## Large Filing Separator Sheet

Case Number:

12-426-EL-SSO<br>12-427-EL-ATA<br>12-428-EL-AAM<br>12-429-EL-WVR<br>12-672-EL-RDR

Date Filed: $\quad 12 / 12 / 2012$
Section: 1 OF 2
Number of Pages: 150
Description of Document: Revised Electric Security Plan Book III
Testimony and Appendices

## FILE

# 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-WVA
CASE NO. 12-672-EL-RDR

## REVISED

## ELECTRIC SECURITY PLAN

BOOK III - Testimony and Appendices


# THE DAYTON POWER AND LIGHT COMPANY CASE NO. 12-426-EL-SSO <br> Revised <br> 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)

SECOND REVISED DIRECT TESTIMONY 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) SECOND REVISED DIRECT TESTIMONY OF 

## WILLIAM J. CHAMBERS

ON BEHALF OF
THE DAYTON POWER AND LIGHT COMPANY
I. INTRODUCTION. ..... 1
II. PROFESSIONAL BACKGROUND ..... 6
III. AN OVERVIEW OF THE CREDIT RATING PROCESS ..... 10
IV. ANALYSIS OF DP\&L'S BUSINESS RISK ..... 21
V. EVALUATION OF DP\&L'S PROJECTED FINANCIAL CONDITION ..... 29
VI. POTENTIAL CONSEQUENCES OF ADDITIONAL CHANGES TO DP\&L'S CREDIT RATING ..... 50
VII. OTHER ..... 54
VIII. CONCLUSION ..... 59

## I. 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 for the next two years, 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 $7 \%$


[^1][^2]Q. Please identify the Exhibits attached to your testimony.
A. The following exhibits summarize the projected financial ratios for DP\&L from 20132017: ${ }^{4}$

- WJC-1: DP\&L's ESP as filed (revised).
- 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

[^3] projected dividend payments and Exhibit WJC-7.B shows the projected issuance of shortterm 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.
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 $S \& P$ 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.

## 1 III. AN OVERVIEW OF THE CREDIT RATING PROCESS

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


#### Abstract

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), AA, A, BBB, BB, B, CCC, CC, 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, $\mathrm{S} \& \mathrm{P}$ 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 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 BB long-term credit rating from S\&P, which lowered the rating and removed it from CreditWatch with Negative Implications in November, 2012. Earlier, S\&P had 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 on DP\&L, but placed that rating "under review for possible downgrade" in November. Fitch Ratings rates DP\&L BBB-, but also placed that rating on Rating Watch Negative in November. In all cases, the referenced ratings apply to the long-term, senior unsecured debt of the Company. DP\&L's ratings are currently at the lower end of the spectrum of integrated electricity utilities, with the majority holding credit ratings in the $\mathrm{A}, \mathrm{A}-, \mathrm{BBB}+$ and BBB rating categories. These recent rating actions reflect concerns regarding increased competition faced by DP\&L resulting in deterioration of its financial position and the potential outcome of the ESP case now before the Commission.

## 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. ${ }^{5}$ As noted above, the agencies publish documents explaining their

[^4] 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 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?

A. Information received from the issuer, along with other economic and industry information is gathered by the rating agency and analyzed. The primary analyst prepares a report, which includes a recommendation regarding the assigned rating. The agency then convenes a rating committee composed of several senior analysts. The primary analyst presents his/her report to the rating committee, which discusses its content, compares it with information regarding similar companies and compares the recommended rating with those assigned to those companies. The rating committee then votes on a rating. All agency ratings are the outcomes of committee processes. No single analyst determines any rating. Along with the rating itself, the rating committee will also decide on an outlook for that rating, if one is to be assigned, or the need to place a rating on its watch list.

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.)

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

A. Appendix D shows the relative importance that $\mathrm{S} \& P$ 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

[^5]transmission and distribution company, would provide a much lower proportion (e.g., $5 \%$ to $15 \%$ ) of the business profile score.?

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. S\&P reiterated this "strong" business evaluation in its November downgrade announcement. ${ }^{8}$
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.

[^6]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 ${ }^{9}$.

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 ${ }^{10}$
- Maturity Structure of Outstanding Debt

2) Cash Flow Adequacy

- Funds from Operations to Interest Expense
- Free Operating Cash Flow to Interest Expense
- $\mathrm{EBIT}^{1 \mathrm{l}}$ 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

[^7]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.

## 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.

# Second Revised Testimony of William J. Chambers Page 22 of 59 

 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.
## Q. What is the current general business and economic climate in DP\&L's service territory?

A. The economic outlook for the Dayton area is subdued. Moody's projects that unemployment will remain near current levels for two more years and "low productivity and restrained income growth will cause [Dayton's] economy to lag that of the U.S." over the longer term. ${ }^{12}$ Further, Moody's ranked Dayton $339^{\text {th }}$ out of 384 metro areas for vitality and $266^{\text {th }}$ out of 392 for job growth from 2011-2016. DP\&L operates in a manufacturing-oriented region, and, as a result, approximately one-half of its load comes

[^8] from industrial and commercial customers, who tend to be relatively price sensitive and prone to shopping. ${ }^{13}$

## 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.

|  | Ownership (\%) | Summer Capacity (MW) | Gross <br> Plant in <br> Service <br> (\$ mil.) | Accumulated Depreciation (\$ mil.) | SCR and FGD <br> Equipment Installed and In Service ( $\mathrm{Yes} / \mathrm{No}$ ) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |  | 91 | 57 |  |
| Total |  | 2,830 | \$3,380 | \$1,726 |  |

Currently, 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, as discussed in the testimony of Company Witness Jackson, DP\&L has recently taken a write-off related to

[^9] the Hutchings Station plant. Some analysts have concluded that all of the coal-fired plants with pollution-control equipment are relatively low cost. ${ }^{14}$ 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." ${ }^{15}$

[^10]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. Though Base Case financial projections are based on the $62 \%$ switching rate, I understand that customer shopping has actually continued. The proposed Switching Tracker is designed to protect DP\&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

November 9, 2012 announcement lowering DP\&L's and DPL's ratings, S\&P noted that,

We view DPL and DP\&L's business risk profiles as "strong" based on the increased competition among Midwest energy retail providers and the expected growth of the unregulated retail business. In addition, we expect competition to increase because of lower wholesale electric prices which will materially reduce DPL's profit margins. ${ }^{16}$

Previously, when placing DP\&L's rating on CreditWatch in April 2012, S\&P had stated:

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. ${ }^{17}$

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. ${ }^{18}$

[^11]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. ${ }^{19}$

In placing DP\&L's "ratings under review for possible downgrade" on November 9, 2012, Moody's updated this analysis, stating:

This rating action has been driven by larger-than-anticipated decline in consolidated financial metrics, uncertainty relating to DP\&L's regulatory compact beginning in 2013 and challenges around debt maturities beginning the latter-half of 2013. ${ }^{20}$

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." ${ }^{21}$

In placing DP\&L's ratings on Rating Watch Negative in November 2012, Fitch noted:

A material reduction in power prices that has exacerbated switching to alternate retail electricity providers among DP\&L's standard service offer (SSO) customers and reduced DP\&L's wholesale revenues accounts for Fitch's revised expectations.... DP\&L is facing several regulatory and

[^12]market challenges in Ohio... in an environment where lower power prices have caused acceleration in customer switching and heightened retail competition. ${ }^{22}$

## V. 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.
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.

[^13]
## 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- at the time of the analysis. 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 $61.5 \%{ }^{23}$ 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.

[^14]Q. How did you handle the relatively low level of DP\&L debt?
A. The most effective way to adjust for this difference and to be able to compare DP\&L with its peers and with rating agency metrics is to impute a higher proportion of debt to DP\&L's capital structure. ${ }^{24}$ I have developed a pro forma analysis under which DP\&L has a $50 \%$ debt / $50 \%$ equity capital structure as of the beginning of 2013. The selected $50 \%$ total debt to total capital ratio is between the $53.9 \%$ median for peer companies with similar credit ratings (see Exhibit WJC-10) and the $49.5 \%$ median for the sample of utilities in Exhibit WJC-9. The selected $50 \%$ ratio is also below that of DPL Inc. on a consolidated basis, but is a reasonable level for analysis

## 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 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 indicates that the rating agencies make this type of adjustment to the raw, reported numbers for their analysis.

[^15]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. ${ }^{25}$

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 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 altemate suppliers. I understand that customer shopping has continued in the months since August and DP\&L projects continued customer shopping 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

[^16]will rise to almost 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 as anticipated by the Company and supported by recent trends. These scenarios highlight the impact on DP\&L's financial condition if the Switching Tracker is not approved.

[^17]$\square$
Q. How do you construct the pro forma financial statements?
A. As shown in Exhibit WJC-1 I, I increased debt at the start of 2013 by $\$ 251$ million to $\$ 1.155$ billion so the debt-to-capital ratio is $50 \%$ at that time. As noted above, the $50 \%$ debt ratio is selected based on peer data (see Exhibits WJC-9 and WJC-10). To offset the increase in debt I reduced equity by a corresponding amount. On a consolidated basis, these changes offset each other at the DPL Inc. level so there is no net change. The increased debt for DP\&L raises the annual interest costs to $\$ 54$ million from $\$ 41$ million under the base case, assuming a $5 \%$ interest rate on the incremental long term debt. This interest rate is consistent with DP\&L's cost of debt as of the end of 2011 (see WP-12.2) and with market data on the yields for utilities with credit ratings similar to DP\&L (see Appendix H).

The pro forma adjustments cause the projected financial statements to differ from those filed by Company Witness Jackson. ${ }^{27}$ In order to maintain internal consistency among the income statement, balance sheet and statement of cash flows in the pro forma projections, I linked these statements together. Specifically, I have modeled DP\&L's dividend policy as follows. If there is adequate cash flow to pay the full dividend in the projections as filed by DP\&L and still leave at least $\$ 10$ million in cash at year-end, I maintained that dividend payment. If payment of that dividend would leave the cash balance below $\$ 10$ million at year-end, $I$ limited the dividend to preserve a $\$ 10$ million cash balance. In the extreme case where cash would fall below $\$ 10$ million even without any dividend payment, I have assumed DP\&L takes on additional short-term debt to maintain a $\$ 10$ million cash balance. ${ }^{28}$ For consistency, I assumed DP\&L pays income tax at a rate of 35.8 percent (rates from the projections filed by DP\&L range from 35.7\% to $36.2 \%$ ).

[^18]

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. Indeed, I understand that additional shopping has increased the level of switching above the August level. 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. ${ }^{29}$ As noted above, this scenario assumes switching increases to of customers by 2013 and to almost 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. ${ }^{30}$ I then made the same pro forma debt adjustments that I discussed previously so that all the alternative scenarios are consistent in that respect.

[^19][^20]Q. What effect would the Switching Tracker have if there is increased customer switching activity?
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 previously. There would still be deterioration in the Company's financial position over time, but the greatest impact would occur in 2016 and 2017.
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 less revenue due to lower prices per unit for its retail volume and/or overall lower sales volumes.

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.


Thus, while reduced rates due to the removal of the SSR may increase 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.


$\square$
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 ADDITIONAL CHANGES TO

 DP\&L'S CREDIT RATINGQ. 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.

1 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).

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 with two agencies (Moody's and Fitch) assigning it a low investment grade rating and $\mathrm{S} \& \mathrm{P}$ assigning a speculative grade rating. 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.


1 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, as I understand, precluded under the Ohio Constitution and under well-established legal precedents dating back to the Bluefield and Hope decisions. ${ }^{33}$

## 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? <br> 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.

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. ${ }^{34}$

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 returr.

[^21]
## 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). ${ }^{35}$ 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 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.

[^22]
## 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 | $13.0 \%$ | $13.0 \%$ | $14.0 \%$ | $13.3 \%$ |

## 8 VIII. CONCLUSION

A. Yes, it does.
Q. What other review did you undertake to assure yourself that this constituted a reasonable range for the ROE?
A. I also examined ROE's for utilities rated BBB- (or Baa3) from each of the three major rating agencies for the same three year time period - 2009 through 2011. These results, reported in Exhibit WJC-12.B and summarized in the table below, indicate that a range of $7.7 \%$ 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 | $8.7 \%$ | $14.6 \%$ | $10.4 \%$ | $11.2 \%$ |

Q. Does this conclude your direct testimony?

## APPENDIX A

## WILLIAM J. CHAMBERS, Ph.D.

## Curriculum Vitae

3 Albion Place
Charlestown, Massachusetts 02129

Home: 617-242-2046
Mobile: 857-540-9556
E-mail: wchamber@bu,edu

Independent Consultant
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

September 2005 - September 2006
January 2001-August 2005

# Second Revised Testimony of William J. Chambers <br> Appendix Page 2 of 13 

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

# Second Revised Testimony of William J. Chambers 

Appendix Page 3 of 13

## G.M. Stamm Economic Research Associates, Toronto, Ontario

Vice President and Director of Research
March 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 <br> Senior Economist

March 1976-March 1979
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
Department of Economics M.A., M. Phil, Ph.D. June 1975
Fields of Specialization: Urban Economics, Public Finance, Monetary Theory, Microeconomic Theory
Dissertation: The Optimal Allocation of Land to Transportation in Urban Areas William Vickrey, Advisor

College of Wooster, Wooster, Ohio
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

2009 General Electric Capital Canada Inc. vs. Her Majesty The Queen
2009 In The Matter Of The Current And Future Financial Condition Of Baltimore Gas And
Electric Company Before The Public Service Commission Of Maryland
2011 El Fassi Realty Corp. v. 31 West 34th Street LLC
2011 NA General Partnership \& Subsidiaries, Iberdrola Renewables Holdings, Inc. \&
Subsidiaries, Successor in Interest to NA General Partnership \& Subsidiaries v. 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 Description | Moody's Description | Fitch Description |
| :---: | :---: | :---: | :---: |
| Investment Grade Rating Categories |  |  |  |
| $\begin{aligned} & \mathrm{AAA} \\ & \mathrm{Aaa} \\ & \mathrm{AAA} \end{aligned}$ | 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. | AAA' 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. |
| $\begin{aligned} & \mathrm{AA} \\ & \mathrm{Aa} \\ & \mathrm{AA} \end{aligned}$ | An obligation rated ' $A A^{\prime}$ ' differs from the highestrated obligations only to a small degree. The obligor's capacity to meet its financial commitment on the obligation is very strong. | Obligations rated Aa are judged to be of high quality and are subject to very low credit risk. | 'AA' ratings denote expectations of very low default risk. They indicate very strong capacity for payment of financial commitments. This capacity is not significantly vulnerable 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 abligor's capacity to meet its financia! commitment 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. |
| $\begin{aligned} & \text { BBB } \\ & \text { Baa } \\ & \text { BBB } \end{aligned}$ | An obligation rated 'EB8' exhlbits 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 defautt 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 |  |  |  |
| $\begin{aligned} & \text { BB } \\ & B a \\ & B B \end{aligned}$ | An obligation rated ' 8 B ' is less vulnerable 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 obligation. | Obligations rated Ba are judged to have speculative elements and are subject to substantial credit risk. | 'BS' 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 'BB', but the obligor currently has the capacity to meet its financial commitment on the obligation. Adverse business, financial, or economic conditions wifl likely impair the obligor's capacity or willingness to meet its firmancial commitment on the obligation. | Obligations rated B are considered speculative and are subject to high credit risk. | ' B ' 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 vuinerable to deterioration in the business and economic environment. |
| $\begin{aligned} & \mathrm{CCC} \\ & \mathrm{Caa} \\ & \mathrm{ccC} \end{aligned}$ | An obligation rated 'CCC' is currently vulnerable to nonpayment, 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 currently highly vulnerable to nompayment. | Obligations rated Ca are highly speculative and are likely in, or very near, default, with some prospect of | Default of some kind appears probable |

# Second Revised Testimony of William J. Chambers <br> Appendix Page 5 of 13 

|  |  | recovery of principal and interest. |  |
| :---: | :---: | :---: | :---: |
| C | $\mathrm{A}^{\prime} \mathrm{C}^{1}$ rating is assigned to obligations that are currently <br> highly vufnerable to nonpayment, obligations that have <br> payment arrearages allowed by the terms of the documents, or obligations 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 finantial obligation; <br> - the issuer has entered into a temporary negotiated waiver or standstitl agreement following a payment default on a material financial obligation; and <br> - Fitch Ratings otherwise believes a condition of ' $R D$ ' or ' $D$ ' to be imminent or inevitable, including through the formal announcement of a coercive debt exchange. |
| D <br> n.a. D | An obligation rated ' $D$ ' is in payment default. The ' D ' <br> rating category is used when payments on an obligation are not made on the date due even if the applicable grace period has not expired, untess 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 Symbols 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\&F ratings from 'AA' to 'CCC' 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 <br> 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 lower end of that generic rating category." <br> [3] Fitch Ratings are long term issuer ratings. The modifiers " " $^{\prime \prime}$ 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 |  |  |  |

# Second Revised Testimony of William J. Chambers APPENDIX C 

## Sample Rating Agency Criteria: S\&P

## RatingsDirect*

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

Primary Credit Analyst:
Todd A Shipman, CFA, New York (1) 212-438-7676; todd_shipman@standardandpoors.com
Table Of Contents
Relationship Between Business And Financial Risks
Part 1--Business Risk Analysis
Part 2-Financial Risk Analysis

Case No. $\mathbf{9 1 7 3}$, Phase II Staff BatalRequest 4
Item No. 2
Attachment 2

## 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-deprh 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

 thens messinty

Elandard \& Poor's 2008.

Chart 1 summarizes the ratings process.

Chart 1
Scoring And Rating Determination Process

© Standard \& Poor's 2006.

## 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
Businass Risk Measures

| Description | Rating aquivalent |
| :--- | :--- |
| Excellent | AAA/AA |
| Strong | A |
| Satisfactory | B8B |
| Weak | BB |
| Vulnerable | B/CCC |

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 risk 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 (M/H), medium risk (M), low/medium risk (L/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.


## 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 transition 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 compere 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 1990s 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 utilitics (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.

## 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 substantially 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 unbundling 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 release 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

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

Industry
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 nceds;
- Service debt and maintain a satisfactory rating profile; and
- Generate a competitive 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 seek 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 are 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. Cutrent 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);
- 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/liberalized 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 tolerance; 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

| Financial Risk Measures |  |
| :--- | :--- |
| Description | Rating equivalent |
| Minimal | AAA/AA |
| Modest | A |
| Intermediate | 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
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 certairly 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 detcrmination of the likely level of leverage and debt over the mediurn 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 supportlack 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
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.

Coppright © 2009 Standard \& Poor's, a division of The McGraw-Hill Companies, Inc. (S\&PI. S\&P and/or its third parry ticensors have exclusive proprietary rights in the data or information provided herain. This data/information may only be used internally for business purpeses and shall not be used for any unlawful or urauthorized purposes. Dissemination, distribution or reprocuction of this data/information in any form is strictly prohibited except with the prior written pernission of S\&P. Because of the possibility of human or mechanical efror by S\&P, its affiliates or its third party licensors, S\&P, its affiliates and its third party licensors do net guarantea the accuracy, adequacy, completenass or availability of any information and is not responsible for amy errors or onissions or for the results obtained from the use of such information. S\&P GIVES NO EXPRESS OR IMPLIED WARAANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILLTY OR FITNESS FOR A PARICLITAR PLRPOSE OR USE. In ne event shall SRP, its affiliates and its third party licensors be liable for any difect, indirect, special or consequential damages in connection with subscriber's or others use of the data/infurmation contained herein. Access to the data or information contained herein is subject to termination in the event any agreement with a thirt party of information or software is terminatad.

Analytic services provided by Standard \& Poor's Ratings Senvices (Ratings Services) are the result of separate activities designed to preserve the independence and objactivity of ratings opinions. The credit ratings and observations contained herein are solely statements of opinion and not statements of fact or recommendations to purchase, hold, or sell any securities of make any other investment decisions. Accordingly, any user of the information contained hersin should not rely on any credit rating or other opinion contained hergin in making amy investment decision. Ratings ara based on information received by Ratings Services. Other divisions of Standard \& Poor's may have information that is not available to Ratings Services. Standard \& Poor's has establishod policies and procadures to maintair the confidentiality of non-public information received during the ratings process.

Ratings Services raceives conqensation for its ratings. Such compensation is nomaly paid either by the issuers of such securities or third parties participating in marketing the securities. While Standard \& Poor's reserves the right to dissominate the rating, it receives no payment for doing so, except for subscriptions to its petblications. Additional informstion about our ratings fees is available at www.standardandpooss.com/usratingsfees.

Any Passwords/user IDs issued by S\&P to users are single user-dedicated and may ONLY be used by the individual to whom they have been assigned. No sharing of passwords/user IDs and no simultaneous access via the same password/user iD is pemitted. To reprint, tranaiate, of ase the data or information othar than as provided herein, contact Client Services, 55 Water Street, New York, NY 10041; 11212438.7280 or by e-mail to: research_requestegstardardandpoors.com.

# Second Revised Testimony of William J. Chambers 

 Appendix Page 7 of 13APPENDIXD


Note:
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 systern 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 |

## Second Revised Testimony of William J. Chambers Appendix Page 9 of 13

| •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

June 2012


Overview
Fitch Ratings presents its annual "U.S. Utilities, Power \& Gas Financial Peer Study" report. The report provides comparative financial ratios for the fiscal year ended Dec. 31, 2011, of 143 companies divided into four peer groups (a detailed explanation of the four categories appears in the table on page 4). This report excludes the Midstream peer group (MID). To view comparative financial ratios for the MID group, please refer to Fitch's special report, "Pipelines, Midstream, and MLP Stats Quarterly - Year-End 2011 - Amended", dated April 18, 2012, which is available at www.fitchratings.com.

## The peer groups covered in this report are:

- Utility parent companies (UPCs).
- Integrated electric utility operating companies (IUCs). - Electric and gas utility distribution companies (UDCs). - Competitive generating companies (CGCs). (IDR), and the ratings are as of Dec. 31, 2011.

The report includes a summary analysis of financial ratios, peer financial tables, and a set of charts with historical coverage and leverage credit metrics for each respective group.

A list of the 143 companies with their respective group and IDR is shown on page 8.

## Analysis

## UPCs

Interest coverage and leverage credit metrics at the consolidated parent company level remained relatively stable in 2011 relative to 2010 . Within the 40 -company UPC peer group, the 2011 simple averages of EBITDA/interest and (FFO plus interest)/interest were 4.7 x and 4.9 x , respectively, compared with 4.8 x and 4.8 x in
 environmental mandates and infrastructure spending will be critical to maintaining healthy credit measures in 2012-2013. Favorably, Fitch believes utilities will continue to enjoy good access to capital markets and low-cost financing in 2012. which should add further stability to coverage measures.

## CGCs

Both interest coverage and leverage credit measures weakened in 2011 compared to 2010. Within the 18 -company CGC peer group, the 2011 average EBITDA/interest and (FFO plus interest)/interest ratios were 3.4 x and 3.3x, respectively, compared with $3.5 x$ and $3.8 x \ln 2010$. The erosion in the sectors debtIEBITDA and FFO/debt metrics was significant with the former weakening to 6.7x in 2011 from $5.3 x$ in 2010 and the later to $\mathbf{1 5 . 7 \%}$ from $\mathbf{1 9 . 9 \%}$.

Financial measures continue to be affected by the low commodity price environment and the roll-off of above-market price hedges, which are reset at lower power prices. Fitch expects the low gas and power price environment to persist through 2012, pressuring energy margins for most merchant generators. Fitch believes that independent generators with significant coal-fired generation exposure will experience higher production costs to comply with environmental regulations, further pressuring future credit measures.

## Using the Data

Limitations: This study is intended to be used as an analytical tool to compare the relative financial performance of companies within, and between, rating categories. The peer study is not intended to be predictive of rating changes, since financial ratios in isolation do not determine credit ratings. Fitch's credit criteria incorporate a variety of other quantitative and qualitative factors. In addition, ratings are also materially affected by linkage to affiliates, different levels of business risk, and other qualitative factors.

Median Ratios Are Not Targets: While the peer study inctudes a table showing median financial ratios for each rating category within the four peer groups, these
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.

## Peer Group Descriptions

 Paer Group
## UUHy Parent Comparifee

Acro

Source: Fitch Ratings.











Peer Medians by Rating Category
(Asactioce 31,2011)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |




Source: Fltch Ratings.

Integrated Utility Companies
EBITDAMnterest Expense
Debt/EBITDA


Utility Distribution Companies




 응
 OUSYOSUGO

[^23] Company Name
NRG Energy，inc．
NSTAR Electric
NSTAR LC
NV Energy，Inc．
National Fuet Gas Comparry
Nevada Power Compony d／ba NV Energy
Now York State Electric \＆Gas Corp． New York State Elect
NextEra Energy，Inc．
NiSource Inc．
Nicor Gas Company NorthWestern Corporation
Nortrem States Power Company－MN Northem States Power Company－MN
Northem States Power Company－WI OGE Energy Corp． Ohio Edison Company
OXdahoma Gas \＆Electric Company Oncor Electric Delivery Company
Orange \＆Rockland Utilites，Inc． Orange \＆Rookland Utilities，Inc． PECO Energy Compeny Pepco Holdings，Inc． PPL Comporation PPL Corporation
PPL Electric UUtities Corporation PPL Energy Supply LLC
PSEG Power LLC
Pacinic Gas \＆Electric Company Pacificorp
Pemnsyivaria Electilc Company Pennsylvania Power Company
Pinnacie West Capital Corporation Potornac Edison Co． Potomac Electric Power Company

苟以
Alphabetical Company Listing Company Name GroupidR Company Name AEP Texas Central Company AES Compration
AGL Resources，Inc．
Allegheny Energy Supply Company CGC BBB－Empire District Electric Company Ameren Corporation
UDC BBB－Exelon Generation Company，LC FirstEnergy Corp．
Firstinergy Solutions Corp．
Forida Power \＆Lignt Company
Iorida Power Conporaion GenOr Americas Generation，LLC
GenOn Eneroy，Inc．
GenOn Mid－Attantic，LLC Georgia Power Company Gulf Power Company bendroda USA
Indlana Michigan Power Company Indianapolis Power \＆Light Company
Jersey Central Power \＆Light Co． Kentucky Power Company Kentucky Ulitities Company Laclede Gas Company㢄 MDU Resourcas Group，Inc． Michigan Consolidated Gas Company
MidAmerican Energy Company
MidAmerican Energy Holdings Company MidAmerican Energy Ho

 | Liquidity |  | Profitablility $(\%)$ |
| :---: | :---: | :---: |
|  |  |  |
| $\begin{array}{c}\text { \％Internal } \\ \text { Generation }\end{array}$ | $\begin{array}{c}\text { Operating } \\ \text { Margin（\％）}\end{array}$ | $\begin{array}{c}\text { ROE } \\ \text {（\％）}\end{array}$ |

が


## $\frac{\text { Capital Structure（\％）}}{\text { Total Hybrid }}$




|  | N～N |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 吹每 |  |  | － |  |
|  | $\overline{\mathrm{N}}$ | －¢ ¢ ¢ |  |  |  |
|  | ¢ ${ }_{\text {¢ }}^{\text {¢ }}$ | \％ペ\％ |  |  |  |
|  | 잉잉․ | ${ }_{\text {¢ }}^{\text {¢ }}$ ¢ ${ }_{\text {¢ }}^{\text {¢ }}$ |  |  |  |
|  | $\stackrel{\sim}{\circ}$ | 90\％ |  |  |  | | 9 |
| :---: |
| 9 |

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

A IDR Energy Corp．
A Mecian
A－IDR
AGL Resources，inc．
Laclede Group，Inc．（The）
MDU Resources Group，Inc．
NSTAR LLC ${ }^{\dagger}$
A－Median
BBB＋IDR
Consolidated Edison，inc．
Consoiidated Edison，inc．
Dominton Resources，Inc．
Exelon Corporation
Iberdrola USA
MidAmerican Energy Holdilings Company
PG\＆E Corp．${ }^{*}$
Public Service Enterprise Group Incorporated＂
SCANA Corporation Sernpra Energy

Xcel Energy，Inc．
BBE＋Median
BEB IDR
American Electric Power
DTE Energy Company＇
Edison Internationa：
FirstEnergy Copp．＂
Northeast Uutilities
Pepco Holdings，inc．＂ PPL Corporation Progress Enargy inc．
TECO Energy，inc．

EBB Medlan
Excludes debt，revenue，amo
Cantinued on next page．

[^24]
## Utility Parent Companies (Continued) <br> chRatings

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

$\begin{array}{ll}\text { Black Hilis Corp. } & 1.6 \\ \text { CenterPoint Energy, Inc. } & 2.5 \\ \text { PaL CO Enteprises, } & 1.9\end{array}$
IPALCO Enterprises, Inc.
NiSource Inc.
Otter Tail Corporation
Otter Tall Corporation
Pinnacle West Capital Corporation
EBE-Median
BE+ IDR
CMS Energy Corporation*
Source: Company reports, Fitch.

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

| Integrated Utility Companies | Interest Coverene ( x ) |  |  | Leverage |  |  | Capital Structure (\%) |  |  | Liquidity | Profitability (\%) |  | Dividends <br> Common <br> Dividend <br> Payout <br> Ratio (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Operating EBITI Interest Expense | $\begin{gathered} \text { Operating } \\ \text { EBITDA } \\ \text { Interest } \\ \text { Expense } \\ \hline \end{gathered}$ | FFO + <br> Interest/ Interest Expense | Debe Operating EBITDA $(x)$ | FFOI Debt (\%) | Debt FFO $\qquad$ | Total Debt Total Capitsl $(\%)$ | Total Hybrid EquityTotal Capital (\%) | Common Equityl Total Capital (\%) | \% Internal Generation | $\begin{array}{r} \text { Operating } \\ \text { Margin } \\ (\%) \end{array}$ | $\begin{gathered} \text { ROE } \\ (\%) \end{gathered}$ |  |
| A IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alabama Power Company | 4.9 | 7.0 | 7.1 | 2.9 | 30.5 | 3.3 | 51.0 | 5.1 | 43.8 | 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 |
| Georgia 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 | 4.6 | 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-IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Carolina Power \& Light Company | 4.3 | 6.8 | 8.0 | 3.2 | 32.3 | 3.4 | 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 | 29 | 49.0 | 0.2 | 60.8 | 136.1 | 12.3 | 10.3 | N.M |
| Northem 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 |
| Northern 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 |
| Southem Califomia 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 | 8.8 | 66.5 |
| BBB+IDR |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Florida Power Comoratión | 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 | 47.8 | 64.5 | 13.2 | 7.0 | 86.2 |
| Public Servica 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 | B. 6 | 87.0 |
| Tampa Electric Company | 3.7 | 5.6 | 6.0 | 2.5 | 35.1 | 2.9 | 48.0 | - | 52.0 | 125.4 | 20.8 | 10.9 | 102.6 |
| Union Electric Company | 3.3 | 5.3 | 5.7 | 3.3 | 28.9 | 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 | 49.0 | 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 | 48.0 | 0.5 | 50.4 | 83.4 | 19.7 | 9.0 | 84.4 |
| BBE 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' | 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 |
| Paciticorp | 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 Oklahoma | 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 Servica Company of New Hampshire ${ }^{\circ}$ | 3.8 | 6.1 | 4.5 | 3.6 | 45.8 | 6.3 | 48.1 | $\square$ | 51.9 | 38.4 | 18.2 | 10.0 | 59.0 |
| Southwestern Public Service Compeny | 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 | 8.8 | 60.3 |
| BEB Medlan | 3.3 | 5.0 | 4.8 | 3.6 | 20.5 | 4.9 | 52.0 | 0.2 | 48.0 | 73.7 | 48.2 | 8.9 | 60.3 |
| ${ }^{\text {a }}$ Excludes debt, revenue, amorization, 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. |  |  |  |  |  |  |  |  |  |  |  |  |  |

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

Utility Distribution Companies (Continued)

| Utility Distribution Companles | Interest Coverage ( x ) |  |  |
| :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} \hline \text { Operating } \\ \text { Eait/ } \\ \text { Interest } \\ \text { Expense } \\ \hline \end{array}$ | $\begin{aligned} & \text { Operating } \\ & \text { EBIYDA } \\ & \text { Interest } \\ & \text { Expense } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { FFO 4 } \\ \text { Interest/ } \\ \text { Interest } \\ \text { Expenst } \\ \hline \end{gathered}$ |
| BBE-IDR |  |  |  |
| Ameren illinols Company | 3.3 | 4.9 | 4.0 |
| Commonwealth Edison Company | 2.7 | 4.2 | 3.5 |
| Michigan Consolidated Gas Company | 3.5 | 4.9 | 5.6 |
| Ohio Edison Company | 2.6 | 4.1 | 3.6 |
| Pennsylvanla Electric Company | 2.3 | 3.2 | 4.0 |
| Pennsylvanta Power Company | 5.6 | 8.4 | 5.3 |
| Rochester Gas \& Electric Corp. | 2.1 | 2.9 | 4.0 |
| BBE-Median | 2.7 | 4.2 | 4.0 |
| BB+ IDR |  |  |  |
| Cleveland Electric Illuminating Company | 1.6 | 2.6 | 2.5 |
| Toledo Edison Company | 1.9 | 2.6 | 1.6 |
| BE+ Medien | 1.7 | 2.6 | 2.1 |
| IDR - Issuer default rating. Source: Company reports, Fitch. |  |  |  |

Global Power Utilities with Utility Tariff Bonds - Unadjusted Credit Measures (As of Dec. 31, 2011)

|  | Interes | Coverage ( x ) |  |  | Leverage |  | Cap | ital Structure |  | Liquidity | Profitabill |  | Dividends |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company Name | Operating EBIT/interest Expense | Operating EBITDA Interest Expense | FFO+ Interest Interest Expense | Operating EBITDA (x) | $\begin{array}{r} \text { FFOI } \\ \text { Debt }(\%) \end{array}$ | $\begin{aligned} & \text { Debty } \\ & \text { FFO }(x) \end{aligned}$ | Debtrotal <br> Capital | Total Hybrid EquityTTotal Capital | Common Equity/Total Capital | \% Internal Gemeration | $\begin{gathered} \text { Operating } \\ \begin{array}{c} \text { Margin } \end{array} \end{gathered}$ | ROE | $\begin{array}{r}\text { Common } \\ \begin{array}{r}\text { Dividend } \\ \text { Payout } \\ \text { Ratio }\end{array} \\ \hline\end{array}$ |
| 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 Electic 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 |
| Atlantic 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 | - |
| Ballimore 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 | 8.8 | 70.4 | 0.4 | 29.3 | 104.4 | 15.4 | 14.3 | 50.8 |
| CentarPoint Energy Houston Electric LLC | 2.2 | 4.4 | 4.2 | 4.0 | 18.3 | 5.5 | 60.5 | - | 39.5 | 100.3 | 28.7 | 44.9 |  |
| CenterPoint Energy, Inc. | 2.2 | 3.7 | 3.9 | 4.2 | 18.6 | 5.4 | 68.5 | - | 31.5 | 93.8 | 15.4 | 36.6 | 24.8 |
| Consumers Energy Company | 3.7 | 5.8 | 5.1 | 3.0 | 24.2 | 4.1 | 50.9 | 0.2 | 48.8 | 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 | 48.0 | 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 | 6.4 | 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 | 80.3 | 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 \& Llght Co. | 3.0 | 5.0 | 3.6 | 3.3 | 15.7 | 6.4 | 46.8 | - | 53.2 | (59.8) | 14.9 | 5.6 | 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 | 8.2 | 3.0 | 25.6 | 3.9 | 55.6 | 0.5 | 43.9 | 146.3 | 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 |
| NorthWestam 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 Uillities | 3.2 | 5.1 | 4.5 | 4.3 | 16.2 | 6.2 | 57.2 | 0.6 | 42.2 | 65.0 | 17.8 | 10.1 | 49.4 |
| Oncor Electric Dellvery 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 | 84.6 | 13.0 | 7.2 | 83.4 |
| Pacific Ges \& 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 | 17.8 | 10.0 | 59.0 |
| Public Service Electric \& Gas Company | 3.7 | 6.0 | 5.8 | 2.8 | 29.6 | 3.5 | 52.9 | - | 47.1 | 97.5 | 15.7 | 11.5 | 57.6 |
| Public Service Enterprise Group Incorporated | 5.8 | 7.8 | 8.7 | 2.2 | 33.5 | 3.0 | 44.1 | - | 65.9 | 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 |
| Westem 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. |  |  |  |  |  |  |  |  |  |  |  |  |  | captalizad lease obiligations, less noneneourse dabt.

obligations, less utility tariff bond debt plus current portion of long-term debt and capitalized lease obligations, less nonrecourse deb.
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
Numerator: Net cash flow from operations, as reported, before changes in working capital.
Denominator: Total long- and shor-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.

## Debt/FFO

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

ALL FITCH CREDIT RATNGS ARE SUBIECT TO CERTAIN LIMITATONS AND DISCLAMERS. PLEASE READ THESE LMMITATIONS AND DISCLAIMERS BY FOLOWING THIS LINK THIS SITE
Copylght © 2012 by Fitch, Inc., Fitch Ratings Ltd. and its subsldianies. One State Street Plaza, NY, NY 10004.Telephone: 1-800-753-4824, (212) 908-0500. Fax (212) 480-4435. Reproduction or retransmission in whode or in par
 sousces are available for a given security of in a given jriscliction. The manner of Fitch's factual imestigation and tha socpe of the chichparty vericicasion it obtains wilvary depencoing on the nature of the rated security and its issuer. advisers, the avalability of preesxisting thirc-party verifcabions such as audit reports, agreed-4pon procadures ietters, appradsais, accuarial reports, engineering reports, legal opinions and other reports provided by third parties, the

 facts. As a result, desptte any verification of current facts, ratings can be affected by fiuture events or conditions that weene not antlipaled at the tme a rating was issued or affimed.





 efficiency of electronic publishing and distribution, Ftth research may be available to electronic subscribers up to three days eariier than to print subscribers.
Lus.fars

## APPENDIX G


 thens measury

- Standmed 8 Poor's 2008.


## 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.

APPENDIX I
Default Rates by S\&P Credit Rating

| U.S. Corporate Average Cumulative Default Rates By Rating Modifier <br> (1981-2011) (\%) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Years After Rating Assigned |  |  |
| Rating | $\mathbf{5}$ | $\mathbf{1 0}$ | $\mathbf{1 5}$ |
| 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 |
| CreditPro@. |  |  |  |

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: Second Revised
Second Revised WJC-1
Page 1 of 1
Witness Responsible: William J. Chambers

|  |  | Interest Coverage |  | Leverage |  | Capital Structure |  | Liquidity | Profitability |  | Dividends |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line No. | Year | Operating <br> EBITDA/ <br> Interest <br> Expense | FFO + Interest/ Interest Expense | Debt/ Operating EBITDA | $\begin{gathered} \text { Debt } / \\ \text { FFO } \\ \hline \end{gathered}$ | Total Debt/ <br> Total Capital | Common Equity/ Total Capital | Internal <br> Generation | Operating <br> Margin | ROE | Common Dividend Payout Ratio |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (K) | (L) | (M) |
| 1 | 2011 | 11.91 | 11.04 | 1.99 | 2.35 | 0.40 | 0.59 | 0.80 | 19.1\% | 14.0\% | 1.14 |
| 2 | 2013 |  |  |  |  |  |  |  |  |  |  |
| 3 | 2014 |  |  |  |  |  |  |  |  |  |  |
| 4 | 2015 |  |  |  |  |  |  |  |  |  |  |
| 5 | 2016 |  |  |  |  |  |  |  |  |  |  |
| 6 | 2017 |  |  |  |  |  |  |  |  |  |  |


The Dayton Power and Light Company
Required Data for Financlal Ratio Calculations (\$ in millions) Scenario: As-Filed
2011-2017

Notes \& Sources:
2011 data from DP\&L Financial Stateroents from 2011 DPL Inc. Annual Report. All other sources described in column (I).
15 Change in Line 10 from Second Revised WJC-1.C. 2012 PPE calculated as average 2011 and 2013 PPE.
25 (Line $24_{t}+$ Line $24_{t-1}$ ) / 2.2013 uses an imputed 2012 value of $\$ 1,383$ calculated from Internal Documents. See Second Revised WJC-11.


Data: Forecasted
Type of Filing: Second Revised
Second Revised WJC-1.D
Page 1 of 1
The Dayton Power and Light Company
Projected Statement of Cash Flows (unaudited) ( $\$$ in millions) 2013-2017
Type of Filing: Second Revised
Work Paper Reference No(s).: CL


## (A) $\quad$ (B) $-\frac{\text { (C) }}{2014}$

Net Income
Depreciation and Amortization
Change in Deferred taxes
Change in Certain Current Assets and Liabilities
Other
Net cash provided by operating activities
Net cash used for investing activities
Actual Issuance (retirement) of short-tenn debt
Actual Dividends paid to DPL fac
Issuance of pref. stock
Other
Net cash used for financing activities
Cash and Cash Equivalents
Net Change
Balance at beginning of period
Cash and cash equivalents at end of period

Notes \& Sources:
4 Change in Line 29 from Second Revised WJC-1.C. 2012 value average of 2011 and 2013 value.
19 Line 20 from previous year. 2013 value from Internal Documents.
Data: Historical and Forecasted
Scenario: Pro Forma Debt Adjustment (Base Case)
2011 - 2017

Data: Historical and Forecasted
Type of Filing: Second Revised
Required Data for Financial Ratio Calculations ( $\$$ in millions)
Scenario: Pro Forma Debt Adjustment (Base Case)

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

## $\frac{\text { Statements of Income }}{\text { Total Revenue }}$ <br> Total Revenue

1,678 \$
$\begin{array}{cc}1,678 & \$ \\ 320 & \$ \\ (51) & \$ \\ 135 & \$ \\ 186 & \$\end{array}$
455 \$
348 s
(28) $\$$
$376 \$$
205
220
Line 7 from Second Revised WJC-2.D.
Line 5 from Second Revised WJC-2.D.
Line 11 -Line 12.
See Below. 1 * Line 14 from Second Revised
ine 25 from Second Revised WJC-2.C Lie 38 from Second Revised WJC-2.C.
ine $20+$ Line 21 .
Line 36 from Second Revised WJC-2.C.
See Below.
Line 39 from Second Revised WJC-2.C.
Second Revised WJC-2.A Page 1 of 1

## The Dayton Power and Light Corapany

 Case No. 12-426-EL-SSOProjected Statements of Income (unaudited) (S in millions)
Scenario: Pro Forma Debt Adjustment (Base Case)
2013-2017 Second Revised WJC-2.B
Page 1 of 1
Witness Responsible: William J. Chambers

26 Equal to the USD US Utility BBB-, 1-year rate (CO401Y Index) as of Dec. 8, 2012. From Bloomberg.
28 (Prior Year Line 25 from Second Revised WJC-2.C $*$ Line $26+$ Additonal S25IM in LT Debt * Line 27)*-1.


[^25]36 Previous year value + Line 39 frorn Second Revised WJC-2.B + (Line 14 and Line 15 from Second Revised WJC-2,D). 2013 value calculated using an inmuted 2012 value from
The Dayton Power and Light Company Projected Balance Sheet (unaudited) (S in millions)
Scenario: Pro Forma Debt Adjustment (Base Case)
2013-2017 Second Revised WJC-2.C
Data: Forecasted
Projected Statement of Cash Flows (unaudited) ( $\$$ in millions) 2013-2017

Data: Historical and Forecasted
The Dayton Power and Light Company
Case No. 12-426-EL-SSO Actual and Projected Financial Ratios
Scenario: Pro Forma Debt Adjustment with No Switching Tracker
2011-2017
Second Revised WJC-3
 $\frac{\text { sptip!u!a }}{}$ Profitability - 2011 - 2017 Type of Filing: Second Revised
Work Paper Reference No(s):: Second Revised WJC-3.A
Work Paper Reference No(s):: Second Revised WJC-3.A

\[\)|  Scenario: Pro Forma Debt Adjustment with No Switching Tracker  |
| :--- |
|  2011-2017  |

\]

Data: Historical and Forecasted

Notes \& Sources:
(C) Line $8 /\left(-1^{*}\right.$ Line 4) from Second Revised WJC-3.A.
(D) (Line 13 - Line 4) $/(-1 *$ Line 4) from Second Revised WJC-3.A.
Line 22 / Line 8 from Second Revised WJC-3.A.
Line 22 / Line 13 from Second Revised WJC-3.A.
Line 22 /(Line $20+$ Line 26) from Second Revised WJC-3.A.
ine 24 / (Line 20 + Line 26) from Second Revised WJC-3.A.
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 Second Revised WJC-3.A.
Equal to Operating Income / Total Revenue. Line 3 / Line 2 from Second Revised WJC-3.A.
(K) Equal to (Net Income + Issuance of pref. stock) / Average Common Shareholder's Equity. (Line 6+ Line 17)/Line 25 from Second Revised WJC-3.A. (L) Equal to Dividends paid to DPL Inc / (Net Income + Issuance of pref. stock). Line 16 / (Line $6+$ Line 17) from Second Revised WJC-3.A.
The Dayton Power and Light Company
Case No. 12-426-EL-SSO
Required Data for Financial Ratio Calculations ( $\$$ in millions) 2011-2017

[^26]The Dayton Power and Light Company
Projected Statements of Income (unaudited) (S in millions)
Scenario: Pro Forma Debt Adjustruent with No Switching Tracker
2013-2017

Notes \& Suurces:
Equal to the USD US Utility BBB-, 1-year rate (C0401Y Index) as of Dec. 8, 2012. From Bloomberg.
(Prior Year Line 25 from Second Revised WJC-3.C* Line $26+$ Additonal $\$ 251 \mathrm{M}$ in LT Debt ${ }^{*}$ Line 27)*-1.
The Dayton Power and Light Company
Case No. 12-426-EL-sSO
Projected Balance Sheet (unaudited) ( S in millions)

Data: Forecasted
The Dayton Power and Light Company
Case No. 12-426-EL-SSO
Projected Statement of Cash Flows (unaudited) (\$ in millions) Scenario: Pro Forma Debt Adjustment with No Switching Tracker Second Revised WJC-3.D 2013-2017 Page 1 of 1
Witness Responsible: William J. Chambers

Notes \& Sources:
Change in Line 29 from Second Revised WJC-3.C. 2012 value 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
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 shor-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 Documents.
Data: Historical and Forecasted
and Revised WJC-4.A
Type of Filing: Second Revised
Work Paper Reference No(s).: S
Scenario: Pro Forma Debt Adjustment with No SSR
2011-2017

| Data: H <br> Type of Work P |  | recasted Revised No(s).: Seco | Revised W |  |  |  |  |  |  | ess Res | Second Revis <br> le: William | ised WJC-4 Page 1 of 1 Chambers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Interes | verage |  |  | Capital | Structure | Liquidity | Prof |  | Dividends |  |
| $\begin{aligned} & \text { Line } \\ & \text { No. } \end{aligned}$ | Year | Operating <br> EBITDA/ <br> Interest <br> Expense | $\mathrm{FFO}+$ <br> Interest/ <br> Interest <br> Expense | Debt/ Operating EBITDA | $\begin{aligned} & \text { Debt/ } \\ & \text { FFO } \end{aligned}$ | Total Debt/ <br> Total Capital | Common Equity/ Total Capital | Internal <br> Generation | Operating <br> Margin | ROE | Common <br> Dividend <br> Payout <br> Ratio |  |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | ( $)$ | (K) | (L) |  |
| 1 | 2011 | 8.96 | 8.41 | 2.54 | 3.07 | 0.51 | 0.48 | 0.76 | 19.1\% | 14.8\% | 1.19 |  |
| 2 | 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 3 | 2014 |  |  |  |  |  |  |  |  |  |  |  |
| 4 | 2015 |  |  |  |  |  |  |  |  |  |  |  |
| 5 | 2016 |  |  |  |  |  |  |  |  |  |  |  |
| 6 | 2017 |  |  |  |  |  |  |  |  |  |  |  |

Notes \& Sources:
(C) Line $8 /(-1$ * Line 4$)$ from Second Revised WJC-4.A. (D) (Line 13 - Line 4) / -1 * Line 4) from Second Revised WJC-4.A.
(E) Line 22 / Line 8 from Second Revised WJC-4.A.
(F) Line 22 / Line 13 from Second Revised WJC-4.A.
(G) Line 22 / (Line $20+$ Line 25) from Second Revised WJC-4.A.
(H) Line 23 /(Line 20 + Line 25) from Second Revised WJC-4.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 Second Revised WJC-4.A.
Equal to Operating Income / Total Revenue. Line 3 /Line 2 from Second Revised WJC-4.A.
(K) Equal to (Net Income + Issuance of pref. stock) / Average Common Shareholder's Equity. (Line $6+$ Line 17) / Line 24 from Second Revised WJC-4.A.
(L) Equal to Dividends paid to DPL Inc / (Net Income + Issuance of pref. stock). Line 16 / (Line $6+$ Line 17) from Second Revised WJC-4.A.
The Dayton Power and Light Company
Required Data for Financial Ratio Calculations ( $S$ in millions) Scenario: Pro Forma Debt Adjustment with No SSR
2011-2017

[^27]
The Dayton Fower and Light Company Projected Balauce Sheet (onaudited) (S in millions)
Scensrio: Pro Forma Debt Adjnstment with No SSR

Projected Statement of Cash Flows (unaudited) (\$ iu millions) 29 Debt Adjustment with No SSR
2013-2017

\footnotetext{
Data: Forecasted
Type of Filing: Second Revised
Second Revised WJC-4.D
Page 1 of 1 Witness Responsible: William J. Chambers

See Below.
Imputed value from Intemal documents.
ine 39 from Second Revised WJC-4.B. Line 18 from Second Revised WJC-4.B

## Sum (Line 2 -Line 6).

Intemal Documents.
Internal Documents.
See Below.
See Below.
Internal Documents.
Intemal Documents.
Intemal Documents.
Line 12 + Line 14 + Line 15 + Line 16.
Line $7+$ Line $9+$ Line 17.
See Below.
Line 20 + Line 21.
(G)
$\square$
Estimated Balance at December 31,
(E) (F)

Pr
Notes \& Sources:
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.

| Line <br> No. | Estimated Balance at December 31, |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Description | 2013 | 2014 | 2015 | 2016 | 2017 | Source |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) |
| 1 |  |  |  |  |  |  |  |
| 2 | Net Income |  |  |  |  |  | Line 39 from Second Revised WJC-4.B. |
| 3 | Depreciation and Amortization |  |  |  |  |  | Line 18 from Second Revised WJC-4.B. |
| 4 | Change in Deferred taxes |  |  |  |  |  | See Below. |
| 5 | Change in Certain Current Assets and Liabilities |  |  |  |  |  | Imputed value from Intemal documents. |
| 6 | Other |  |  |  |  |  |  |
| 7 | Net cash provided by operating activities |  |  |  |  |  | Sum (Line 2 - Line 6). |
| 8 ( 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 Lnc |  |  |  |  |  | Internal Documents. |
| 14 | Actual Dividends paid to DPL Ine |  |  |  |  |  | See Below. |
| 15 | Issuance of pref. stock |  |  |  |  |  | Intemal 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 |  |  |  |  |  | See Below. |
| 22 | Cash and cash equivalents at end of period |  |  |  |  |  | Line $20+$ Line 21. |
|  | Notes \& Sources: |  |  |  |  |  |  |
| 4 | Change in Line 29 from Second Revised WJC-4.C. 2012 value average of 2011 and 2013 value. |  |  |  |  |  |  |
| 12 | Line 11 unless Line 22 falls below $\$ 10 \mathrm{M}$ and Line 14 equals \$0. Then increased such that Line 22 is equal to $\$ 10 \mathrm{M}$, |  |  |  |  |  |  |
| 14 | Equal to Line 13 unless Line 22 falls below $\$ 10 \mathrm{M}$ | $\text { ount } 0 \text {. }$ | debt. D | lowe | Line 2 | \$10M | original issuance of short-term debt. |
| 21 | Line 22 from previous year. 2013 value from Inte |  |  |  |  |  |  |

## The Dayton Power and Light Company

 2013-2017Data: Historical and Forecasted
Type of Filing: Second Revised
Work Paper Reference No(s).: Second Revised WJC-5.A

## The Dayton Power and Light Company

Case No. 12-426-EL-SSO
Actual and Projected Financial
Scenario: Pro Forma Debt Adjustment with No Switching Tracker \& No SSR 2011-2017
Second Revised WIC-5 Witness Responsible: William J. Chambers Dividend犀

The Dayton Power and Light Company
Required Data for Financial Ratio Calculations ( $\$$ in millions)

| Data: Historical and Forecasted |
| :--- |
| Type of Filing: Second Revised |
| Work Paper Reference No(s): Second Revised WJC-5.B; Second Revised WJC-5.C; Second Revised WJC-5.D; Second Revised WJC-11 |


| Data: Historical and Forecasted |
| :--- |
| Type of Filing: Second Revised |
| Work Paper Reference No(s): Second Revised WJC-5.B; Second Revised WJC-5.C; Second Revised WJC-5.D; Second Revised WJC-11 |


| Line <br> No. | Description |  | 2011 | $2013$ | 2014 | 2015 | 2016 | 2017 | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (A) | (B) |  | (C) | (D) | (E) | (F) | (G) | (H) | (1) |
| 1 | Statements of Income |  |  |  |  |  |  |  |  |
| 2 | Total Revenue | \$ | 1,678 | \$ |  |  |  |  | Line 7 from Second Revised WJC-5.B. |
| 3 | Operating Income | \$ | 320 | \$ |  |  |  |  | Line 22 from Second Revised WJC-5.B. |
| 4 | Interest Expense | \$ | (51) | \$ |  |  |  |  | Line 30 from Second Revised WJC-5.B. |
| 5 | Depreciation and Amortization | \$ | 135 | \$ |  |  |  |  | Line 18 from Second Revised WJC-S.B. |
| 6 | Net Income | \$ | 186 | \$ |  |  |  |  | Line 39 from Second Revised WJC-5.B. |
| 7 |  |  |  |  |  |  |  |  |  |
| 8 | Operating EBITDA | \$ | 455 | \$ |  |  |  |  | Line $3+$ Line 5. |
| 9 |  |  |  |  |  |  |  |  |  |
| 10 | Statement of Cash Flows |  |  |  |  |  |  |  |  |
| 11 | Net Cash Provided by Operating Activities | \$ | 348 | \$ |  |  |  |  | Line 7 from Second Revised WJC-5.D, |
| 12 | Change in Cerrain Assets and Liabilities | \$ | (28) | \$ |  |  |  |  | Line 5 from Second Revised WJC-5.D. |
| 13 | Funds From Operations | \$ | 376 | \$ |  |  |  |  | Line 11 - Line 12. |
| 14 |  |  |  |  |  |  |  |  |  |
| 15 | Capital Expenditures | \$ | 205 | \$ |  |  |  |  | See Below. |
| 16 | Dividends paid to DPL Inc | \$ | 220 | \$ |  |  |  |  | -1 * Line 14 from Second Revised WJC-5.D. |
| 17 | Issuance of pref. stock | \$ | (1) | \$ |  |  |  |  | Line 15 from Second Revised WJC-5.D. |
| 18 |  |  |  |  |  |  |  |  |  |
| 19 | Balance Sheet |  |  |  |  |  |  |  |  |
| 20 | Short-Term Debt | \$ | - | \$ |  |  |  |  | Line 25 from Second Revised WJC-5.C. |
| 21 | Long-Term Debt | \$ | 1,155 | \$ |  |  |  |  | Line 38 from Second Revised WJC-5.C. |
| 22 | Total Debt | \$ | 1,155 | \$ |  |  |  |  | Line $20+$ Line 21. |
| 23 |  |  |  |  |  |  |  |  |  |
| 24 | Common Shareholder's Equity | \$ | 1,107 | \$ |  |  |  |  | Line 36 from Second Revised WJC-5.C. |
| 25 | Average Common Shareholder's Equity | \$ | 1,243 | \$ |  |  |  |  | See Below. |
| 26 | Total Capitalization | \$ | 2,285 | \$ |  |  |  |  | Line 39 from Second Revised WJC-5.C. |

Required Data for Financial Ratio Calculations (S in miltions)
Scenario: Pro Forma Debt Adjustment with No Switching Tracker \& No SSR
2011-2017

[^28]Data: Forrecasted
Projected Statements of Income (unaudited) (\$ in millions)
Scenario: Pro Forma Debt Adjustment with No Switching Tracker \& No SSR
2013-2017
Second Revised WJC-5.B
Page 1 of 1
Witness Responsible: William ). Chambers

Equal to the USD US Utility BBB, 1 -year rate (C0401Y Index) as of Dec. 8 , 2012. From Bloomberg
(Prior Year Line 25 from Second Revised WIC-5.C $*$ Line $26+$ Additonal $\$ 251 \mathrm{M}$ in LT Debt * Line 27 ) -1 .
Data: Forecasted
Scenario: Pro Forma Debt Adjustment No Switching Tracker \& No SSR

Data: Forecasted
The Dayton Power and Light Company
Case No. 12-426-EL_SSO
Case No. 12-426-EL_SSO
Projected Statement of Cash Flows (unaudit Projected
Scenario: Pro Forma Debt Adjustment with No Switching Tracker \& No SSR
$2013-2017$ Second Revised WJC-5.D
Page 1 of 1 Wimess Responsible: William J. Chambers

Line 39 from Second Revised WJC-5.B.
Line 18 from Second Revised WJC-5.B.
See Below.
Imputed value from Intemal documents.
Sum (Line 2 - Line 6).
Internal Documents.
Internal Documents.
See Below.
Internal Documents.
See Below.
Intemal Documents.
Internal Documents.
Line $12+$ Line $14+$ Line $15+$ Line 16.

Line $7+$ Line $9+$ Line 17.
See Below.
Line $20+$ Line 21 .
The Dayton Power And Light Company
Case No. 12-426-EL-SSO
Operating EBITDA / Interest Expense Ratio By Scenario
Second Revised WJC-6.A
Page 1 of 1
Witness Responsible: William J Chambers

201520162017
-2011 Fitch Median Utility BBB-
The Dayton Power and Light Company ratios from Second Revised WJC-1, Second Revised WJC-2, Second Revised WJC-3, Second Revised WJC-4, and Second Revised WJC-5.
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.
Range represents +/- one standard deviation.

## The Dayton Power And Light Company Case No. 12-426-EL-SSO <br> (FFO + Interest Expense) / Interest Expense By Scenario

g'9-OIM pasuay puozas


 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. Range represents $+/$ - one standard deviation.
The Dayton Power And Light Company Case No. 12-426-EL-SSO
Debt / Operating EBITDA
By Scenario
Second Revised WJC-6.C
Witness Responsible: William J. Chambers


Data: Historical and Forecasted Work Paper Reference No(s): Second Revised WJC-1; Second Revised WJC-2; Second Revised WJC-3; Type of Filing: Second Revised Second Revised WJC-4; Second Revised WJC-5

## The Dayton Power And Light Company Case No. 12-426-EL-SSO <br> Debt / FFO By Scenario <br> - By Scenario



Notes \& Sources:
The Dayton Power
The Dayton Power and Light Company ratios from Second Revised WJC-1, Second Revised WJC-2, Second Revised WJC-3, Second Revised WJC-4, and Second Revised WJC-5.
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.
Range represents $+/$ - one standard deviation.
Data: Historical and Forecasted
The Dayton Power And Light Company Case No. 12-426-EL-SSO
Return on Equity
By Scenario


-2011 Fitch Median Utility BBB-
The Dayton Power and Light Company ratios from Second Revised WJC-I, Second Revised WJC-2, Second Revised WJC-3, Second Revised WJC-4, and Second Revised WJC-5. 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. Range represents +/- one standard deviation.

 and Second Revised WJC-5.D
The Dayton Power And Light Company
Case No. 12-426-EL-SSO Short Term Debt Outstanding
By Scenario

The Dayton Power and Light Company Short Term Debt equal to Line 25 from Second Revised WJC-1.C, Second Revised WJC-2.C, Second Revised WJC-3.C, Second Revised WJC-4.C,
The Dayton Power And Light Company
Case No. 12-426-EL-SSO
Summary of Scenarios
$\begin{array}{lr}\text { Data: Forecasted } & \text { Second Revised WJC-8 } \\ \text { Type of Filing: Second Revised } & \text { Page } 1 \text { of } 1 \\ \text { Work Paper Reference No(s).: None } & \text { Witness Responsible: William J. Chambers }\end{array}$

Scenario
Base Case
No Switching Tracker
No SSR
No Switching Tracker \& No SSR
The Dayton Power And Light Company Case No. 12-426-EL-SSO Second Revised WJC-9
Page 1 of 1



Capital Structure of Comparable Firms to DP\&L
[G] Book Value of Common Equity for 6/30/2012. Data from Capital IQ. Data for CV from SEC-Edgar, 10Q, on $3 / 31 / 2012$ (dollars in millions).
[H] Book Value of Minority Interest for $6 / 30 / 2012$. Data from Capital IQ. Data for CV from SEC-Edgar, 10 Q , on $3 / 31 / 2012$ (dollars in millions).
[I] Book Value of Preferred Equity for $6 / 30 / 2012$. Data from Capital IQ. Data for CV from SEC-Edgar, 10 Q , on $3 / 31 / 2012$ (dollars in millions). [J] Book Value of Total Debt for 6/30/2012. Data from Capital IQ. Data for CV from SEC-Edgar, 10Q, on 3/31/2012 (dollars in millions).


Fitch 2011 BRE- Integrated Utility Company Financial Ratios
$1-8 \frac{\text { Notes \& Sources: }}{\text { From Fitch Ratings, U.S. Uoilities, Power \& Gas Financial Peer Study, June 2012, at 12. Includes all firms from BBB-IDR list except Dayton Power \& Light Company. }}$



|  |  | Interest Coverage ( x ) |  |  | Leverage |  |  | Capital Structure |  |  | Liquidity | Profitability |  | Dividends |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Line } \\ & \text { No. } \end{aligned}$ | Integrated Utility Company | Operating <br> EBTT/ <br> Interest <br> Expense | Operating EBITDA <br> Interest Expense | FFO + <br> Interest' <br> Interest <br> Expense | Debt Operating EBITDA | FFO/Debt | $\begin{aligned} & \text { Debt } \\ & \text { FFO } \\ & \hline \end{aligned}$ | Total Debt/ Total Capital | Total Hybrid Equity/Total Capital | $\begin{gathered} \text { Common } \\ \text { Equity } \\ \text { Total Capital } \\ \hline \end{gathered}$ | Internal Generation | Operating Margin | ROE | Common <br> Dividend Payout Ratio |
| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (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 | 0.24 | 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 | Southwestem Electric Power Company | 2.40 | 3.50 | 3.50 | 4.70 | 0.15 | 6.60 | 53.1\% | * | 46.5\% | 0.70 | 18.3\% | 9.3\% | 0.03 |
| 10 | Non-DP\&LMedian | 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 | * | 8.96 | 8.41 | 2.54 | * | 3.07 | 50.5\% | * | 0.48 | 0.76 | 19.1\% | 14.8\% | 1.19 |

Work Papes Reference No(s).: Second Revised WJC-1; Second Revised WJC-2
10 Median of Line 1 -Line 8.

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: Historica | nd Forecasted |  |  |  | cond Revised WJC-11 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Type of Filing: | cond Revised |  |  |  | Page 1 of 1 |
| Work Paper Re | ence No(s).: Second Revised W | 2.B; |  | Responsib | William J. Chambers |
| Second Revis | WJC-2.D; |  |  |  |  |
| CLJ Second R | ised Exhibits with DETAIL 12. | .x1sx |  |  |  |
|  |  | 12/3 | 2012 | 12/3 | 013 |
| Line |  |  |  |  |  |
| No. | Line Item | As-Filed | Pro Forma | As-Filed | Pro Forma |
| (A) | (B) | (C) | (D) | (E) | (F) |
| 1 | Short Term Debt | 0 | 0 | 0 | 0 |
| 2 |  |  |  |  |  |
| 3 | Common Shareholder's Equity | 1,383 | 1,132 | 1,478 | 1,219 |
| 4 | Preferred Stock | 23 | 23 | 23 | 23 |
| 5 | Long Term Debt | 904 | 1,155 | 904 | 1,155 |
| 6 | Total Capitalization | 2,310 | 2,310 | 2,405 | 2,397 |
| 7 | Debt Ratio | 39\% | 50\% | 38\% | 48\% |

Notes \& Sources:
(C) Equal to (E), except Common Shareholder's Equity. Common Shareholder's Equity for (C) calculated as $\$ 146.1$ net income less $\$ 51.0$ dividend. See CLJ Second Revised Exhibits with DETAIL 12.10.12.xlsx.
(D) Equal to (C), except Long Term Debt increases by $\$ 250.9$ million and Common Shareholder's
Equity decreases by a like amount so that the Debt Ratio equals $50 \%$.
CLJ Second Revised Exhibits with DETAIL 12.10.12.xlsx
(F) Equal to (D), except Common Shareholder's Equity, which also includes 2013 retained earnings



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

[^3]:    ${ }^{4}$ The exhibits to this Second Revised testimony have the same exhibit numbers as in my Original testimony. I understand that other witnesses have also re-used the exhibit numbers in their original testimonies. All exhibit references in this testimony refer to the revised versions.

[^4]:    ${ }^{5}$ 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.

[^5]:    ${ }^{6}$ Standard \& Poor's, "2008 Corporate Criteria: Analytical Methodology," April 15, 2008, at 1.

[^6]:    ${ }^{7}$ Standard \& Poor's, "New Business Profile Scores Assigned for U.S. Utility and Power Companies; Financial Guidelines Revised," June 2, 2004, at 10.
    ${ }^{8}$ Standard \& Poor's, "DPL Inc., Dayton Power \& Light Ratings Lowered Two Notches, To 'BB' From 'BBB-'; Debt Ratings Aiso Cut; Outlook Stable," November 9, 2012.

[^7]:    ${ }^{9}$ See, e.g., Standard \& Poor's, "Utilities: Key Credit Factors: Business and Financial Risks in the Investor-Owned Utilities Industry," November 26, 2008.
    ${ }^{10}$ EBITDA is earnings before interest, taxes, depreciation and amortization.
    ${ }^{11}$ EBIT is earnings before interest and taxes.

[^8]:    ${ }^{12}$ Moody's Analytics, "Precis U.S. Metro - Dayton," June 2012, at 1.

[^9]:    ${ }^{13}$ Miller, T., "DPL Incorporated," Morningstar Equity Research, September 27, 2011, at 2.

[^10]:    ${ }^{15}$ See, e.g., Baird Equities Research, "DPL Inc. (DPL)," July 29, 2011, at 2.
    ${ }^{15}$ Morningstar Equity Research, "DPL Incorporated," September 27, 2011, at 2.

[^11]:    ${ }^{16}$ Standard\& Poor's, "DPL Inc., Dayton Power \& Light Ratings Lowered Two Notches, To 'BB' From 'BBB-'; Debt Ratings Also Cut; Outlook Stable," November 9, 2012.
    ${ }^{17}$ Standard \& Poor's, "S\&P May Cut Dayton Power \& Light Co. Ratings," April 23, 2012.
    ${ }^{18}$ Moody's Investors Service, "Moody's Downgrades DPL to Bal and DP\&L to Baa2 Following Acquisition by AES," November 28, 2011.

[^12]:    ${ }^{19}$ Moody's Investors Service, "Moody's Disclosures on Credit Ratings of DPL Inc.," March 30, 2012.
    ${ }^{20}$ Moody's Investors Service, "Moody's places the ratings of DPL and DP\&L under review for possible downgrade," November 9, 2012.
    ${ }^{21}$ FitchRatings, "Fitch Downgrades DPL to 'BB+' and DP\&L to 'BBB-' Following Acquisition by AES; Outlook Stable," November 29, 2011.

[^13]:    ${ }^{22}$ FitchRatings, "Fitch Downgrades DPL and Places DPL and DP\&L on Rating Watch Negative," November 7, 2012.

[^14]:    ${ }^{23}$ 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.

[^15]:    ${ }^{24}$ 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."

[^16]:    ${ }^{25}$ EIA Annual Energy Outlook 2012.xlsx.

[^17]:    ${ }^{26}$ Note that there are slight differences between my exhibits and WP-12 due to rounding.

[^18]:    ${ }^{27}$ As my calculations require additional detail beyond what is included in Second Revised Exhibits CLJ-2, CLJ-3, and CLJ-4, I rely on the underlying spreadsheet 'CLJ Second Revised Exhibits with DETAIL 12.10.12.xlsx' provided to me on December 10, 2012.
    ${ }^{28}$ I assume that the interest rate on that short term debt is $1.16 \%$, which is the yield on an index from Bloomberg based on the one year debt of BBB- rated U.S. utilities (C0401Y) as 12/7/12.

[^19]:    ${ }^{29}$ These projections were provided to me in an Excel spreadsheet 'CLJ Second Revised Exhibits with DETAILincremental switching 12.10.12.xlsx' on December 10, 2012. With approval of the Switching Tracker, additional switching would result in financial projections similar to the Base Case. But the Switching Tracker would only partially offset the loss due to increased switching because of differences between the Switching Tracker calculation and DP\&L's assumed margin on retained customers and a timing difference, as I understand true-up payments under the Switching Tracker would be made some time after the additional shopping occurred.
    ${ }^{30}$ Miller, T., "DPL Incorporated," Momingstar Equity Research, September 27, 2011 , at 3.

[^20]:    ${ }^{31}$ FitchRatings, "Fitch Downgrades DPL and Places DPL and DP\&L on Rating Watch Negative," November 7, 2012.

[^21]:    ${ }^{33}$ 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 ).
    ${ }^{34}$ 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.

[^22]:    ${ }^{35}$ David Parcell, The Cost of Capital - A Practitioner's Guide, Society of Utility and Regulatory Financial Analysts, 2010 .

[^23]:    rating． UPC－Utility parent company．UDC－Utility distribution company．IUC－Integrated itility company．CGC－C
    Source：Fitch Ratings． ny．CGC－Competitive generating company．IDR－Issuer default

[^24]:    U．S．Utilities，Power \＆Gas Financial Peer Study
    June 22， 2012

[^25]:    Notes \& Sources:
    Previous year value

[^26]:    V'と-OIM pas!nay puozs
    
    

    2011 data from DP\&L Financial Statements from 2011 DPL Inc. Annual Report, adjusted for the additional $\$ 251 \mathrm{M}$ long term debt. See Second Revised WJC-11. All other sources described in column (I). Change in Line 10 from Second Revised 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 $\$ 1,132$ calculated from Internal Documents. See Second Revised WJC-11.

[^27]:    Data: Historical and Forecasted
    Data: Historical and Forecasted
    Type of Filing: Second Revised
    Work Paper Reference No(s): Second Revised WJC-4.B: Second Revised WJC-4.C: Second Revised WJC-4.D; Second Revised WJC-11 WJC-4.A
    Page 1 of 1
    Work Paper Reference No(s).: Second Revised WJC-4.B; Second Revised WJC-4.C; Second Revised WJC-4.D; Second Revised WJC-11
    Line
    

    15 Change in Line 10 from Second Revised WJC-4.C. 2012 PPE calculated as average 2011 and 2013 PPE. $\$ 251 \mathrm{M}$ long term debt. See Second Revised WJC-11. All other sources described in column (I).
    24 (Line $24_{t}+$ previous year Line $24_{t-1}$ )/2.2013 uses an imputed 2012 value of $\$ 1,132$ calculated from Intermal Documents. See Second Revised WJC-11.

[^28]:    2011 data from DP\&L Financial Statements from 2011 DPL Inc. Annual Report, adjusted for the additional \$251M long term debt. See Second Revised WJC-11. All other sources described in column (I). Change in Line 10 from Second Revised WJC-5.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 $20 i 2$ value of $\$ 1,132$ calculated from Internal Documents. See Second Revised WJC-11.

