q. What methodology and associated processes were used to develop the pro forma financial statements?

A. The pro forma financial statements included in Exhibit CLJ-2, CLJ-3 and CLJ-4 reflect the projected financial impact of the Company's filed ESP and were developed consistent with the methodology and process used by the Company for preparing its normal operating forecast. This methodology is a "bottom up" approach to forecasting that requires input and assumptions from a variety of areas within the Company. The assumptions, which include distribution sales, Standard Service Offer ("SSO") sales, customer shopping, generation plant characteristics, commodity price curves, and fuel and operating cost projections, among others, are reviewed with the business areas to determine the most reasonable set of assumptions to be incorporated into the forecast. As we progress through the business year, we track and monitor actual results compared to the forecast. Based on actual results combined with potential changes in business and market conditions, the forecast is adjusted as needed. This process makes the forecast a reliable one.

## Q. What are the major components of in the financial forecast?

A. The inputs and assumptions received from the various areas within the Company are used to derive the following major components of the forecast:
(1) distribution baseline sales volumes and SSO baseline sales volumes;
(2) commodity price forecast;
(3) generation dispatch forecast;
(4) retail and wholesale revenue estimates;
(5) operations and maintenance expenses forecast; and
(6) capital expenditures forecast.

## Q. How are each of the above components developed?

A. The development and methodology for each of these major components are as follows:
(1) Distribution Sales and SSO Sales - The development of the distribution baseline sales volumes and SSO baseline sales volumes are described in Company Witness Hoekstra's testimony in this case.
(2) Commodity Price Forecast - The Company does not develop internal commodity price curve forecasts. We utilize publically available forward market curves in the Company's forecast.
(3) Generation Dispatch Forecast - The generation dispatch forecast, combined with forecasted energy purchases, is modeled to meet sufficiently the Company's anticipated total energy requirements. Based on a number of assumptions, including plant operational characteristics, planned outages, plant availability, variable costs, and forward market curves, we model, by generating unit, the estimated generation megawatt hours, the cost of fuel consumed, variable production costs, and costs associated with the operation of environmental equipment. In addition to fuel and other generation-related costs, we model and forecast purchased power costs.
(4) Retail and Wholesale Revenue Estimates - Retail revenue estimates for customers under DP\&L's SSO rates are developed by customer class. The retail revenues reflected in the Company's pro forma financials include existing tariff rates, adjustments to retail riders that are cost trackers (such as the fuel adjustment clause), the effects of the ESP (including the impact that the Competitive Bid Process has on retail rates), and the distribution baseline sales volumes and SSO baseline sales volumes described earlier.

Wholesale revenues estimates include: (a) known special contracts, which are developed according to the terms of the contracts; (b) known forward wholesale agreements, which are developed according to the terms of the agreements; and (c) spot market wholesale sales, which are not committed or known sales when the forecast is developed, but are projected based on forecasted generation output and expected wholesale market prices.

## (5) Operations and Maintenance ("O\&M") Expense Forecast - O\&M expenses are

 forecasted by (and reviewed with) all of the business areas within the Company. Underlying the O\&M forecast are assumptions for various items such as projected salary increases and inflationary factors. Each area's O\&M forecast includes staffing plans, labor costs, and other operational costs necessary to perform the functions of the specific area.(6) Capital Expenditures Forecast - Capital expenditures are forecasted by (and reviewed with) all of the relevant business areas within the Company, although a substantial portion of the forecast is driven by the Company's operational groups: Transmission; Distribution; and Generation. The forecast includes specific projects with estimated inservice dates as well as dollars allocated to fund smaller projects under a blanket capital


[^0]:    ${ }^{1}$ Opinion and Order in the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of an Electric Security Plan. Case No. 11-346-EL-SSO et. al., at 33.

[^1]:    ${ }^{2}$ The Switching Tracker is essentially a true-up mechanism designed to compensate DP\&L for lost revenues related to additional customer switching. For convenience, I refer to incremental switching that takes place absent approval of the Switching Tracker as "uncompensated switching" (or "uncompensated shopping").

[^2]:    ${ }^{4}$ The following description is based on my experience with Standard \& Poor's and published materials. See Standard \& Poor's, Corporate Ratings Criteria, 2008, at 16-19.

[^3]:    ${ }^{5}$ Standard \& Poor's, "2008 Corporate Criteria: Analytical Methodology," April 15, 2008, at 1.
    ${ }^{6}$ Standard \& Poor's, "New Business Profile Scores Assigned for U.S. Utility and Power Companies; Financial Guidelines Revised," June 2, 2004, at 10.

[^4]:    ${ }^{7}$ See, e.g., Standard \& Poor's, "Utilities: Key Credit Factors: Business and Financial Risks in the Investor-Owned Utilities Industry," November 26, 2008.
    ${ }^{8}$ EBITDA is earnings before interest, taxes, depreciation and amortization.
    ${ }^{9}$ EBIT is earnings before interest and taxes.

[^5]:    ${ }^{11}$ Miller, T., "DPL Incorporated," Morningstar Equity Research, September 27, 2011 , at 2.

[^6]:    ${ }^{12}$ See, e.g., Baird Equities Research, "DPL Inc. (DPL)," July 29, 2011, at 2.
    ${ }^{13}$ Momingstar Equity Research. "DPL Incorporated," September 27, 2011 , at 2.

[^7]:    ${ }^{14}$ Standard \& Poor's, "S\&P May Cut Dayton Power \& Light Co. Ratings," April 23, 2012 (emphasis added).
    ${ }^{15}$ ibid
    ${ }^{16}$ Moody's Investors Service, "Moody's Downgrades DPL to Bal and DP\&L to Baa2 Following Acquisition by AES," November 28, 2011.

[^8]:    ${ }^{17}$ Moody's Investors Service, "Moody's Disclosures on Credit Ratings of DPL Inc.," March 30, 2012.
    ${ }^{18}$ FitchRatings, "Fitch Downgrades DPL to 'BB+' and DP\&L to 'BBB-' Following Acquisition by AES; Outlook Stable," November 29, 2012.

[^9]:    ${ }^{19}$ Exhibit WJC-9 shows that the median debt ratio among an alternative sample of thirteen utilities was $49.5 \%$. That sample was used in DP\&L's prior rate case 08-1094-EL-SSO.
    ${ }^{20}$ As noted above, this type of adjustment is consistent with Section 4928.142(D)(4) of the Revised Code, which states that ROE comparisons should be made after making "such adjustments for capital structure as may be appropriate."

[^10]:    ${ }^{21}$ EIA Annual Energy Outlook 2012.xlsx.

[^11]:    ${ }^{22}$ Note that there are slight differences between my exhibits and WP-12 due to rounding.

[^12]:    ${ }^{23}$ As my calculations require additional detail beyond what is included in WP-12, I rely on the underlying spreadsheet 'WP-12 Proforma Financials Cost of Debt and CLJ-1-FILING with Detail.xlsx' provided to me on September 26, 2012.

[^13]:    ${ }^{24} \mathrm{I}$ assume that the interest rate on that short term debt is $1.18 \%$, the yield on an index of one year, BBB- rated U.S. utilities from Bloomberg (C0401Y) as 9/27/12.

[^14]:    ${ }^{25}$ These projections were provided to me in an Excel spreadsheet 'WP-12 Proforma Financials Cost of Debt and CLJ-1- FILING-incr switching DETAIL.xlsx' on September 26, 2012. With approval of the Switching Tracker, additional switching would result in financial projections similar to the Base Case, though there would be a timing difference as I understand true-up payments under the Switching Tracker would be made some time after the additional shopping occurred.
    ${ }^{26}$ Miller, T., "DPL Incorporated," Morningstar Equity Research, September 27, 2011, at 3.

[^15]:    ${ }^{27}$ Fitch Ratings, "U.S. Utilities: Insatiable Thirst for Financing," September 2012, at 4.

[^16]:    ${ }^{28}$ Bluefield Water Works and Improvement Company v. Public Service Commission of the State of West Virginia (262 U.S. 679); Federal Power Commission et. al. v. Hope Natural Gas Company (320 U.S. 591).

[^17]:    ${ }^{29}$ Opinion and Order in the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to Section 4928.143, Revised Code, in the Form of an Electric Security Plan. Case No. 11-346-EL-SSO et. al., at 33.
    ${ }^{30}$ David Parcell, The Cost of Capital - A Practitioner's Guide, Society of Utility and Regulatory Financial Analysts, 2010.

[^18]:    Data. Ilistorical and Forecasted
    Notes \& Sources:
    2011 data from DP\&L Financial Statements from 2011 DPL Inc. Annual Report, adjusted for the additional $\$ 278 \mathrm{M}$ long term debt. See WJC-11. All other sources described in column (I) Change in Line 10 from WJC-3.C. 2012 PPE calculated as average 2011 and 2013 PPE.

    25 (Line $24_{t}+$ previous year Line $24_{t-1}$ )/2.2013 uses an imputed 2012 value of $\$ 1,156$ calculated from intemal Documents. See WJC-1 1

[^19]:    Notes \& Sources.
    $\begin{array}{ll}4 & \text { Change in Line } 29 \text { from WJC-4.C. } 2012 \text { value average of } 2011 \text { and } 2013 \text { value. } \\ 12 & \text { Line } 11 \text { unless Line } 22 \text { falls below } \$ 10 \mathrm{M} \text { and Line } 14 \text { equals } \$ 0 \text {. Then increased such that Line } 22 \text { is equal to } \$ 10 \mathrm{M} \text {. }\end{array}$
    Equal to Line 13 unless Line 22 falls below $\$ 10 \mathrm{M}$ using the original amount of short-term debt. Dividends then lowered such that Line 22 is equal to $\$ 10 \mathrm{M}$ using the original issuance of short-term debt. Line 22 from previous year. 2013 value from Intemal Docurnents.
    Type of Filing Original
    Work Paper Reference No(s):: WP-12 Proforma Financials Cost of Debt and CLJ-I- FILING with Detail.xisx; WJC-4.B; WJC-4.C
    WJC-4.D Witness Responsible: William J. Chambers

    Below.
    mputed value from Internal documents.
    um (Line 2 - Line 6).
    Internal Documents.
    Internal Documents.
    See Below.
    nternal Documents.
    Internal Documents.
    Internal Documents.
    Line $12+$ Line $14+$ Line $15+$ Line 16 .
    ee Below.
    Line $7+$ Line $9+$ Line 17.
    Line $20+$ Line 21
    (H)

    Line 39 from WJC-4.B.
    Line 18 from WJC-4.B.
    

    | Estimated Balance at December 31, |  |
    | :--- | :--- |
    | 2013 | 2014 | Net Change

    Baiance at beginning of period
    Cash and cash equivalents at end of

    Baiance at begining of period
    Cash and cash equivalents at end of period

[^20]:    Data: Historical and Forecasted
    Type of Filing: Original

    WJC-5A Page 1 of 1
    Chambers

    Type of Filing: Original
    Work Paper Reference No(s).: WJC-5.B; WJC-5.C; WJC-5.D; WJC-11

    | Linc | Description | 2011 | 2013 | 2014 | 2015 | 2016 | 2017 | Source |
    | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
    | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) |
    | 1 | Statements of Income |  |  |  |  |  |  |  |
    | 2 | Total Revenue | \$ |  |  |  |  |  | Line 7 from WJC-5.B. |
    | 3 | Operating income | \$ |  |  |  |  |  | Line 22 from WJC-5.B. |
    | 4 | Interest Expense | \$ |  |  |  |  |  | Line 30 from WIC-5.B. |
    | 5 | Depreciation and Amortization | \$ |  |  |  |  |  | Line 18 from WJC-5.B. |
    | 6 | Net Income | \$ |  |  |  |  |  | Line 39 from WJC-5.B. |
    | 7 |  |  |  |  |  |  |  |  |
    | 8 | Operating EBITDA | \$ |  |  |  |  |  | Line $3+$ Line 5 . |
    | 9 |  |  |  |  |  |  |  |  |
    | 10 | Statement of Cash Flows |  |  |  |  |  |  |  |
    | 11 | Net Cash Provided by Operating Activities | \$ |  |  |  |  |  | Line 7 from WJC-5.D. |
    | 12 | Change in Certain Assets and Liabilities | \$ |  |  |  |  |  | Line 5 from WJC-S.D. |
    | 13 | Funds from Operations | \$ |  |  |  |  |  | Line 11 - Line 12. |
    | 14 |  |  |  |  |  |  |  |  |
    | 15 | Capital Expenditures | \$ |  |  |  |  |  | See Below. |
    | 16 | Dividends paid to DPL inc | \$ |  |  |  |  |  | -1 * Line 14 from WJC-5.D. |
    | 17 | Issuance of pref. stock | 8 |  |  |  |  |  | Line 15 from WJC-5.D. |
    | 18 |  |  |  |  |  |  |  |  |
    | 19 | Balance Sheet |  |  |  |  |  |  |  |
    | 20 | Short-Term Debt | \$ |  |  |  |  |  | Line 25 from WJC-5.C. |
    | 21 | Long-Term Debt | \$ |  |  |  |  |  | Line 38 from WJC-5.C. |
    | 22 | Total Debt | \$ |  |  |  |  |  | Line $20+$ Line 21 , |
    | 23 |  |  |  |  |  |  |  |  |
    | 24 | Common Shareholder's Equity | \$ |  |  |  |  |  | Line 36 from WJC-s.C. |
    | 25 | Average Common Shareholder's Equity | \$ |  |  |  |  |  | See Below. |
    | 26 | Total Capitalization | \$ |  |  |  |  |  | Line 39 from WJC-5.C. |

    2011 data from DP\&L Financial Statements from 2011 DPL Inc. Annual Report, adjusted for the additional $\$ 278 \mathrm{M}$ long term debt. See WJC-I 1 . All other sources described in column (I).
    Change in Line 10 from WJC-5.C. 2012 PPE calculated as average 2011 and 2013 PPE.
    25 (Line $24_{\mathrm{t}}+$ previous year Line $24_{\mathrm{t}-\mathrm{t}}$ )/2. 2013 uses an imputed 2012 value of $\$ 1,156$ calculated from Internal Documents. See WJC-11.

[^21]:    Work Paper Reference No(s):: WP-12 Profonna Financials Cost of Dett and CLJ-1- FILING-incr switching DETAIL. .xsx; WJC-5.B; WJC-5.D

[^22]:    Data: Forecasted
    WJC-5.D Witness Responsible: William J. Chambers
    

    Change in Line 29 from WJC-S.C. 2012 average of 2011 and 2013 value.
    Line 11 unless Line 22 falls below $\$ 10 \mathrm{M}$ and Line 14 equals $\$ 0$. Then increased such that Line 22 is equal to $\$ 10 \mathrm{M}$.
    Equal to Line 13 unless Line 22 falls below $\$ 10 \mathrm{M}$ using the original amount of short-term debt. Dividends then lowered such that Line 22 is equal to $\$ 10 \mathrm{M}$ using the original issuance of short-term debt. Line 22 from previous year. 2013 value from Internal Documents
    Type of Filing: Original
    Work Paper Reference No(s).: WP-12 Proforma Financials Cost of Debt and CLJ-1- FLLING-iner switching DETALL.xlsx; WJC-5.B; WJC-5.C

[^23]:    Range represents $+/$ - one standard deviation.

[^24]:    $2016 \quad 2017$

    - 2011 Fitch Median Utility BBB-

[^25]:    Nutes \& Sounces
    2011 Fitch Median Utilily BBB3- from Fitch Rattngs, U.S. Utilitus, Power \& Gas Financial Peer
    2011 Fitch Median Utility BBB- from Fitch Ratings, U.S. Ulilites, Power \& Gus Financial Peer Study, June 2012, at 12. Excludes Dayton Power and Light Company
    Kange represents t/- one standard deviation

[^26]:    Notes \& Sources:
    Numbers in miltions
    Fith Credu Ratings
    Fith Credit Ratings from Fitch Ratings, U.S. Utilities, Power \& Gas Financial Peer Study, June 2012, at 1i-12
    S\&P Credit Rating from 'homson One and StandardAdPoors com, as of June 22, 2012 .
    Moody's Credit Ratings from Moodys com, as of June 22, 2012. Moody's Credit Ratings from
    Financiais fiom Capital IQ.

[^27]:    $\square$ MANAGEMENT POLICIES, PRACTICES, AND ORGANIZATION

    - OPERATING INCOME
    - RATE BASE
    - ALLOCATIONS
    - RATE OF RETURN
    - RATES AND TARIFFS
    - OTHER

[^28]:    ${ }^{1}$ Opinion and Order, p. 33 (Case No. 11-346-EL-SSO).

[^29]:    "Protect at-risk populations, including, but not limited to, when considering the implementation of any new advanced energy or renewable energy resource."

    Does DP\&L's ESP advance that policy, and if so, how?

