BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2011 Under the Electric Security Plans of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company	**Case No. 12-1544-EL-UNC**

APPLICATION

By its Second Finding and Order and its Second Opinion and Order dated, respectively, March 4 and March 25, 2009, in Case No. 08-935-EL-SSO, the Commission approved an Electric Security Plan ("ESP 1") under Ohio Revised Code 4928.143 for Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company (collectively, "Companies"). ESP 1 was in effect until May 31, 2011. On August 25, 2010, the Commission approved a Combined Stipulation regarding the Companies' second Electric Security Plan ("ESP 2") in Case No. 10-388-EL-SSO. ESP 2 became effective on June 1, 2011.

Each of the Companies is an electric distribution utility within the meaning of Ohio Revised Code 4928.01(A)(6). Under Ohio Revised Code 4928.143(F), the Commission is to consider, following the end of each annual period of an ESP, whether significantly excessive earnings have resulted for an electric distribution utility under its ESP "as measured by whether the earned return on common equity of the electric distribution utility is significantly in excess of the return on common equity that was earned during the same period by publicly traded companies, including utilities, that face comparable business and financial risk, with such adjustments for capital structure as may be appropriate." Pursuant to the provisions of Ohio Revised Code 4928.143(F) and Ohio Administrative Code 4901:1-35-3(C)(10), the Companies

by this Application request the Commission's determination that significantly excessive earnings did not result for the Companies under their ESPs with respect to the annual period ending December 31, 2011.

In support of the requested determination, the Application is accompanied by the testimony and analysis of Kevin R. Burgess and Dr. Michael J. Vilbert. (Attachments 1 and 2). In addition, and as contemplated under the cited Ohio Administrative Code section, provided for each of the Companies as part of the Application are the FERC Form 1 for 2011 and the Securities and Exchange Commission Form 10-K filing for 2011.[1]

Also as contemplated under the cited Ohio Administrative Code section is a presentation of the Companies' capital budget requirements for future committed investments in Ohio for each annual period remaining in the ESP.[2] The statute provides that in connection with the determination of whether significantly excessive earnings exist "[c]onsideration also shall be given to the capital requirements of future committed investments in this state." Additionally, the accompanying testimony also addresses the group of various factors (expressly set out in the Opinion and Order of June 30, 2010, Case No. 09-786-EL-UNC, p. 29) which the Commission views as reflecting "significant variations" among Ohio's electric utilities. In the context of the review applicable to 2011, however, the Companies submit that analysis of financial performance metrics provided for the Companies and the comparable publicly traded companies provide a substantial and adequate basis to support the conclusion that significantly excessive

[1] As these documents are readily and publicly available online at the websites of the agencies of the federal government with which they have been filed, hard copies of these voluminous documents have not been physically submitted to the Docketing Division. The Companies' FERC Form 1 for 2011 can be located on the docketing section of the Commission's website in Case No. 12-0001-EL-RPT, filed on April 17, 2012. The Companies' Securities and Exchange Commission Form 10-K filing for 2011 can be located on the SEC website. See http://www.sec.gov/edgar/searchedgar/companysearch.html .

[2] The Companies capital requirements can be found on pages 12-14 of the Securities and Exchange Commission Form 10-K filing for 2011. The website where the Securities and Exchange Commission Form 10-K filing for 2011 can be located is listed in the footnote above.

earnings did not result. Accordingly, the Commission need not engage in any detailed analysis of future capital requirements nor the other factors in order to reach the determination requested herein.

WHEREFORE, based upon the foregoing, the Companies request that the Commission determine and set out as its findings and order in this case that for the annual period ending December 31, 2011, the earnings of the Companies under ESP 1 and ESP 2 were not significantly excessive.

Respectfully submitted,

/s/ *Carrie M. Dunn*

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ATTORNEYS FOR APPLICANTS, OHIO EDISON COMPANY, THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, AND THE TOLEDO EDISON COMPANY

[Attachment 1 to Application]

BEFORE THE

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DIRECT TESTIMONY OF

KEVIN R. BURGESS

ON BEHALF OF

OHIO EDISON COMPANY
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
THE TOLEDO EDISON COMPANY

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.

A. My name is Kevin R. Burgess. My business address is FirstEnergy Corp. ("FirstEnergy"), 76 South Main Street, Akron, Ohio 44308. I am Assistant Controller of FirstEnergy and a number of its subsidiary companies, including Ohio Edison Company ("OE"), The Cleveland Electric Illuminating Company ("CEI"), and The Toledo Edison Company ("TE") (collectively, "Companies").

Q. WHAT ARE YOUR EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS?

A. I earned a Bachelor of Arts degree in Economics and Business with an emphasis in Accounting from Hendrix College in 1987 and a Master of Business Administration degree from The Ohio State University in 2010. I started with FirstEnergy in 1999 as Manager, Business Services for Fossil Generation. In 2002, I became Director, Planning & Analysis for FirstEnergy Solutions Corp. ("FES"). In 2004 I was promoted to Controller at FES and in 2005, I was promoted to Controller, Energy Delivery for the FirstEnergy utilities. In May 2009, I was promoted to Assistant Controller of FirstEnergy and a number of its subsidiaries.

Q. PLEASE DESCRIBE YOUR DUTIES AS ASSISTANT CONTROLLER.

A. I am responsible for: insuring that the financial, accounting, and tax records of FirstEnergy and its subsidiaries are maintained in conformity with generally accepted accounting principles ("GAAP") and regulatory requirements; disbursements to employees, tax authorities and vendors; external financial reporting; accounting

research in connection with proposed accounting standards and proposed business transactions; and cost analysis and account classification of construction projects.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to present information for purposes of the Commission's annual test with respect to whether the Companies' ESP has resulted in significantly excessive earnings per Ohio Revised Code 4928.143(F). I am responsible for identifying and quantifying transactions that are included in the accounts for each of the companies under GAAP but are excluded from their Ohio regulatory books of account for purposes of the significantly excessive earnings evaluation. In particular, I provide information regarding the Companies' earnings and equity which supports the conclusion that the return on equity that was earned in 2011 by the Companies was not significantly in excess of the return that was earned by publicly traded companies as described in the statute. I also sponsor materials that are required to accompany the Companies' filing under Ohio Administrative Code 4901:1-35-03(C)(10)(a).

Q. IS YOUR TESTIMONY IN THIS PROCEEDING CONSISTENT WITH THE COMMISSION'S JUNE 30, 2010 FINDING AND ORDER AND AUGUST 25, 2010 ENTRY ON REHEARING IN CASE NO. 09-786-EL-UNC ("09-786 CASE")?

A. Yes, my analysis and conclusions here are consistent with the Finding and Order and Entry on Rehearing where applicable to the Companies. The analysis and conclusions

are also consistent with the Companies' filing in Case No. 10-1265-EL-UNC and the Companies' filing in Case No. 11-4553-EL-UNC.

Q. WHAT MATERIALS HAVE YOU INCLUDED WITH YOUR TESTIMONY?

A. I have included the following four attachments to my testimony:

Attachment KRB-1	Return on Equity Calculation
Attachment KRB-2	Net Income Calculation
Attachment KRB-3	Common Equity Calculation
Attachment KRB-4	Capital Structure, Debt Cost, Effective Income Tax Rates

Q. HAVE YOU INCLUDED THE COMPANIES' FERC FORM 1 AND SEC FORM 10-K IN YOUR FILING PURSUANT TO OHIO ADMINISTRATIVE CODE 4901:1-35-03(C)(10)(a)?

A. No. As discussed in the Application, the Companies' FERC Form 1 and SEC Form 10-K are publicly available documents that can be located on the Internet. Due to the voluminous nature and public availability of these documents, the Commission Staff has advised the Companies that it is acceptable to fulfill this requirement by citing where parties may locate these documents on the Internet. The URLs where these documents can be found on the Internet are provided in the Application.

Q. DO YOU SPONSOR THE COMPANIES' ANALYSIS OF THE RETURN ON EQUITY EARNED BY THE COMPARABLE GROUP OF PUBLICLY TRADED COMPANIES DURING 2011 OR THE THRESHOLD ABOVE SUCH RETURN AT WHICH THE COMPANIES' EARNINGS WOULD BE CONSIDERED SIGNIFICANTLY EXCESSIVE?

A. No. That analysis is sponsored by Companies' Witness Dr. Michael J. Vilbert.

Q. DID YOU PROVIDE THE COMPANIES' 2011 CAPITAL STRUCTURE, EFFECTIVE INCOME TAX RATES, AND DEBT COST INFORMATION UPON WHICH DR. VILBERT RELIES FOR HIS ANALYSIS?

A. Yes, I provided the Companies' 2011 capital structure, effective income tax rates, and debt cost information to Dr. Vilbert for use in his analysis. This information can be found on Attachment KRB-4.

Q. PLEASE EXPLAIN THE PROCESS FOR DETERMINING THE EARNED RETURN ON COMMON EQUITY FOR THE COMPANIES IN 2011.

A. The earned return on common equity was calculated by dividing 2011 net income by average common equity during 2011. For purposes of the determination of significantly excessive earnings, net income and common equity were adjusted as contemplated by the Stipulations in the Companies' ESPs and for other special items described below. Average common equity was calculated by summing the adjusted common equity balances at the end of each of the thirteen months from December 31, 2010 through December 31, 2011 and dividing the result by thirteen.

Q. DO THE COMPANIES HAVE PREFERRED STOCK OUTSTANDING FOR WHICH DIVIDEND REQUIREMENTS WOULD REDUCE NET INCOME AVAILABLE TO COMMON STOCKHOLDERS?

A. No, they do not.

Q. WHAT ARE THE SPECIFIC ADJUSTMENTS CONTEMPLATED BY THE STIPULATION IN THE COMPANIES' ESPs?

A. The specific adjustments contemplated by the Stipulation were to exclude the impact of (i) the write-off of regulatory assets due to the implementation of the Stipulated ESPs, (ii) the revenues under Rider DSI, (iii) a reduction in equity resulting from any write-off of goodwill, and (iv) deferred carrying charges.

Q. DID YOU ADJUST BOTH THE NET INCOME AMOUNTS AND COMMON EQUITY BALANCES IN YOUR ANALYSIS?

A. Yes, the monthly adjustments were applied to net income and were also applied to the determination of the average common equity balance.

Q. ARE THE COMMON EQUITY ADJUSTMENTS MADE IN THE 2011 SEET CUMULATIVE FROM 2009?

A. Yes, in order to reflect the cumulative nature of the equity balances the common equity adjustments made are cumulative from 2009 until May 31, 2011 when ESP 1 ended. Thereafter, the equity adjustments for the SEET associated with ESP 2 are cumulative as well.

Q. DID YOU MAKE AN ADJUSTMENT FOR THE WRITE-OFF OF GOODWILL IN 2009, 2010 OR 2011 AS ALLOWED FOR BY THE ESPs?

A. No. There were no impairments of goodwill recognized by the Companies in 2009, 2010 or 2011 so no associated adjustments were needed.

Q. DID YOU MAKE AN ADJUSTMENT TO EXCLUDE THE IMPACT OF THE WRITE-OFF OF REGULATORY ASSETS DUE TO THE IMPLEMENTATION OF THE ESPs?

A. Yes. In 2009, CEI wrote off approximately $216 million (pre-tax) of Regulatory Transition Charges ("RTC") and, in the aggregate, the Companies wrote off $10 million (pre-tax) of fuel-related regulatory assets due to the implementation of the ESPs. The adjustments have been applied to the common equity balances associated with the months in which the first ESP was in effect, since all adjustments to the balance sheet are cumulative. However, for the June 2011 equity balances and forward, these adjustments were not made, as the write-offs of the regulatory assets were associated with the first ESP.

Q. WHAT OTHER ADJUSTMENTS HAVE YOU MADE TO THE EARNINGS AND COMMON EQUITY BALANCES OF THE COMPANIES?

A. Consistent with the Companies' 2009 and 2010 SEET filings, I have made other adjustments for subsidiary company earnings unrelated to providing distribution services in Ohio and for other extraordinary and nonrecurring items. The

extraordinary items include organizational restructuring charges, impairments in the value of investments in securities held in nuclear decommissioning trusts, mark to market adjustments associated with our pension and post-retirement benefits plan, and liabilities incurred in connection with the economic development commitments contained in the Stipulated ESPs.

Q. WHY SHOULD THESE OTHER ADJUSTMENTS BE EXCLUDED FROM THE MEASURE OF RETURN ON EQUITY COMPUTED FOR THE UTILITY UNDER ANALYSIS?

A. If portions of a company's profits are extraordinary or nonrecurring, or are otherwise non-representative of the utility's operations, they should be excluded from the utility's return on equity calculation in order to maintain comparability with the basis upon which the earnings of a comparable group of companies are reported. In addition, if a portion of the utility's earnings are related to subsidiary companies not providing distribution services in Ohio, those earnings should be excluded for the SEET analysis. For example, Pennsylvania Power Company is a distribution subsidiary of Ohio Edison providing service in the Commonwealth of Pennsylvania -- its earnings, which are non-Ohio jurisdictional and unrelated to the provisions of an Ohio ESPs, should not be included for SEET purposes. These types of adjustments are consistent with the Order in Case No. 09-786-EL-UNC..

Q. WHAT ARE THE EARNINGS, AVERAGE COMMON EQUITY, AND RETURN ON EQUITY FOR THE COMPANIES FOR 2011 SEET PURPOSES?

A. The earnings in 2011, adjusted for the items described above, were $22,471,378 for CEI, $78,085,144 for OE, and $4,291,010 for TE. The average common equity with adjustments for 2011 was $1,284,264,631 for CEI, $777,714,341 for OE, and $366,653,873 for TE. The resulting return on equity for 2011 was 1.7% for CEI, 10.0% for OE, and 1.2% for TE. The underlying calculations supporting these amounts are shown in Attachments KRB-1, KRB-2, and KRB-3.

Q. DO YOU BELIEVE THAT ANY OF THE COMPANIES HAD SIGNIFICANTLY EXCESSIVE EARNINGS FOR 2011 WITHIN THE MEANING OF OHIO REVISED CODE 4928.143(F)?

A. No. Based upon my calculation of the Companies' returns on equity and Dr. Vilbert's calculation of the returns on equity for the comparable group of publicly traded companies and the analysis of SEET thresholds, I conclude that none of the Companies had significantly excessive earnings in 2011. My conclusion is the same when relying on either the Commission's "safe harbor" analysis or Dr. Vilbert's statistical analysis of what would comprise the threshold for determining significantly excessive earnings. Furthermore, the Companies do not have significantly excessive earnings if the threshold were to be determined using the methodology applied by the Commission in its Order in Case No. 10-1261-EL-UNC, as mentioned in the testimony of Dr. Vilbert.

Q. IN REACHING YOUR CONCLUSION, DID YOU TAKE INTO CONSIDERATION THE CAPITAL REQUIREMENTS OF THE COMPANIES' FUTURE COMMITTED INVESTMENTS IN OHIO?

A. No. As was the case with the Companies' 2009 and 2010 SEET filings, since the equity return results of the Companies were below the thresholds of what would comprise significantly excessive earnings as compared with the comparable group of publicly traded companies, I did not consider such an analysis necessary.

Q. PURSUANT TO OHIO ADMINISTRATIVE CODE 4901:1-35-03(C)(10)(a), WHAT ARE THE COMPANIES' CAPITAL BUDGET REQUIREMENTS FOR FUTURE COMMITTED INVESTMENTS IN OHIO FOR EACH ANNUAL PERIOD FOR THE REMAINING ESP PERIOD?

A. As discussed in the Application, the Companies' capital requirements can be found on pages 12-14 of the 2011 SEC Form 10-K. The URL where the SEC Form 10-K can be found on the Internet is provided in the Application.

Q. PLEASE DISCUSS THE FINDING AND ORDER AND ENTRY ON REHEARING IN CASE NO. 09-786-EL-UNC AS THEY RELATE TO THE COMPANIES.

A. The Finding and Order and the Entry on Rehearing provide direction on a number of issues that had been the topic of much discussion in the Companies' and other electric utilities' ESP cases and Case No. 09-786-EL-UNC. The Finding and Order took the

form of responding to eleven questions that had been previously posted to the Commission's website and available to the Companies and other electric utilities for comment and that were addressed in the question and answer session held before the Commission on April 1, 2010. In several of the Commission's responses to the eleven questions, electric utilities are directed to file a great deal of additional information and hypothetical scenarios (e.g., impacts to the SEET from earnings differences with and without implementation of an ESP and impacts from including and excluding deferrals) to facilitate the Commission's consideration of whether an electric utility had significantly excessive earnings in the prior year. For example, electric utilities are directed to address in their SEET filings the effect of including and excluding off-system sales, deferrals, and the differences between an electric utility's ESP and its prior rate plan. In addition, the Commission discusses giving consideration to other broad factors in its review, including factors related to an electric utility's risk profile. The Entry on Rehearing further addressed these issues.

Q. DO THE FINDING AND ORDER AND THE ENTRY ON REHEARING IN THE CASE NO. 09-786-EL-UNC PROVIDE GUIDANCE AS TO WHEN AN ELECTRIC UTILITY MUST INCLUDE IMPACTS TO THE SEET FROM EARNINGS DIFFERENCES UNDER A UTILITY'S CURRENT RATE PLAN AND PRIOR RATE PLAN?

A. Yes. On page 29 of the Order the Commission establishes a "safe harbor" of 200 basis points above the mean of the comparable group. Page 29 of the Finding and Order states, in part, "…any electric utility earning less than 200 basis points above

the mean of the comparable group will be found not to have significantly excessive earnings." On page 5 of the Entry on Rehearing the Commission clarifies that information comparing a utility's earnings under the current rate plan and prior rate plan is not required to be filed in years where an electric utility can demonstrate that it does not exceed the "safe harbor", and this appears to have been reaffirmed in the Commission's Opinion and Order in AEP's SEET proceeding, Case No. 10-1261-EL-UNC.

This directive is applicable here since Dr. Vilbert's calculations show the "safe harbor" for OE, CEI, and TE is, respectively, 13.37%, 13.83% and 14.55%. As noted above, each of the Companies' returns on equity for 2011 (OE - 10.0%, CEI – 1.7%, and TE – 1.2%) are within (i.e. less than) the "safe harbor".

Q. DID THE COMPANIES PROVIDE A COMPARISON OF EARNINGS UNDER THE ESPs TO WHAT MAY HAVE OCCURRED HAD THE PRIOR RATE PLAN BEEN IN EFFECT IN THIS FILING?

A. No, for the reasons described in my answer to the preceding question.

Q. DID THE COMPANIES PROVIDE SEET CALCULATIONS WITH AND WITHOUT THE IMPACT OF DEFERRALS IN THIS FILING?

A. No. The Companies' ESP Stipulations provided that the calculation of return on equity for SEET purposes shall specifically exclude the impact of deferred carrying charges. As shown on the attachments to my testimony, the Companies' SEET return on equity calculations do exclude the impact of deferred carrying charges. On page

16 of the Finding and Order in Case No. 09-786-EL-UNC the Commission concludes that since the Companies' ESP Stipulations addressed the treatment of deferrals when calculating the SEET, this obviated the need for the Companies to supplement their SEET filing with calculations including and excluding all deferrals.

Q. PLEASE DISCUSS THE SECOND PARAGRAPH OF PAGE 29 OF THE FINDING AND ORDER IN CASE NO. 09-786-EL-UNC.

A. In the second paragraph of page 29 of the Finding and Order the Commission discusses giving consideration to a broad range of factors in its determination of whether an electric utility had significantly excessive earnings in the prior year. These factors include an electric utility's most recently authorized return on equity and an electric utility's risk profile, itself comprised of several components. Many of these factors have been extensively addressed and litigated before the Commission in other proceedings, such as the Companies' most recent distribution rate case (Case No. 07-551-EL-AIR), the Companies' first ESP case (Case No. 08-935-EL-SSO), the Companies' second ESP case (Case No. 10-0388-EL-SSO), and other cases. The records in these cases, including the Companies' testimony, are publicly available on the Commission's website. Below I will briefly address these additional factors in the second paragraph of page 29 of the Finding and Order in Case No. 09-786-EL-UNC, to the extent not already discussed elsewhere in my testimony.

Q. DO THE COMPANIES OWN GENERATION?

A. No, the Companies do not own any generation. The Companies acquire all power necessary to serve their standard service offer customers through a descending clock format competitive bid process. The bidding process is conducted by an independent bid manager who selects the winning bidder(s) subject to Commission oversight.

Q. DID THE ESPs IN EFFECT IN 2011 FOR THE COMPANIES INCLUDE A FUEL AND PURCHASED POWER ADJUSTMENT OR OTHER SIMILAR ADJUSTMENTS?

A. As discussed in the Companies' ESP cases, the Companies have rider mechanisms that recover generation-related expenses for customers who take standard service offer ("SSO") generation service from the Companies. For example, the Generation Service Rider ("Rider GEN") recovers the cost of providing SSO generation service including energy and capacity, resource adequacy requirements, transmission service and transmission ancillaries. The Generation Cost Reconciliation Rider ("Rider GCR") reconciles any under or over recovery of the cost of providing SSO generation service.

Q. DO THE COMPANIES MAKE OFF-SYSTEM SALES?

A. No. The Companies do not make off-system sales since they do not own generation assets. Therefore, there is no impact from off-system sales on the Companies' SEET analysis.

Q. PLEASE DISCUSS THE COMPANIES' RATE DESIGN AND THE EXTENT TO WHICH THE COMPANIES REMAIN SUBJECT TO WEATHER AND ECONOMIC RISK.

A. The Companies' rate design has been the subject of significant discussion, negotiation, and litigation before the Commission over the past several years in the most recent distribution rate case, the ESP cases, and other cases. The Companies' distribution rate design was established in the most recent distribution rate case and generation and transmission rate design was established in the ESP cases. Further detail about the Companies' rate design can be found in the records in these cases. Kilowatt-hour sales and kilowatt demands are impacted by weather and the economy. To the extent that kilowatt-hour sales and kilowatt demands deviate from the levels used to establish the Companies' rates, differences will exist in the revenues collected by the Companies as compared to the revenue requirement used in setting the current rates.

Q. PLEASE DESCRIBE THE COMPANIES' ACTIONS WITH RESPECT TO MEETING INDUSTRY CHALLENGES TO MAINTAIN AND IMPROVE THE COMPETITIVENESS OF OHIO'S ECONOMY

A. As discussed in the stipulations and supporting testimony in the Companies' ESP cases (Case No. 08-935-EL-SSO and Case No. 10-0388-EL-SSO), the Companies' ESPs provide more certain and stable rate levels than otherwise would have been in place and advances renewable energy and energy efficiency in Ohio. The Companies' ESPs have resulted in a competitive market for generation service

through the competitive bidding process for SSO customers, retail shopping, and governmental aggregation. Further, the Companies' ESPs provide funding for lower income customers and for economic development purposes and include an Economic Development Rider ("Rider EDR") that provides credits to certain customer groups to help transition those customers to market based pricing. The Companies' ESPs were supported by signatory parties representing varied and diverse interests, such as large industrial customers, small- and medium-sized manufacturers, small businesses, hospitals, schools, environmental interests, residential customers including lower income residential customers, and governmental entities. The Companies' ESPs provide a number of mechanisms that support state policy and improves the competitiveness of Ohio's economy.

Q. PLEASE DESCRIBE THE COMPANIES' ACTIONS WITH RESPECT TO INNOVATION AND INDUSTRY LEADERSHIP INVOLVING INVESTMENT, RESEARCH AND DEVELOPMENT OF ADVANCED TECHNOLOGIES AND INNOVATIVE PRACTICES.

A. The Companies are implementing a Smart Grid Modernization Initiative in Ohio to test and validate the integration of crosscutting smart grid technologies with existing distribution system infrastructure, analyze full-system life-cycle costs and benefits, examine how existing infrastructure will function when combined with smart grid technologies, and evaluate the benefits to customers and the environment. As part of this initiative, the companies have deployed advanced meter technologies to a pilot group of customers and these customers will participate this summer in a Customer

Behavior Study designed to analyze customers' willingness to reduce their contribution to peak demand when provided various in-home technologies, education and peak time rebates. The initiative also includes evaluation of volt/var control systems and distribution automation for grid efficiency and reliability enhancements. The U.S. Department of Energy selected the Companies as an award recipient for smart grid stimulus funds. The introduction of these advanced technologies is expected to improve the reliability and interactivity of the electric distribution infrastructure in targeted areas selected for the pilot.

The Companies are also actively implementing the portfolio of energy efficiency and peak demand reduction programs approved by the Commission in Case No. 09-1947-EL-EEC on March 23, 2011. The energy efficiency and peak demand reduction programs offer customers programs designed to reduce their energy use and contributions to peak demand. As commercial and industrial customers successfully implement these programs, they improve their cost structure and become more competitive.

Other examples of the Companies' commitment to advanced and innovative technologies include participation in the Electric Power Research Institute (EPRI) national energy efficiency demonstration project to evaluate highly efficient technologies with the potential to reduce energy usage. FE is piloting advanced technologies, including the Ductless Heat Pump Technology Pilot being conducted across its service territories, and partnering with Habitat for Humanity, Ohio, and

Whirlpool to evaluate the efficiency of the next-generation of refrigerators, washers and dryers. The Companies are also active in the Ohio Department of Transportation's task force on Plug-in Electric Vehicle Infrastructure Readiness, collaborating in a grant with Clean Fuels Ohio and University of Akron, and a member of the SMART@CAR research consortium at OSU with other Ohio utilities, automakers, and other stakeholders. As part of an EPRI led industry DOE award, the companies will be testing a Plug-in Electric Trouble Truck next year to evaluate these vehicles and their charging capabilities. The companies are also participating in industry research through the Electric Power Research Institute and demonstrating plug-in electric vehicles to evaluate smart charging technologies and impacts related to grid infrastructure, economic development and the environmental aspects of Plug-in Electric Vehicle technology.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes

2011 Significantly Excessive Earnings Test (SEET)
Return on Equity Calculation

Line	Description	CEI	OE	TE	Source
1	SEET Net Income	22,471,378	78,085,144	4,291,010	Attachment KRB-2, Page 1, Line 8
2	SEET Common Equity	1,284,264,631	777,714,341	366,653,873	Attachment KRB-3, Page 2, Line 105
3	SEET Return on Equity	1.7%	10.0%	1.2%	Calculation: Line 1 / Line 2

Note: See Attachments KRB-2 and KRB-3 for the calculation of Net Income and Common Equity.

2011 Significantly Excessive Earnings Test (SEET)
Net Income Calculation

Line	Description	CEI	OE	TE	Source
1	Net Income	70,569,683	128,224,098	34,719,948	2011 Q4 FERC Form 1, Page 117, Line 78
2	Subsidiary Company Income	(2,729,410)	(15,092,551)	(63,606)	2011 Q4 FERC Form 1, Page 117, Line 36
3	Rider DSI Income	(26,455,631)	(31,264,669)	(10,107,414)	Workpaper 1, Page 2, Line 45
4	Deferred Interest Income	(12,365,797)	(5,948,841)	(2,082,760)	Workpaper 2, Page 2, Line 45
5	RTC Reg. Asset Write-Off After-Tax	0	0	0	
6	Fuel Reg. Asset Write-Off After-Tax	0	0	0	
7	Extraordinary Items After-Tax	(6,547,467)	2,167,106	(18,175,158)	Workpaper 4, Page 1, Line 13
8	SEET Net Income	22,471,378	78,085,144	4,291,010	Calculation: Sum Lines 1 through 7

2011 Significantly Excessive Earnings Test (SEET)
Common Equity Calculation

Line	Month	Description	CEI	OE	TE	Source
1	December	12/31/10 Common Equity	1,302,806,510	914,411,475	393,543,434	2010 Q4 FERC Form 1, Page 112, Line 16
2		Undistributed Subsidiary Earnings	(34,328,132)	11,888,074	(319)	2010 Q4 FERC Form 1, Page 112, Line 12
3		Rider DSI Income	(49,017,046)	(57,393,249)	(18,609,513)	Workpaper 1, Page 1, Line 6
4		Deferred Interest Income	(54,915,229)	(25,580,444)	(5,241,683)	Workpaper 2, Page 1, Line 6
5		RTC Reg. Asset Write-Off After-Tax	138,887,274	0	0	Workpaper 3, Page 1, Line 3
6		Fuel Reg. Asset Write-Off After-Tax	2,237,678	3,258,536	954,907	Workpaper 3, Page 1, Line 6
7		Extraordinary Items After-Tax	15,040,832	18,463,658	8,543,332	Workpaper 4, Pages 2 -3
8		12/31/10 SEET Common Equity	1,320,711,888	865,048,051	379,190,159	Calculation: Sum Lines 1 through 7
9	January	1/31/11 Common Equity	1,258,788,711	829,939,767	381,933,932	Workpaper 5, Page 1, Line 15
10		Undistributed Subsidiary Earnings	(35,241,543)	47,483,904	(5,965)	Workpaper 5, Page 1, Line 2
11		Rider DSI Income	(51,401,993)	(60,395,943)	(19,528,777)	Workpaper 1, Page 1, Line 9
12		Deferred Interest Income	(56,162,492)	(26,199,180)	(5,378,916)	Workpaper 2, Page 1, Line 9
13		RTC Reg. Asset Write-Off After-Tax	138,887,274	0	0	Workpaper 3, Page 1, Line 3
14		Fuel Reg. Asset Write-Off After-Tax	2,237,678	3,258,536	954,907	Workpaper 3, Page 1, Line 6
15		Extraordinary Items After-Tax	(8,605,717)	(11,848,780)	(17,381,815)	Line 7 + Workpaper 4, Page 1, Line 14
16		1/31/11 SEET Common Equity	1,248,501,919	782,238,304	340,593,367	Calculation: Sum Lines 9 through 15
17	February	2/28/11 Common Equity	1,262,477,262	839,361,017	384,062,007	Workpaper 5, Page 1, Line 16
18		Undistributed Subsidiary Earnings	(36,469,234)	45,295,394	(12,755)	Workpaper 5, Page 1, Line 3
19		Rider DSI Income	(53,564,195)	(62,956,510)	(20,345,535)	Workpaper 1, Page 1, Line 12
20		Deferred Interest Income	(57,368,693)	(26,713,832)	(5,527,453)	Workpaper 2, Page 1, Line 12
21		RTC Reg. Asset Write-Off After-Tax	138,887,274	0	0	Workpaper 3, Page 1, Line 3
22		Fuel Reg. Asset Write-Off After-Tax	2,237,678	3,258,536	954,907	Workpaper 3, Page 1, Line 6
23		Extraordinary Items After-Tax	(8,605,717)	(11,848,780)	(17,388,311)	Line 7 + Workpaper 4, Page 1, Line 15
24		2/28/11 SEET Common Equity	1,247,594,376	786,395,825	341,742,861	Calculation: Sum Lines 17 through 23
25	March	3/31/11 Common Equity	1,268,978,062	846,184,157	385,890,775	2011 Q1 FERC Form 3Q, Page 112, Line 16
26		Undistributed Subsidiary Earnings	(2,173)	8,051,873	(19,560)	2011 Q1 FERC Form 3Q, Page 112, Line 12
27		Rider DSI Income	(55,923,068)	(65,610,361)	(21,200,007)	Workpaper 1, Page 1, Line 15
28		Deferred Interest Income	(58,532,312)	(27,223,661)	(5,699,911)	Workpaper 2, Page 1, Line 15
29		RTC Reg. Asset Write-Off After-Tax	138,887,274	0	0	Workpaper 3, Page 1, Line 3
30		Fuel Reg. Asset Write-Off After-Tax	2,237,678	3,258,536	954,907	Workpaper 3, Page 1, Line 6
31		Extraordinary Items After-Tax	(6,434,963)	(10,629,035)	(16,939,558)	Line 7 + Workpaper 4, Page 1, Line 16
32		3/31/11 SEET Common Equity	1,289,210,498	754,031,510	342,986,647	Calculation: Sum Lines 25 through 31
33	April	4/30/11 Common Equity	1,273,784,737	857,378,576	387,850,684	Workpaper 5, Page 1, Line 18
34		Undistributed Subsidiary Earnings	(3,053)	45,038,733	(24,436)	Workpaper 5, Page 1, Line 5
35		Rider DSI Income	(57,932,191)	(67,958,992)	(21,946,269)	Workpaper 1, Page 1, Line 18
36		Deferred Interest Income	(59,663,434)	(27,733,358)	(5,875,296)	Workpaper 2, Page 1, Line 18
37		RTC Reg. Asset Write-Off After-Tax	138,887,274	0	0	Workpaper 3, Page 1, Line 3
38		Fuel Reg. Asset Write-Off After-Tax	2,237,678	3,258,536	954,907	Workpaper 3, Page 1, Line 6
39		Extraordinary Items After-Tax	(6,434,963)	(10,629,035)	(16,939,558)	Line 7 + Workpaper 4, Page 1, Line 17
40		4/30/11 SEET Common Equity	1,290,876,049	799,354,460	344,020,034	Calculation: Sum Lines 33 through 39
41	May	5/31/11 Common Equity	1,269,950,497	704,350,519	374,450,839	Workpaper 5, Page 1, Line 19
42		Undistributed Subsidiary Earnings	(3,393)	43,066,443	(30,533)	Workpaper 5, Page 1, Line 6
43		Rider DSI Income	(60,095,956)	(70,513,683)	(22,777,781)	Workpaper 1, Page 1, Line 21
44		Deferred Interest Income	(60,974,351)	(28,459,415)	(6,171,437)	Workpaper 2, Page 1, Line 21
45		RTC Reg. Asset Write-Off After-Tax	138,887,274	0	0	Workpaper 3, Page 1, Line 3
46		Fuel Reg. Asset Write-Off After-Tax	2,237,678	3,258,536	954,907	Workpaper 3, Page 1, Line 6
47		Extraordinary Items After-Tax	(6,434,963)	(10,629,035)	(16,939,558)	Line 7 + Workpaper 4, Page 1, Line 18
48		5/31/11 SEET Common Equity	1,283,566,786	641,073,365	329,486,437	Calculation: Sum Lines 41 through 47
49	June	6/30/11 Common Equity	1,278,690,168	719,092,851	379,462,348	2011 Q2 FERC Form 3Q, Page 112, Line 16
50		Undistributed Subsidiary Earnings	(4,073)	3,866,974	(36,658)	2011 Q2 FERC Form 3Q, Page 112, Line 12
51		Rider DSI Income	(2,452,115)	(2,858,380)	(928,745)	Workpaper 1, Page 1, Line 24
52		Deferred Interest Income	(951,958)	(499,209)	(193,741)	Workpaper 2, Page 1, Line 24
53		RTC Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 3
54		Fuel Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 6
55		Extraordinary Items After-Tax	(1,125)	13,129	(700,500)	Line 7 + Workpaper 4, Page 1, Line 19
56		6/30/11 SEET Common Equity	1,275,280,897	719,615,366	377,602,704	Calculation: Sum Lines 49 through 55

2011 Significantly Excessive Earnings Test (SEET)
Common Equity Calculation

Line	Month	Description	CEI	OE	TE	Source
57	July	7/31/11 Common Equity	1,288,542,757	740,291,538	385,204,415	Workpaper 5, Page 1, Line 21
58		Undistributed Subsidiary Earnings	(4,630)	40,066,967	(41,672)	Workpaper 5, Page 1, Line 8
59		Rider DSI Income	(5,118,304)	(6,082,115)	(2,003,394)	Workpaper 1, Page 1, Line 27
60		Deferred Interest Income	(1,886,918)	(999,835)	(392,622)	Workpaper 2, Page 1, Line 27
61		RTC Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 3
62		Fuel Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 6
63		Extraordinary Items After-Tax	(1,125)	13,129	(700,500)	Line 7 + Workpaper 4, Page 1, Line 20
64		7/31/11 SEET Common Equity	1,281,531,780	773,289,685	382,066,228	Calculation: Sum Lines 57 through 63
65	August	8/31/11 Common Equity	1,300,307,226	760,053,558	390,914,267	Workpaper 5, Page 1, Line 22
66		Undistributed Subsidiary Earnings	(5,307)	53,479,340	(47,760)	Workpaper 5, Page 1, Line 9
67		Rider DSI Income	(7,910,047)	(9,246,552)	(3,072,659)	Workpaper 1, Page 1, Line 30
68		Deferred Interest Income	(2,790,343)	(1,459,277)	(571,609)	Workpaper 2, Page 1, Line 30
69		RTC Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 3
70		Fuel Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 6
71		Extraordinary Items After-Tax	(1,125)	13,129	(1,156,977)	Line 7 + Workpaper 4, Page 1, Line 21
72		8/31/11 SEET Common Equity	1,289,600,404	802,840,199	386,065,262	Calculation: Sum Lines 65 through 71
73	September	9/30/11 Common Equity	1,309,267,459	770,155,341	393,923,540	2011 Q3 FERC Form 3Q, Page 112, Line 16
74		Undistributed Subsidiary Earnings	(5,486)	14,726,108	(49,379)	2011 Q3 FERC Form 3Q, Page 112, Line 12
75		Rider DSI Income	(10,181,373)	(11,925,639)	(3,963,436)	Workpaper 1, Page 1, Line 33
76		Deferred Interest Income	(3,675,969)	(1,860,077)	(730,220)	Workpaper 2, Page 1, Line 33
77		RTC Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 3
78		Fuel Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 6
79		Extraordinary Items After-Tax	(137,929)	(63,825)	(408,991)	Line 7 + Workpaper 4, Page 1, Line 22
80		9/30/11 SEET Common Equity	1,295,266,702	771,031,908	388,771,514	Calculation: Sum Lines 73 through 79
81	October	10/31/11 Common Equity	1,315,352,106	781,529,509	398,312,202	Workpaper 5, Page 1, Line 24
82		Undistributed Subsidiary Earnings	(5,938)	51,408,046	(53,436)	Workpaper 5, Page 1, Line 11
83		Rider DSI Income	(12,363,413)	(14,387,428)	(4,751,889)	Workpaper 1, Page 1, Line 36
84		Deferred Interest Income	(4,548,471)	(2,235,672)	(872,846)	Workpaper 2, Page 1, Line 36
85		RTC Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 3
86		Fuel Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 6
87		Extraordinary Items After-Tax	(137,929)	(63,825)	(408,991)	Line 7 + Workpaper 4, Page 1, Line 23
88		10/31/11 SEET Common Equity	1,298,296,355	816,250,630	392,225,041	Calculation: Sum Lines 81 through 87
89	November	11/30/11 Common Equity	1,320,685,570	793,177,137	400,289,815	Workpaper 5, Page 1, Line 25
90		Undistributed Subsidiary Earnings	(6,515)	49,735,973	(58,630)	Workpaper 5, Page 1, Line 12
91		Rider DSI Income	(14,449,409)	(16,823,006)	(5,540,174)	Workpaper 1, Page 1, Line 39
92		Deferred Interest Income	(5,407,942)	(2,618,290)	(1,005,825)	Workpaper 2, Page 1, Line 39
93		RTC Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 3
94		Fuel Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 6
95		Extraordinary Items After-Tax	(137,929)	(63,825)	(408,991)	Line 7 + Workpaper 4, Page 1, Line 24
96		11/30/11 SEET Common Equity	1,300,683,775	823,407,989	393,276,196	Calculation: Sum Lines 89 through 95
97	December	12/31/11 Common Equity	1,281,080,949	716,047,085	368,322,244	2011 Q4 FERC Form 1, Page 112, Line 16
98		Undistributed Subsidiary Earnings	(7,103)	49,616,360	(63,925)	2011 Q4 FERC Form 1, Page 112, Line 12
99		Rider DSI Income	(15,376,721)	(18,144,235)	(5,939,146)	Workpaper 1, Page 1, Line 42
100		Deferred Interest Income	(6,306,675)	(3,069,869)	(1,153,006)	Workpaper 2, Page 1, Line 42
101		RTC Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 3
102		Fuel Reg. Asset Write-Off After-Tax	0	0	0	Workpaper 3, Page 1, Line 6
103		Extraordinary Items After-Tax	14,928,328	31,259,799	7,307,732	Line 7 + Workpaper 4, Page 1, Line 25
104		12/31/11 SEET Common Equity	1,274,318,778	775,709,140	368,473,900	Calculation: Sum Lines 97 through 103
105		SEET Average Common Equity	1,284,264,631	777,714,341	366,653,873	Calculation: 13-Month Average

2011 Significantly Excessive Earnings Test (SEET)
Capital Structure, Debt Cost, Effective Income Tax Rates

Line	Description	CEI	OE	TE	Source
1	Average Monthly Long-Term Debt	1,747,082,940	1,038,452,425	597,548,555	Workpaper 6, Page 1, Lines 1, 4, & 7
2	Average Monthly SEET Common Equity	1,284,264,631	777,714,341	366,653,873	Attachment KRB-3, Page 2, Line 105
3	Average Monthly Total Capital	3,031,347,571	1,816,166,766	964,202,428	Calculation: Line 1 + Line 2
4	Average Monthly Long-Term Debt %	57.6%	57.2%	62.0%	Calculation: Line 1 / Line 3
5	Average Monthly SEET Common Equity %	42.4%	42.8%	38.0%	Calculation: Line 2 / Line 3
6	Average Monthly Total Capital %	100.0%	100.0%	100.0%	Calculation: Line 4 + Line 5
7	Average Monthly Cost of Long-Term Debt	6.70%	7.12%	6.80%	Workpaper 6, Page 1, Lines 10, 11, & 12
8	Effective Income Tax Rates	36.142493%	35.876294%	35.740630%	FE Tax Department

[Attachment 2 to Application]

BEFORE THE

PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2011 Under the Electric Security Plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company	**Case No. 12-1544-EL-UNC**

DIRECT TESTIMONY OF

MICHAEL J. VILBERT

ON BEHALF OF

OHIO EDISON COMPANY
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
THE TOLEDO EDISON COMPANY

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I. INTRODUCTION AND SUMMARY

Q1. Please state your name and address for the record.

A1. My name is Michael J. Vilbert. My business address is The Brattle Group, 201 Mission Street, Suite 2800, San Francisco, CA 94105, USA.

Q2. Please describe your job and educational experience.

A2. I am a Principal of The Brattle Group, ("*Brattle*"), an economic, environmental and management consulting firm with offices in Cambridge, Washington, London, San Francisco, Madrid and Rome. My work concentrates on financial and regulatory economics. I hold a B.S. from the U.S. Air Force Academy and a Ph.D. in finance from the Wharton School of Business at the University of Pennsylvania.

Q3. What is the purpose of your testimony in this proceeding?

A3. I have been asked by Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company (collectively, the "Companies") to address provisions of the Am. Substitute Senate Bill No. 221 ("S.B. 221") with regard to the significantly excessive earnings test ("SEET") within the meaning of Section 4928.143(F) of the Revised Code ("R.C.") for a utility's Electric Security Plan ("ESP"). Specifically, I propose a method of implementing the SEET that provides a statistical test consistent with the language of the statute. I then implement the proposed method and derive the applicable significantly excessive earnings threshold for the 2011 fiscal year.

Q4. Are you intending to provide legal interpretation of the statutory requirements?

A4. No. Nothing in my testimony is intended to imply a legal opinion. The statute mandates an evaluation of an Ohio electric utility's earnings which involves consideration of economic and financial principles. As an expert in financial and regulatory economics, I am offering guidance as to how such an evaluation should be undertaken with proper application of these principles.

Q5. Have you previously testified before the Public Utilities Commission of Ohio on the issue of the appropriate method to implement a SEET?

A5. Yes, I submitted Initial Testimony on July 31, 2008 and Rebuttal Testimony on October 28, 2008 in Case No. 08-935-EL-SSO, and subsequently testified before the Commission in October 2008. I also submitted Initial Testimony on September 1, 2010 in Case No. 10-1265-EL-UNC, and on July 29, 2011 in Case No. 11-4553-EL-UNC. In addition, I have read the PUCO Staff's SEET Recommendations filed in Case No. 09-786-EL-UNC, the transcript from the SEET meeting held at the PUCO on April 1, 2010, the Commission's June 30, 2010 Finding and Order and its August 25, 2010 Entry on Rehearing in Case No. 09-786-EL-UNC.

Q6. Are you familiar with the Commission's decisions in its application of the SEET for 2009 and 2010?

A6. Yes. I know that the Companies' 2009 and 2010 earnings were not deemed significantly excessive. FirstEnergy, the Commission Staff and other parties stipulated to those outcomes, and the Commission agreed.[1] I have also read the Commission's decision in Case No. 10-1261-EL-UNC involving American Electric Power's Ohio subsidiaries,[2] as well as the prefiled testimony and oral hearing testimony of Commission Staff's witness, Richard Cahaan, in that case.[3]

[1] In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and the Toledo Edison Company for the Administration of the Significantly Excessive Earnings Test Under Section 4928.143(F), Revised Code, and Rule 4901:1-35-10, Ohio Administrative Code, Opinion and Order, November 22, 2010 ("FirstEnergy 2009 Order"); In the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2010 Under the Electric Security Plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, Opinion and Order, January 18, 2012 ("FirstEnergy 2010 Order").

[2] In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Administration of the Significantly Excessive Earnings Test under Section 4928.143(F), Revised Code, and Rule 4901:1-35-10, Ohio Administrative Code, Opinion and Order, January 11, 2011 ("AEP 2009 Decision").

[3] Prefiled Testimony of Richard Cahaan submitted on behalf of Capital Recovery and Financial Analysis Division, Public Utilities Commission of Ohio, October 20, 2010 ("Cahaan AEP Prefiled Testimony"), and the transcript of the oral hearing testimony of Mr. Cahaan on October 27, 2010 ("Cahaan AEP Hearing Testimony").

Q7. Is the methodology you propose in this testimony the same as the one you proposed in your previous testimony in Cases No. 10-1265-EL-UNC and 11-4553-EL-UNC?

A7. Yes, the methodology I propose for the SEET is the same.

Q8. Please summarize your testimony.

A8. S.B. 221 mandates an annual test to determine whether the electric utilities in Ohio subject to an Electric Security Plan have earned significantly excessive earnings compared to other publicly traded companies of comparable business and financial risk, but the legislation does not specify how this test is to be performed.

It is important that the test be well designed. A poorly designed test for significantly excessive earnings could impose asymmetric risk on the electric utilities and could discourage the utilities from pursuing measures that would increase the efficiency of their service because any increase in profits from such efficiency measures may inappropriately result in a determination of significantly excessive earnings.

My testimony proposes and implements a test that provides an economic interpretation of the language of statute. The test is relatively easy to apply and uses readily available information. The test also mitigates the potential to impose asymmetric risk on the utilities by guarding against incorrectly determining that significantly excessive earnings have occurred. If asymmetric risk were imposed upon the utilities, it would require an increase in the utilities' allowed rates so that they could again expect to earn their cost of capital on average.

II. PROPOSED TEST OF SIGNIFICANTLY EXCESSIVE EARNINGS

A. TEST OUTLINE

Q9. Please outline the method you propose.

A9. The proposed annual test of significantly excessive earnings compares the utility's earnings to the average (mean) earned return of companies that have comparable business risk to the utility, making appropriate adjustments for differences in capital

structure. The utility's earnings may be deemed significantly excessive if they are greater than a threshold that is significantly higher than the average return earned by comparable companies.

Q10. Is the earned return on equity ("ROE") an accounting measure of return on book equity or a return on the market value of equity?

A10. The statute uses the term "earnings," which indicates that it envisions an accounting measure of the return on the utility's book value of equity: "… the commission shall consider, following the end of each annual period of the plan, if any such adjustments resulted in excessive earnings …."[4] In addition, the statute specifically requires that the "revenues, expenses, or earnings of any affiliate or parent company" not be considered in implementing the test of significantly excessive earnings.[5] As a result, if the utility is not itself publicly traded, its ROE measure can only be based on accounting data. This is discussed in more detail below in the discussion of the proposed earnings metric.

Q11. What is the implication of the measure of return for the utility being an accounting-based return on book equity?

A11. The implication is that the test of significantly excessive earnings for the sample of companies of comparable business and financial risk should also be based upon a measure of the accounting-determined return on equity. Otherwise the test would not be evaluating comparable measures of earnings. This point is discussed in more detail below.

Q12. What metric do you have in mind when testing for "significantly excessive earnings"?

A12. The statute is not explicit in defining the term, but I interpret the language as suggesting two characteristics that should be incorporated into the test. First, economists frequently refer to a test result that is "statistically significant" at some

[4] R.C. 4928.143(F).

[5] R.C. 4928.143(F).

confidence level. "Significantly" excessive therefore suggests a statistical test is appropriate. Second, significantly "excessive" implies earnings well beyond what is normal, proper and reasonable. The language seems to recognize that there will be fluctuations in earned returns due to normal variations in economic conditions so that simply earning more than authorized or more than earned by comparable firms would not reach the level of being significantly excessive. As discussed below, it is important to avoid erroneously concluding that significantly excessive earnings have occurred because of the negative incentive signal it would send to the utility, as well as because it would impose asymmetric risk on the utility. In addition, I propose a method that is predictable and attempts to avoid hard-to-anticipate arbitrary considerations that would unnecessarily create uncertainty among investors regarding the outcome of the test, and thus possibly raise the utility's cost of capital.

B. EARNINGS METRIC

Q13. What measure of return on equity do you use for the sample companies?

A13. I use an accounting measure of return on equity, which I then adjust for differences in capital structure between sample companies, as required by the statute. As a measure of the earnings that accrue to shareholders, I rely on net income before non-recurring gains or losses. As a measure of shareholders' equity, I use the average of the beginning-of-year and end-of-year book value of equity from each company's balance sheet, as reported by *Value Line*.

Q14. Why do you rely on accounting values rather than market values?

A14. I use accounting book values because it is the only possibility consistent with the language of the law. Specifically, the statute reads: "In making its determination of significantly excessive earnings under this division, the commission shall not consider, directly or indirectly, the revenue, expenses, or earnings of any affiliate or parent company."[6] All of the PUCO regulated electric utilities operating in Ohio are subsidiaries of larger companies so they are not themselves publicly traded. This is

[6] R.C. 4928.143(F).

true for FirstEnergy's subsidiaries that operate in Ohio. It is therefore not possible to construct a market-based measure of earnings for the utility, without relying on information of its parent company. As noted above, the law uses the term "earnings," which indicates that it envisions an accounting measure of the return on the utility's book value of equity.

Q15. But could you not use market values for the set of comparable companies?

A15. Yes, but in that case a comparison would have to be made between an accounting measure of returns for the utility, and a market-based measure of returns for the sample companies. Such a comparison cannot be properly made in the case of earned returns. A company's stock return, the market-based measure of return, is driven not only by realized earnings, but also, or even mostly, by expectations about future earnings. To the contrary, an accounting measure of return, such as net income divided by common equity, does not capture expectations about future earnings. It is therefore inappropriate to base the test of significantly excessive earnings comparing book-based with market-based measures of earned returns. Indeed, the statute itself makes reference to historical rather than forward-looking measures of return.[7]

Q16. How is this different from setting the allowed ROE based on market measures of returns?

A16. The key difference is that the allowed ROE in the context of a traditional rate case is set equal to the *expected* rate of return on equity, whereas in the current matter, the test of significantly excessive earnings must be based on *earned*, or realized, returns. The expected rate of return is the rate that investors can expect to obtain by financing investments of comparable risk, and it is determined in the market. The allowed ROE is therefore set equal to this expectation, in order to allow the utility to attract investors, who would otherwise invest in these alternative investments. It has become routine in U.S. rate regulation to accept the "cost of capital" as the right expected rate of return on utility investment. That practice is normally viewed as consistent with the U.S. Supreme Court's opinions in *Bluefield Waterworks & Improvement Co. v.*

[7] R.C. 4928.143(F).

Public Service Commission, 262 U.S. 678 (1923), and *Federal Power Commission v. Hope Natural Gas*, 320 U.S. 591 (1944). The only way to estimate expectations about the future is to use information embedded in stock prices, which by their very nature reflect the information and beliefs investors currently hold about future cash flows. In contrast, in the case of a test of significantly excessive earnings, which specifically considers what the utility and comparable firms have already earned in the past year, there is no need to measure expectations, and therefore no need to rely on stock prices, i.e., market measures. It would be particularly inappropriate to compare an accounting measure of returns for the utility, which does not incorporate expectations about future performance, with a measure based on stock prices for the sample companies, which does incorporate such expectations.

Q17. More specifically, what metric are you proposing?

A17. I propose (and have implemented) a measure of return on total capital equal to the ratio of total ordinary return to long-term capital (including debt and preferred equity), less tax shields generated by the use of debt, divided by total long-term capital. The numerator of this fraction is therefore the sum of two items: earnings on equity before non-recurring items and pre-tax interest expense on long-term debt multiplied by one minus the effective tax rate for each individual company.[8] The denominator is the sum of average shareholders' equity (including preferred equity) and average long-term debt for the year under analysis:

$$R = \frac{(NI - Nonrec) + (1-t)LT\ Int}{Average\ Total\ Capital}$$

where:

- *NI* = Net Income (including dividends paid to preferred stock, if any)
- *Nonrec* = Nonrecurring gains/losses
- *t* = Effective marginal tax rate

[8] The tax rate information is from *Value Line* and relies on the effective tax rate.

- *LT Int* = Interest expense on long-term debt
- *Average Total Capital* = the sum of common equity, preferred equity and long-term debt, computed as an average of the beginning-of-year and end-of-year values.[9]

Q18. Why do you add the interest expense multiplied by (1-*t*)?

A18. I add the interest expense because it is the return obtained by debt holders. I multiply by (1-*t*) in order to eliminate the effect of tax shields created by the use of debt in the capital structure. The effect of adding this term is to account for differences in capital structure between companies, as indicated by the statutory language requiring "adjustments for capital structure as may be appropriate."[10] Simply comparing the return on equity between companies with very different equity ratios is not meaningful. Companies with very little equity should earn a higher return on equity reflecting higher financial risk, while companies with comparable business risk, but much higher equity ratios should earn a lower return on equity. In order to arrive at a figure that can be meaningfully compared, I compute the surplus that would accrue to shareholders if each company were financed entirely by equity. This entails adding the interest expense, but subtracting the income tax that would be payable in that case, since interest expense is tax deductible, but earnings are not.

Q19. Can you provide an example of why it is necessary to consider differences in capital structure to insure consistency between sample companies of comparable business risk?

A19. Yes. Consider two companies that are identical in every way except for their capital structures, such as the two hypothetical companies shown in Table 1 below.

[9] Appendix B contains a detailed discussion of the exact *Value Line* items used to compute the earnings metric.

[10] R.C. 4928.143(F).

Table 1. Effect of the Capital Structure Adjustment.

	Company 1 100% Equity Ratio	Company 2 50% Equity Ratio	Formulas
[1] Total Capital	10,000	10,000	
[2] Debt	0	5,000	
[3] Equity	10,000	5,000	[1] - [2]
[4] Cost of Debt	6%	6%	
[5] EBIT	1,500	1,500	
[6] Interest Expense	0	300	[2] x [4]
[7] Pretax income	1,500	1,200	[5] - [6]
[8] Tax Rate	40%	40%	
[9] Total Tax	600	480	[7] x [8]
[10] Net Income	900	720	[7] - [9]
[11] Return on Equity (without capital structure adjustment)	9.00%	14.40%	[10] / [3]
[12] Return on Total Capital (without tax shield adjustment)	9.00%	10.20%	([10] + [6]) / [1]
[13] Return on Total Capital (with tax shield adjustment)	9.00%	9.00%	([10] + (1 - [8]) x [6]) / [1]

Assume that both have Earnings before Interest and Taxes ("EBIT") of $1500, but that one is financed entirely with equity while the other has interest expense of $300. After-tax net income for the all equity financed company is $900 assuming a 40 percent income tax rate, but after-tax net income for the debt financed company is $720 (($1500 EBIT - $300 interest) x (1 – 40% tax rate)). As shown in row [11] of Table 1, simply computing the return on equity would suggest that Company 2 is more profitable, since its ROE is 14.4 percent compared to the 9 percent of Company 1. However, the difference in ROEs is simply a reflection of the different capital structures, not of the underlying profitability of the company. Adjusting for these differences is the reason why I rely on a measure of return on total capital instead of simply realized return on equity, following the requirement of the statute that such an adjustment is necessary.[11]

[11] R.C. 4928.143(F).

Q20. Why is it also necessary to recognize the tax shield of the interest payments?

A20. As shown in row [12] of Table 1 if the full amount of interest were used in computing the return on total capital, the result would be $1020 ($720 net income + $300 interest expense) compared to the $900 for the all-equity financed firm. Therefore, the measure of return on total capital would suggest that the debt-financed firm also had a greater rate of return on total capital but that also would be incorrect. The after-tax interest expense would be $180 ($300 x (1- tax rate of 40%)) for a total of $900 ($720 net income + $180 after-tax interest expense). As shown in row [13] of Table 1, the use of the after-tax interest expense instead of the full interest expense results in a return on total capital for both companies identical in all ways except capital structure.

Q21. Why do you use the average total capital for the year, instead of the end-of-year balances?

A21. The average of the beginning-of-year and end-of-year balances for capital items gives a better measure of the company's capital during the entire year over which earnings have been earned. Using the average reduces the impact of issuing or retiring debt or equity during the year, which could bias the rate of return calculation.

Q22. Why do you eliminate non-recurring gains and losses from net income?

A22. I eliminate these items because the purpose of using a sample of comparable companies is to obtain a measure of normal, or usual, earned returns – in other words, a measure of ordinary, recurring, returns that have been earned by companies similar to the utility under analysis. Simply put, eliminating non-recurring items from the comparable companies' earnings measure ensures a higher degree of comparability.

C. COMPARABLE COMPANIES

Q23. What is the purpose of the sample selection procedure?

A23. The purpose of the sample selection procedure I propose is to select a sample of companies "including utilities" that matches as closely as possible the business risk of the Companies. It is important that the sample selection process result in a consistent set of comparable companies, year-to-year, because the factors that make a set of

companies comparable do not change rapidly. Failing to select a consistent set of companies year-to-year could unnecessarily increase the uncertainty associated with the SEET and could result in two otherwise similar companies having different SEET outcomes simply because the samples differ. The sample selection method I propose focuses on characteristics of the electric distribution industry which do not change rapidly so the universe of companies eligible for inclusion in the sample do not change much year-to-year.

Q24. How did you select the sample of companies of comparable business and financial risk?

A24. I select the sample based only on business risk similarities, and then take capital structure differences into account by adjusting the measure of return on capital, as discussed above. Differences in financial risk result from differences in capital structure. By using a measure of returns that attempts to control for such differences, there is less need to restrict the sample based on capital structure. This is an enormous advantage, because imposing a restriction that all companies in the sample have approximately the same capital structure as the target utility would reduce the number of sample companies substantially, making the resulting estimate much less precise.

Q25. How did you select companies of comparable business risk?

A25. The law does not restrict the universe of comparable companies to regulated utilities. Indeed, the statute appears to suggest that a larger universe should be considered, by its use of the phrase "including utilities."[12] Therefore I considered the following important characteristics of the electric distribution industry: sample companies should operate in industries that (1) rely on a network of assets to provide services to a customer mix that includes residential, commercial and industrial customers, and (2) that exhibit high capital intensity. Capital intensity means that the capital investment required for each dollar of revenue is high. Based on the first of these two characteristics, I started with a universe of twelve industries as classified by *Value*

[12] R.C. 4928.143(F).

Line: Electric Utilities,[13] Natural Gas Utilities, Oil and Gas Distribution, Pipeline MLPs, Water Utilities, Environmental Services,[14] Railroads, Air Transportation, Trucking, Cable TV, Telecommunications Services, and Telecommunications Utilities.

Q26. Is this the same set of industries you considered in your report filed in previous SEET cases?

A26. Yes.

Q27. How did you narrow the number of industries in your final sample?

A27. I computed an average measure of capital intensity for each industry,[15] based on five years of data (fiscal years 2007-2011). I then eliminated industries that had low capital intensity as determined by this metric. The remaining group of industries includes Electric Utilities, Natural Gas Utilities, Oil and Gas Distribution, Pipeline MLPs, Water Utilities, Environmental Services, Railroads, Telecommunications Services, and Cable TV.[16] Appendix B contains additional details about the sample selection procedure, as well as industry statistics for the industries included in the final sample.

Q28. Did you apply additional criteria to eliminate some companies from the industries remaining in the sample?

A28. Yes. Before calculating the capital intensity measure, I eliminated companies with a credit rating below investment grade, foreign companies, as well as companies for which the information necessary to compute the asset turnover measure was not available. The data were extracted from the *Value Line Investment Analyzer* and

[13] Electric Utilities are divided by *Value Line* into three groups based on geographical area of operation: East, Central, and West.

[14] The Environmental Services industry contains primarily waste management companies.

[15] The measure I used was asset turnover, equal to the ratio of revenues to total assets. The resulting value gives a measure of how much revenue is generated by each dollar of assets. Larger values indicate lower capital intensity.

[16] I could not calculate the asset turnover for the Telecommunications Utilities industry because it included no domestic companies with above-investment grade credit rating.

Bloomberg.[17] The sample used to calculate the 2007-2011 industry average capital intensity contains 91 companies.

Q29. Is this the same sample you use to compute the threshold for significantly excessive earnings?

A29. Not exactly. In order to calculate the return on total capital, I had to use additional data fields not required to arrive at the measure of asset turnover, but I use five years of asset turnover data to measure capital intensity. Some companies may have sufficient current data to calculate the return on total capital but not have five years of asset turnover data. Alternatively some companies may have data for the asset turnover calculation but may have some missing data necessary to calculate the return on total capital. As a result, there are minor differences between the sample used to select the capital intensive industries and the sample used to compute the earnings metric. Table 2 below lists all the industries considered, as well as the number of companies in each industry that was included in either calculation. Table B 5 in Appendix B lists the individual companies that were included in each calculation.

Q30. Are the companies in your sample used to compute the threshold for significantly excessive earnings for 2011 the same as those in your 2010 test sample?

A30. The 2011 sample is substantially similar to the 2010 sample, although not identical. Of the 83 companies in the 2010 sample and the 81 in the 2011 sample, 76 are included in both samples. In percentage terms, 94 percent of this year's sample companies were included in the 2010 sample, and 92 percent of last year's sample companies are included in the 2011 sample.[18]

[17] The financial statement data used in the analysis were extracted from *Value Line Investment Analyzer* on May 4, 2012. For those companies that lacked data for Total Assets, I obtained those figures from Bloomberg. For credit ratings, I used Bloomberg and Compustat.

[18] One reason for the smaller number of sample companies in 2011 is that *Value Line* has not yet published fiscal year 2011 data for its entire universe of companies. I discuss this data availability issue in more detail below.

Table 2. Sample Industries

Industry	Number of Companies in Earnings Threshold Calculation	Number of Companies in Capital Intensity Calculation
Electric Utilities		
Electric Utility (Central)	19	19
Electric Utility (East)	16	16
Electric Utility (West)	11	12
Electric Utilities	***46***	***47***
Other Regulated Utilities		
Natural Gas Utility	10	10
Water Utility	5	5
Oil and Gas Distribution	3	2
Pipeline MLP	5	8
All Regulated Utilities	***69***	***72***
Other Capital Intensive Industries		
Railroad	3	3
Telecommunications Services	4	4
Environmental	3	3
Cable TV	2	3
All Capital Intensive Industries	***81***	***85***
Other Industries		
Air Transport	3	3
Telecommunications Utility	0	0
Trucking	3	3
All Industries	***87***	***91***

Q31. Do you have any additional comments about the sample?

A31. Yes. Focusing on the companies in the earnings threshold calculation, both the sample containing the initial range of all industries and the subset of all capital intensive industries are dominated by electric utilities (46 companies out of 87 and 81 companies respectively). Moreover, 69 companies operate in regulated industries. The large fraction of regulated companies and electric utilities in particular gives a high degree of confidence in the sample being of comparable business risk with an electric utility. At the same time, including some unregulated companies in comparable industries is not only consistent with the language used in the statute but also results in the consideration of a larger number of estimates. A larger sample is,

in general, preferable as it will smooth out fluctuations from an industry group or subset of companies with unusual returns in a particular year.

Q32. Have you considered the effect of including electric utilities in your sample that derive a large part of their earnings from unregulated generation?

A32. Yes. Including companies with unregulated segments is not in itself a reason for concern, since the statute itself envisions looking beyond regulated utilities for a comprehensive sample of comparable companies. However, there could be a legitimate concern that the volatility of generation revenues is higher than volatility of revenues of regulated electric distribution companies, and therefore that the returns of companies that invest heavily in electric generation may not be comparable. In order to gauge whether this is in fact the case, I also computed rate of return thresholds for a subsample of companies that excludes those electric utilities classified by the *Edison Electric Institute* as "Diversified" or "Mostly Regulated."[19] Companies in these two categories have more unregulated assets than companies classified as "Regulated." As a result, eliminating these two categories will eliminate the electric companies with a substantial investment in unregulated generation.

Q33. Are the results obtained by excluding electric utilities with substantial unregulated operations materially different?

A33. No. The thresholds I obtained by excluding the Diversified and Mostly Regulated electric utilities are very close to those obtained for the full sample. The numerical results are discussed in the next subsection. It should also be pointed out that focusing on a particular group of companies that have a high rate of return in a given year is not an appropriate basis for excluding them from the sample as being insufficiently comparable to the utility under analysis. Earned returns vary from year to year. Companies or industries that may have had a particularly good year recently

[19] The EEI classifies utilities as "Diversified" if they have less than 50 percent of their assets in regulated operations. The "Mostly Regulated" category includes utilities with between 50 and 80 percent regulated assets. The classifications for each company upon which I rely are provided in the *Q4 2011 Financial Update – Rate Case Summary*, published by EEI and available on its website at http://www.eei.org/whatwedo/DataAnalysis/IndusFinanAnalysis/Pages/QtrlyFinancialUpdates.aspx. The EEI uses information as of December 31, 2010 to classify companies according to this criterion.

may under-perform in the future. It is much more advisable to select sample companies based on characteristics of an operational and business risk nature, which remain unchanged over time as long as the company does not change its primary business.

Q34. Do you test for "outliers" in your sample companies?

A34. Yes. I recommend that any company more than three standard deviations above or below the mean return on total assets be eliminated from the sample. The mean and standard deviation should then be recalculated and the test for any companies greater than three standard deviations above or below the mean should be repeated. This process should continue until no sample companies have realized returns more than three standard deviations away from the mean. In general, I expect that in practice it is unlikely to need more than 1 or 2 iterations to arrive at the final sample.

Q35. Why do you recommend eliminating outliers?

A35. Observations three standard deviations above or below the mean are extraordinarily rare in a normal distribution, less than 1 in 350. Such observations could be the result of an error in the data. Eliminating such observations has two beneficial effects on the SEET. The first benefit is that it provides further screening for companies that might otherwise appear to be comparable. The second benefit is that companies that may themselves have unusual earnings in a particular year do not affect the SEET for the regulated companies in Ohio. However, eliminating observations from the sample must be done with caution because the observations may be providing important information about the sample. Simply because an observation is unusual does not necessarily mean that there is an error in the data or that it is not a legitimate member of the target population. For example, the discovery that one man in a sample of 100 is more than 7 feet tall does not suggest that the measurement is in error even though the mean height for a man in the U.S. is about 5 feet 9 inches.

Q36. Did application of the outlier test result in eliminating any companies from the sample?

A36. No, it did not. In general, excluding outliers helps deal with the larger problem of balancing the tradeoff between false positives and not detecting significantly excessive earnings. For example, in my analysis performed for the 2009 and 2010 test years, I identified and eliminated two outliers from each sample to achieve that balance. The absence of outliers in this year's sample indicates a homogenous distribution of returns, which hopefully reduces both types of error because it will make it easier to detect significantly excessive earnings while simultaneously allowing for an increase in the confidence level to avoid false positives. Increasing the size of the sample has a similar effect if the companies are comparable to the regulated company.

Q37. What data source are you using?

A37. Most of the data are taken from *Value Line* except for the information on the corporate credit ratings, which can be extracted from Compustat, Standard & Poor's, Bloomberg or other sources, and the Edison Electric Institute's (EEI) classification of electric utilities based on percentage of regulated assets, which is obtained from EEI. I used the *Value Line Investment Analyzer*, which provides electronic access to the historical data reported in the *Value Line* sheets.[20] In addition, because *Value Line* has not yet published the end-of-year data for all the companies in the sample, I used Bloomberg to supplement the dataset when possible.

Q38. Are there any issues related to data availability that are important to discuss?

A38. Yes, there are two important issues regarding data availability. *Value Line*, as do other reliable data providers, reports data based on the fiscal year according to which each company operates. An important reason for this is that for most companies only annual (fiscal year) financial statements are audited. In addition, there is a lag of up

[20] The analysis could be performed using only the printed *Value Line* sheets, but doing so would require manually collecting the necessary data. In addition, the data items reported in the printed sheets are not identical to the ones available in the historical database, so care should be taken that the correct information is used.

to three months between the end of the fiscal year and the time audited results become available. As a result, the test cannot be performed immediately after the end of each calendar year.

The second issue stems from *Value Line*'s data updating process, which does not reflect all the fiscal year end data as soon as it becomes available. Because of this delay in publishing the data, I had to rely on Bloomberg data to ensure that the sample size was not reduced artificially. I discuss both issues in greater detail in Appendix B.

D. SIGNIFICANTLY EXCESSIVE EARNINGS

Q39. How can the sample of comparable risk companies be used to determine whether the utility has earned significantly excessive earnings?

A39. A properly selected sample provides a collection of returns that exhibit the kind of variation one would expect to see from companies that experience no unusual events that would cause excessively high or low returns. Based on the sample, it is possible to draw inferences about the unknown characteristics of the underlying process that determines, in practice, a utility's actual return on total capital. Conceptually, the set of possible returns that the utility can experience in the absence of significantly excessive earnings, and the associated probabilities that each of these returns occur, can be thought of as a statistical distribution whose parameters (i.e., the mean and standard deviation) are unknown.

The mean of this distribution represents what the utility is expected to earn on average in a normal year. The standard deviation indicates how much variation one is likely to observe around this mean. A utility's earnings are affected by many factors, many of which cannot be measured or predicted with certainty. Therefore, it is to be expected that in the course of a normal year, in which no significantly excessive earnings have occurred, a utility might earn more or less than the average amount. The magnitude of this variation is measured by the standard deviation.

Q40. Can the mean and standard deviation of this distribution of returns be measured accurately?

A40. The true parameters of this distribution are not known, but we can estimate them using the sample of comparable companies. The sample average and standard deviation provide the best estimates of the mean and standard deviation of the unknown distribution of returns. The better and more comprehensive the sample is, the better the estimated parameters will be. This is the reason why a larger sample is preferable to a smaller sample: it provides more precise estimates, reducing the likelihood that these estimates differ from the true, but unknown, parameters by material amounts. In this regard, adjusting the results for capital structure differences rather than restricting the sample to only those companies that are similar to the Companies' capital structure is critical in maximizing the test's reliability.[21]

Q41. Does it mean that if the utility earns more than the allowed, or expected, amount, any excess should be deemed significantly excessive?

A41. No. Because so many factors determine the actual earnings, a utility's realized return on capital is guaranteed to fluctuate around its expected value.[22] Sometimes returns are higher than the expected value, and sometimes lower, and these differences tend to offset each other over time. Simply earning something higher than the mean of the distribution is not evidence of significantly excessive earnings.

Q42. How then should it be determined that significantly excessive earnings have occurred?

A42. While some variation around the mean is to be expected, we may sometimes observe a return sufficiently high (or low) that it is unlikely to have been generated by the same underlying process that generates usual, ordinary earnings. When such an unlikely return is observed, we may conclude that something happened to the utility in that year that altered its earnings process, making it possibly significantly

[21] Basing the sample selection on a parameter such as beta would have a similar problem.

[22] Here, I use the word "expected" in its statistical sense, i.e., the average of all possible outcomes from the distribution of returns, weighted by each outcome's probability of occurrence.

excessive. Mathematically, we can determine what it means that an observation is sufficiently unlikely by using the standard deviation, as described more fully below.

Q43. After you have calculated the return on total capital for the sample companies, how do you propose to test for significantly excessive earnings?

A43. After calculating the return on total capital for the sample companies for the year, I calculate the sample mean and standard deviation of the data. I then implement a *one-sided* statistical test of significantly excessive earnings.[23] If the earned rate of return on total capital of the utility exceeds the sample mean earned return on total capital by more than 1.645 standard deviations, then significantly excessive earnings may be indicated by the test.

Q44. Can the return threshold be expressed in terms of ROE, rather than return on total capital?

A44. Yes. Using the threshold return on total capital derived from the sample, a threshold ROE level can be determined using information about the utility's capital structure and its tax rate, interest expense, and preferred dividends. An example of how this transformation can be performed is provided in Appendix B.

Q45. In his AEP pre-filed testimony and oral hearing testimony, Mr. Cahaan discussed the sensitivity of your method to the capital structure adjustment, and in particular to the Companies' capital structure, which is influenced by decisions of their sole shareholder, FirstEnergy.[24] Do you believe this presents a concern regarding using your methodology?

A45. No, I do not. As the example in Table 1 illustrates, the capital structure adjustment essentially eliminates the effect of capital structure on the test results. While the ROE threshold certainly is affected by the Companies' equity ratio, the fundamental measure that drives the comparison between the sample results and the Companies'

[23] The test is one-sided because it focuses only on whether the regulated company's earnings exceed the mean by more than 1.645 standard deviations, and not on whether earnings are less than the mean by the same amount.

[24] Cahaan AEP Prefiled Testimony, p. 10, and Cahaan AEP Hearing Testimony, pp. 446-447.

results is the return on total capital. In other words, whether a Company's earnings may be deemed significantly excessive or not depends on how much money the Company earns for all its investors in that year, regardless of how that money is divided between debt investors and equity investors. That comparison does not depend on the Company's mix of debt and equity – changing the ratio of debt to equity without changing the total earnings will not change the return on total capital threshold. Therefore, such a change in capital structure will not affect the test results. This is an important reason why the capital structure adjustment is critical to a correct comparison between the company under analysis and the sample. Performing this adjustment ensures that the test makes "such adjustments for capital structure as may be appropriate," and that a meaningful comparison is being made between the Companies' ROE and the sample companies' ROE, as the statute requires.

Q46. Why did you select 1.645 standard deviations above the mean as the cutoff for determining significantly excessive earnings?

A46. For a normal distribution, 95 percent of the observations lie below 1.645 standard deviations above the mean. In other words, if a number were drawn at random from a normal distribution, only 5 percent of the time would the number be expected to be higher than 1.645 standard deviations above the sample mean. The 95 percent figure is typically referred to in the statistics literature as the confidence level used in hypothesis testing. Other commonly used confidence levels are 90 percent and 99 percent, but in most cases levels below 90 percent are not considered sufficiently reliable. The chosen confidence level determines how conservative the test is: a higher level ensures that fewer false positives are generated but also makes it more likely that the test does not identify significantly excessive earnings.

Q47. In your initial testimony before the Commission in Case No. 08-935-EL-SSO, you recommended a threshold of 1.28 standard deviations. Have you changed your recommendation?

A47. Yes. In subsequent testimony filed in Case No. 10-1265-EL-UNC and Case No. 11-4553-EL-UNC, I revised my recommended threshold because I also recommended a test for outliers. I continue that revised recommendation here. A sample without

outliers means that the distribution of returns is more homogeneous, which increases the possibility of a false positive for significantly excessive earnings relative to a less homogeneous sample. As I discussed in my initial testimony in Case No. 08-935-EL-SSO, if the distribution is more homogeneous, it would be appropriate to increase the confidence level.

Q48. What standard deviation cutoffs do these alternative confidence levels yield?

A48. Using a higher confidence level means that the return threshold is set farther above the sample average return. For example, using a 97.5 percent confidence level implies setting the threshold at 1.96 standard deviations above the average. Other common cutoffs are shown in Table 3 below.

Table 3. Standard Deviation Cutoffs at Different Confidence Levels

Confidence Level	90%	95%	97.5%	99%
Number of Standard Deviations for Threshold	1.282	1.645	1.960	2.326

Q49. What factors should be considered in setting the confidence level of the SEET?

A49. Selection of the confidence level involves a trade-off between falsely determining that significantly excessive earnings occurred by setting the confidence level too low versus not detecting significantly excessive earnings when they occurred by setting the confidence level too high. The fact that the proposed sample contains companies from industries other than the electric utility industry suggests that the confidence level be lower, but the elimination of outliers argues for a higher confidence level. A 90 percent confidence level is the most conservative statistical test that could be applied and has the effect of allowing more false positives than a higher confidence level.[25] A higher confidence level is appropriate if the sample is restricted to only regulated utilities, or if it has no outliers, because the distribution of returns for the

[25] I use the term "conservative" within the context of this proceeding. In the case of statistical hypothesis testing, a conservative confidence level would be one that is at the higher end of acceptable levels, such as 99 percent.

sample would likely be less variable. In other words, if the sample companies were more comparable to an electric utility, it is likely that variations in earnings caused by factors not related specifically to the electric utility industry would be reduced. As a result, it is necessary to use a higher confidence level in order to determine that earnings in excess of that threshold could be significantly excessive. If the sample were restricted to only electric utilities, the possibility of a false positive would be higher when using a lower confidence level. The variance of the sample returns would likely be smaller for a sample restricted to electric utilities which would substantially reduce the threshold for a determination of significantly excess profits. In that case, a higher confidence level such as 97.5 percent would be necessary in order to avoid deeming "significantly excessive" a return that is simply at the high end of the normal variation in returns that characterizes the operations of an electric utility. The absence of outliers has a similar effect on the distribution of the sample.

Q50. But would it not then be better to use a sample that is as comparable as possible to an electric utility?

A50. Not necessarily. First, the statute refers to a sample of comparable companies "including regulated utilities." This language suggests that not only should the sample include utilities other than electric utilities, but also companies with unregulated operations. Second, it is impossible to select a sample of companies that is perfectly comparable to the utility under analysis. Differences will always exist even if attention is restricted to the same industry. As more industries are included in the sample, the sample may become less comparable to the specific company, but it may also be a better sample for the determination of significantly excessive earnings. However, there is no clear line that mechanistically determines what an acceptable range of industries to consider may be. It is important however to be aware that changing the breadth of the sample needs to be taken into account when selecting an appropriate statistical confidence level. It would be inappropriate to change one without adjusting the other to reflect the different level of comparability between the sample companies.

Q51. Why is it important to guard against a false positive?

A51. A false positive means that the test incorrectly identifies the utility's earnings as significantly excessive. Although it is important to protect customers from paying rates that result in significantly excessive profits, it is also important to avoid a determination of significantly excessive profits when none were earned. Reducing the probability of false positives mitigates the problem of asymmetric risk, which is an important concern that needs to be addressed when implementing a test of significantly excessive earnings. In addition, incorrect determinations of significantly excessive earnings negatively affect the utility's incentives to operate efficiently.

Q52. Please describe what you mean by the term "asymmetric risk".

A52. Asymmetric risk is the situation in which the possibility of a bad outcome is not offset by the possibility of an equally good outcome. In general, a utility's earned ROE will deviate somewhat each year from the ROE used to set rates due to random fluctuations in costs and revenues: sometimes the earned ROE will be greater than expected and sometimes it will be less. For an electric utility, a key reason for under or over-earning the expected ROE is frequently due to fluctuating power prices or to differences between actual and forecast costs. If high power prices are reflected in rates with a delay, the result will often be that a utility's ROE is low in the current year, but higher than normal next year – simply because the costs of power are recovered with a delay. Under normal economic circumstances, these fluctuations offset each other over time, allowing the utility to earn its cost of capital on average. However, if the utility is erroneously determined to have significantly excessive earnings that must be refunded, the offsetting of high and low earnings over time no longer happens, and the utility will fail to earn its cost of capital on average. This situation would impose asymmetric risk on the utility because the utility receives no extra income in years of very low earnings, but must refund income when earnings are determined to be significantly excessive.

Q53. How should a regulator address the situation of a utility that faces asymmetric risk?

A53. Ideally, the source of the asymmetric risk should be eliminated or minimized if possible. If elimination of the asymmetric risk is not possible, the utility's allowed return in a traditional rate proceeding must be set above the estimated cost of capital by an amount that offsets the asymmetric risk so that the utility will again be able to expect to earn its cost of capital on average.

Imposing asymmetric risk on the utilities is an inappropriate regulatory outcome, and therefore not likely to be what the legislators had in mind. Instead, a determination of significantly excessive earnings, or windfall profits, should be reserved for the situation in which earnings exceed the expected return by an amount so great as to not likely be the result of random fluctuations of a magnitude to be expected under normal situations. If such excessively high profits were not corrected, then the utility would be likely to earn a rate of return well above its cost of capital. Such an outcome could be unfair to ratepayers, and it is this situation that the test should attempt to prevent.

Q54. Is a company's cost of capital affected by asymmetric risk?

A54. It could be depending upon whether the probability of an asymmetric outcome is related to the rest of the economy. Recall that a company's cost of capital depends upon the risk that cannot be diversified away, i.e., the market risk or systematic risk of a company. If the asymmetric risk is also systematic, then the company's cost of capital would be increased. Even if the asymmetric risk has no systematic component, the price of the company's stock is likely to decrease so that investors can compensate for the possibility that their return may be adversely affected by the asymmetric risk. Both shareholders and customers may be adversely affected by asymmetric risk because ultimately customers pay the costs of service, including the cost of equity capital which may increase as a result of asymmetric risk.

Q55. Is the asymmetric risk mitigated by the fact that the regulated utility can file a rate case whenever it believes that its costs exceed what can be recovered in its currently allowed rates?

A55. No. The SEET is backward looking in that it considers realized returns. A rate case only affects prospective rates. A utility whose earnings fell short of the allowed return cannot seek recovery of the past shortfall in a future rate case. Therefore, the asymmetric risk remains if only earnings in excess of the threshold must be returned to ratepayers while earnings substantially below the utility's cost of capital cannot be reclaimed.

Q56. Are there other problems with erroneously determining that significantly excessive earnings have occurred?

A56. Yes. Too many determinations of significantly excessive earnings can result in inefficient decision-making by the utility. All businesses have an incentive to reduce costs and to operate efficiently through the promise of higher profits. If the expectation of higher earnings disappears, so does the incentive to seek efficiencies that will ultimately benefit rate payers. An inefficient business means that obtainable gains are not realized, either by the shareholders or by the ratepayers. This is a "lose-lose" situation, which has no desirable features for any party.

Q57. You have discussed the dangers of false positives, but what about false negatives? Is it not important to make sure the likelihood of detecting significantly excessive earnings when they do occur is as high as possible?

A57. It is important to guard against both types of errors. One way to reduce the likelihood of false negatives is to ensure that the companies in the sample are as comparable as possible to the Companies. I do this in two ways: first, I eliminate non-recurring and extraordinary earnings from the calculation, thus reducing earnings variability and the sample standard deviation. Second, I ensure that the sample excludes any companies whose earnings are outliers – values either too low or too high, that would otherwise increase sample standard deviation and the SEET threshold.

It is worth keeping in mind that given any sample, a tradeoff will always exist: reducing the probability of making one type of error increases the probability of making the other type. I believe that choosing a 95 percent confidence level for the threshold calculation achieves a balance between the two types of error.

Q58. You have assumed that the distribution of earned returns for the sample companies can be approximated by a normal distribution. What is the effect on the test if the earned returns were not normally distributed?

A58. If the returns were not normally distributed, the test would not have precisely a 95 percent confidence level. The area in the tails of the distribution could be somewhat more or less than expected for a normal distribution. In fact, a plot of the sample returns shows that the distribution is slightly skewed to the right (toward higher returns), implying that most likely the confidence level is somewhat lower than the 95 percent I recommend. In other words, if the sample is not exactly normally distributed, then imposing the normal distribution is a conservative assumption in the sense that earnings are found to be excessive more often with a corresponding increase in the potential for a false positive.

Q59. Assuming that the utility's earnings fall above the threshold, are there any additional factors that need to be considered?

A59. If application of the formula outlined above suggests the utility's earnings may be significantly excessive, the Commission should scrutinize the utility's earnings for any unusual items. If the utility's earnings rise above the threshold, then the cause of the excessive earnings should be visible – i.e., the extra earnings should be attributable to a particular event experienced by the company during the year being tested, or to a particular earnings source. If no such item can be identified, the possibility that the determination of significantly excessive earnings is incorrect should be seriously contemplated. I note also that the language of the statute states that "Consideration also shall be given to the capital requirements of future committed investments in this state."[26] From the perspective of an expert in financial

[26] R.C. 4928.143(F).

and regulatory economics, I believe these may be appropriate factors to include in the consideration of whether significantly excessive earnings have been realized. The Commission has also recommended that factors other than a statistical test result be considered in making a determination as to whether the utility has significantly excessive earnings.[27]

Q60. Do you have any concerns regarding reliance on factors other than the statistical test?

A60. Yes, I do. The SEET can have an important effect on the utility's financial performance. Investors are likely to evaluate carefully the likelihood that the SEET would result in a finding of significantly excessive earnings, and thus lower returns on their investment after the fact. The more transparent the process by which this determination is made, the less uncertainty surrounds the expected outcome of the test, and thus the investors' expected return. Lower uncertainty about the utility's future performance translates, in turn, into a lower cost of capital than would be the case if the SEET process is viewed as having great uncertainty. A lower cost of capital ultimately means lower rates for the utility's customers. If the test depends on factors that may be not well defined, highly subjective or are difficult to quantify, investors are faced with higher risk about the ultimate test outcome, and higher risk means they will demand a higher expected return in order to be willing to provide capital. Because of this, I believe the test should be as transparent as possible, so that it doesn't increase the utility's regulatory risk and thus its cost of capital.

Q61. In the AEP Decision, the Commission declined to rely on a "bright line SEET threshold based exclusively on a statistical analysis of comparable companies."[28] Isn't the method you propose based exclusively on statistical analysis?

A61. It is, to some extent, but I place great importance on ensuring that the sample selection process results in a suitable set of comparable companies. It is at that stage of the process that judgment is best used, and I rely on both quantitative and

[27] Commission Finding and Order 09-786-EL-UNC, p. 29.

[28] AEP 2009 Decision, p. 24.

qualitative criteria to arrive at a sample of comparable companies. Having done so, I believe that this sample accurately reflects not only the average returns suitable as a benchmark for the SEET, but also the range of such returns. Whether most sample companies earned relatively similar returns, or very different returns, is not captured by considering only the average sample return, but is useful information about the economic environment in which the Companies operated. A stable economic environment will likely result in relatively small variation around the mean, and suggest using a threshold closer to the average for determining significantly excessive earnings. Conversely, an environment with a lot of uncertainty, in which many companies earned very high and very low returns, requires using a threshold farther away from the average. After all, if a lot of companies of comparable risk earned returns above those of the company, it is difficult to argue that the company has significantly excessive earnings.

Additionally, I would note that although the Commission in the AEP Decision declined to rely exclusively on the statistical analysis or "bright line" test proposed in that case, the Commission did recognize that "a statistical analysis of the variation in returns among companies facing comparable business and financial risks can provide useful information, as indicated in our decision in 09-786. . . ."[29] The value of a statistical analysis was also recognized by the Commission's Staff in its formal Recommendation developed in Case No. 09-786-EL-UNC, and comprised at least a portion of the methodologies proposed by other witnesses testifying in the initial round of Electric Security Plan cases, including the witness sponsored by the Ohio Consumers' Counsel.

Q62. The Commission looked favorably upon Mr. Cahaan's suggestion to set the SEET threshold 50 percent above the sample average ROE. Would that method accurately reflect the relevant sample characteristics?

A62. No, because it ignores the variation and range of returns seen in the sample. In order to take account of how variable the sample is, the 50 percent figure should change

[29] AEP 2009 Decision, p. 24.

with how heterogeneous the sample returns are – when the sample shows more variability the threshold should be higher, perhaps 60 or 70 percent, and conversely, the threshold should be lower when sample variability is low. This is the same logic as that employed by Mr. Cahaan in deciding to switch from a threshold based on a fixed number of basis points above the sample mean (as he did in the initial round of Electric Security Plan cases), to one based on adding a percentage of the mean as he did in the AEP case. In doing so, he may have intended to better reflect that over time the level of the sample average might change substantially in response to economic factors such as inflation, making a fixed adder unfair.[30] But I believe he fell somewhat short of the mark since these factors can also influence variability of the sample distribution, making a fixed percentage adder a poor measure of significantly excessive earnings. That is why using information about the sample itself is more reliable in determining the proper threshold.

Accordingly, it is difficult to see how one could reasonably reflect changes in sample variability without using the most commonly used measure of sample variability, namely the standard deviation. In fact, using a fixed percentage of the sample average would provide just as much a "bright line" threshold as using the standard deviation does. The important difference is that fixing the 50 percent is arbitrary, and more importantly, could result in a threshold that is inappropriately large, or inappropriately low, given the economic reality in which the company operated.

Q63. How could use of a fixed percentage of the sample average, such as 50 percent, result in too high a threshold?

A63. That can happen if the sample does not exhibit much variability. For example, in a sample with average returns of 10 percent and standard deviation of 2 percent, the 50 percent threshold (15 percent) would be 2.5 standard deviations higher than the mean. In a normally distributed population, that would imply a less than 1 percent chance of earnings not being significantly excessive (recall the standard deviation cutoffs shown in Table 3). By contrast, using a fixed number of standard deviations as a threshold

[30] Cahaan AEP Testimony, pp. 16-17.

ensures that the result scales appropriately with the amount of sample variability. In this situation, the method I propose would give a threshold of only 13.3 percent.

Q64. The Commission also considered that in the AEP 2009 case subtracting that same percentage from the sample average resulted in a number close to the company's cost of debt, as highlighted by Mr. Cahaan. Is that comparison relevant in determining a SEET threshold?

A64. Given the retrospective nature of the test, I do not think it is particularly useful. It would certainly be unusual and excessively deficient for a company's *expected* return on equity to be lower than its cost of debt, but when looking at realized returns one should keep in mind why equity commands higher expected returns that debt: it is risky, and part of that riskiness manifests itself in sometimes very low, even negative, actual or realized returns. In fact, when examining realized stock returns, which is what measures shareholders actual gains and losses, it is not at all unusual to see numbers that are not only lower than the company's cost of debt, but lower than zero.

Another reason to be skeptical of using this comparison is that there is no economic reason why subtracting 50 percent from the sample average ROE should result in a number close to the cost of debt. While it can yield such a result, as it did in the AEP case for that year, it does not necessarily have to do so. In fact, the Companies' actual rates of return on equity were all below the cost of debt in 2009, with Toledo Edison's ROE being as much as 280 basis points below its cost of debt.[31] Similarly, in 2010, Cleveland Electric Illuminating Company's ROE was 530 points below its cost of debt and Toledo Edison's ROE was 100 basis points below its cost of debt.[32]

[31] Toledo Edison's ROE, calculated for the purpose of the SEET, was 3.8 percent, while its embedded cost of debt was 6.62 percent (FirstEnergy 2009 SEET Order, p. 3).

[32] The two Companies' ROE's reported for the purpose of the 2010 SEET were 1.4 percent and 5.8 percent respectively, while their cost of debt was 6.7 percent and 6.8 percent respectively (FirstEnergy 2010 SEET Order, p. 3).

E. RESULTS OF THE SAMPLE

Q65. Based on the sample of comparable companies you selected, what values for the test did you obtain?

A65. Using data for the 2011 fiscal year, I obtained an average return on total capital equal to 7.48 percent with a standard deviation of 2.24 percent. If electric utilities classified as Diversified by the EEI are excluded, then the average return becomes 7.53 percent, and the standard deviation becomes 2.23 percent. Further excluding Mostly Regulated electric utilities yields an average return on total capital of 7.59 percent, and a standard deviation of 2.31 percent. The results are not substantially different if companies classified as Mostly Regulated or Diversified were eliminated from the sample.

Q66. What thresholds do these numbers imply?

A66. If the determination is performed based on the full sample of capital intensive industries, then significantly excessive earnings may be found if the return on total capital were greater than or equal to 11.16 percent. Restricting the sample in the two ways described above imply thresholds of 11.20 percent and 11.38 percent respectively. The results are summarized in Table 4 below.

Table 4. Return on Total Capital Thresholds for Different Samples

Statistical Significance Threshold	**95.0%**			
		Capital Intensive Industries	Excluding Electric Utilities Classified "D" by EEI	Excluding Electric Utilities Classified "D" or "MR" by EEI
Sample Average Return on Total Capital	[1]	7.48%	7.53%	7.59%
Sample Standard Deviation	[2]	2.24%	2.23%	2.31%
Return on Total Capital Threshold	[3]	**11.16%**	**11.20%**	**11.38%**

Sources and Notes:
[1]: Sample average of return on total capital for the corresponding sample.
[2]: Sample standard deviation of return on total capital for the corresponding sample.
[3] = [1] + 1.645 x [2]. See Table 3 for supporting evidence for 1.645.

Q67. Which of these three thresholds do you find most reasonable?

A67. I believe that the results based on the full sample of capital intensive industries, which are presented in Table 5, are the most reliable. While eliminating electric utilities

with more unregulated assets does not influence the results substantially, using a larger sample provides a more reliable result, and is therefore a better methodology.

Q68. You mentioned earlier that applying a 50 percent adder to the sample mean can result in a higher threshold than that based on the standard deviation. Does that apply in this case?

A68. It does, in fact. As shown in Table 4, the threshold I derive for the sample of capital intensive industries is 11.16 percent. Adding 50 percent to the sample average return on total capital of 7.48 percent would yield a threshold of 11.22 percent, which while of comparable magnitude is slightly higher than 11.16 percent. To be clear, in his AEP Testimony Mr. Cahaan suggested that the adder be calculated and applied based directly on the sample average ROE, not on the return on total capital. However, that approach, in addition to being just as exposed to this specific problem, has the additional problem of either not adjusting for capital structure (contrary to the statute), or reducing the sample size unnecessarily.

Q69. What ROE thresholds do these numbers imply?

A69. In order to determine a threshold in terms of ROE, one needs to use information about the utility's capital structure, tax rate, cost of debt and preferred equity. Because each of the three FirstEnergy utilities has different values for these quantities, I calculate Company-specific thresholds in Table 5 below.[33] Restricting the sample based on the EEI classification of electric utilities does not yield substantially different results so those results are not presented here.[34] The ROE thresholds for each Company and each subsample are detailed in Table B 4 of Appendix B.

[33] See Attachment KRB-4 to the Testimony of Mr. Kevin R. Burgess for details on the calculation of the utility-specific capital structure, cost of debt, and effective tax rate.

[34] Using a threshold of 50 percent above the sample mean, the method that the Commission applied in the AEP 2009 Decision, would yield a return on total capital threshold of 11.22 percent, and therefore thresholds for the three Companies of 20.65 percent, 20.11 percent and 22.40 percent respectively (as obtained by substituting 11.22 percent for the threshold value in row 9 of Table 5).

Table 5. Thresholds for Significantly Excessive Earnings

		Cleveland Electric Illuminating	Ohio Edison	Toledo Edison
Average Capital Structure for 2011				
Equity Ratio	[1]	42.4%	42.8%	38.0%
Debt Ratio	[2]	57.6%	57.2%	62.0%
Debt-to-Equity Ratio	[3]	1.36	1.34	1.63
Embedded Cost of Debt	[4]	6.70%	7.12%	6.80%
Effective Tax Rate	[5]	36.14%	35.88%	35.74%
Sample Statistics				
Sample Average Return on Total Capital	[6]	7.48%	7.48%	7.48%
Sample Standard Deviation	[7]	2.24%	2.24%	2.24%
ROE Thresholds using the Sample Standard Deviation				
Statistical Significance Threshold	[8]	95.0%	95.0%	95.0%
Return on Total Capital Threshold	[9]	11.16%	11.16%	11.16%
ROE Threshold at Sample Average plus 1.645 standard deviations	[10]	**20.51%**	**19.97%**	**22.24%**

Sources and Notes:
[1] - [2], [4] - [5]: Provided by FirstEnergy. See Testimony of Kevin R. Burgess, Attachment KRB-4.
[3] = [2] / [1].
[6]: Sample average of return on total capital for the sample.
[7]: Sample standard deviation of return on total capital for the sample.
[8]: Confidence level of statistical test.
[9] = [6] + 1.645 x [7]. See Table 3 for supporting evidence for 1.645.
[10] = [9] x (1 + [3]) - (1 - [5]) x [4] x [3].

Q70. Have you also determined the "safe harbor" ROE of 200 bps over the sample mean?

A70. Yes. These values are displayed in row [10] of Table 6 below, adjusted for each Company's capital structure. The values vary by company because the capital structures vary by company.

Table 6. ROE Determinants Using 200 bps "Safe Harbor" Increment

		Cleveland Electric Illuminating	Ohio Edison	Toledo Edison
Average Capital Structure for 2011				
Equity Ratio	[1]	42.4%	42.8%	38.0%
Debt Ratio	[2]	57.6%	57.2%	62.0%
Debt-to-Equity Ratio	[3]	1.36	1.34	1.63
Embedded Cost of Debt	[4]	6.70%	7.12%	6.80%
Effective Tax Rate	[5]	36.14%	35.88%	35.74%
Sample Statistics				
Sample Average Return on Total Capital	[6]	7.48%	7.48%	7.48%
Sample Standard Deviation	[7]	2.24%	2.24%	2.24%
ROE Determinants using "Safe Harbor" Increment				
ROE Corresponding to Sample Average Return on Total Capital, Adjusted to Account for Capital Structure	[8]	11.83%	11.37%	12.55%
"Safe Harbor" Increment	[9]	2.00%	2.00%	2.00%
ROE Determinants using "Safe Harbor" Increment	[10]	**13.83%**	**13.37%**	**14.55%**

Sources and Notes:
[1] - [2], [4] - [5]: Provided by FirstEnergy. See Testimony of Kevin R. Burgess, Attachment KRB-4.
[3] = [2] / [1].
[6]: Sample average of return on total capital for the sample.
[7]: Sample standard deviation of return on total capital for the sample.
[8] = [6] x (1 + [3]) - (1 - [5]) x [4] x [3].
[9]: Commission Finding and Order in case no. 09-786-EL-UNC, at p. 29.
[10] = [8] + [9].

Q71. Why did you not simply calculate the sample average ROE and add 200 bps to determine the "safe harbor" ROE?

A71. Simply averaging the realized ROEs for the sample companies ignores differences in capital structure, but the statute specifies that differences in capital structure should be considered. Adjusting for differences in capital structure is inherent in the method I propose and important as demonstrated by the variation in the safe harbor determinant for the Companies. These vary from 13.37 percent to 14.55 percent. Ignoring capital structure differences could lead to an unfair result and weakens the effectiveness of the safe harbor determination.

Q72. How does the resulting ROE threshold depend on the utility's capital structure?

A72. While the return on total capital threshold is based only on the sample of comparable companies, and therefore not affected by the utility's capital structure, the ROE threshold depends on it. In general, a higher equity thickness lowers the ROE threshold, while a lower equity thickness tends to raise it. As an example, if Ohio Edison's capital structure had an equity thickness of 50 percent instead of 42.8 percent, the implied ROE threshold based on the capital intensive sample would be 17.75 percent or approximately 222 basis points lower than the implied threshold at 42.8 percent equity. The thresholds that result at several hypothetical equity ratios for Ohio Edison are presented below in Table 7:

Table 7. Implied ROE Thresholds at Different Equity Ratios for Ohio Edison

Cost of Debt	7.12%			[1]
Effective Tax Rate	35.9%			[2]
Equity	35.0%	**42.8%**	50.0%	[3]
Debt-to-Equity ratio	1.86	**1.34**	1.00	[4] = (1-[3])/[3]
Return on Total Capital Threshold	11.16%	**11.16%**	11.16%	[5]
Implied Return on Equity Threshold	23.40%	**19.97%**	17.75%	[6] = [5] x (1+[4]) - (1-[2]) x [4] x [1]

Note: The calculations use the cost of debt and tax rate information for Ohio Edison, and for illustrative purposes consider two hypothetical capital structures around the Company's actual values.

Q73. Does this conclude your testimony?

A73. Yes.

APPENDIX A:

QUALIFICATIONS OF MICHAEL J. VILBERT

Michael Vilbert is an expert in cost of capital, financial planning and valuation who has advised clients on these matters in the context of a wide variety of investment and regulatory decisions. He has testified or submitted testimony on cost of capital, economic damages, the business purpose and economic substance of tax related transactions, valuation of assets in arbitration and the effect of regulatory policy changes on the cost of capital.

He received his Ph.D. in Financial Economics from the Wharton School of the University of Pennsylvania, an MBA from the University of Utah, an M.S. from the Fletcher School of Law and Diplomacy, Tufts University, and a B.S. degree from the United States Air Force Academy. He joined The Brattle Group in 1994 after a career as an Air Force officer, where he served as a fighter pilot, intelligence officer, and professor of finance at the Air Force Academy.

REPRESENTATIVE CONSULTING EXPERIENCE

- Dr. Vilbert served as the consulting expert in several cases for the U.S. Department of Justice and the Internal Revenue Service regarding the business purpose and economic substance of a series of tax related transactions. These projects required the analysis of a complex series of financial transactions including the review of voluminous documentary evidence and required expertise in financial theory, financial market as well as accounting and financial statement analysis.

- In a securities fraud case, Dr. Vilbert designed and created a model to value the private placement stock of a drug store chain as if there had been full disclosure of the actual financial condition of the firm. He analyzed key financial data and security analysts'' reports regarding the future of the industry in order to recreate pro forma balance sheet and income statements under a variety of scenarios designed to establish the value of the firm.

- For pharmaceutical companies rebutting price-fixing claims in antitrust litigation, Dr. Vilbert was a member of a team that prepared a comprehensive analysis of industry profitability. The analysis replicated, tested and critiqued the major recent analyses of drug costs, risks and returns. The analyses helped develop expert witness testimony to rebut allegations of excess profits.

- For an independent electric power producer, Dr. Vilbert created a model that analyzed the reasonableness of rates and costs filed by a natural gas pipeline. The model not only duplicated the pipeline's rates, but it also allowed simulation of a variety of "what if" scenarios associated with cost recovery under alternative time patterns and joint cost allocations. Results of the analysis were adopted by the intervenor group for negotiation with the pipeline.

- For the CFO of an electric utility, Dr. Vilbert developed the valuation model used to support a stranded cost estimation filing. The case involved a conflict between two utilities over the responsibility for out-of-market costs associated with a power purchase contract between them. In addition, he advised and analyzed cost recovery mechanisms that would allow full recovery of the stranded costs while providing a rate reduction for the company's rate payers.

- Dr. Vilbert has testified as well as assisted in the preparation of testimony and the development of estimation models in numerous cost of capital cases for natural gas pipeline, water utility and electric utility clients before the Federal Energy Regulatory Commission ("FERC") and state regulatory commissions. These have spanned standard estimation techniques (e.g., Discounted Cash Flow and Risk Positioning models). He has also developed and applied more advanced models specific to the industries or lines of business in question, e.g., based on the structure and risk characteristics of cash flows, or based on multi-factor models that better characterize regulated industries.

- Dr. Vilbert has valued several large, residual oil-fired generating stations to evaluate the possible conversion to natural gas or other fuels. In these analyses, the expected pre- and post-conversion station values were computed using a range of market electricity and fuel cost conditions.

- For a major western electric utility, Dr. Vilbert helped prepare testimony that analyzed the prudence of QF contract enforcement. The testimony demonstrated that the utility had not been compensated in its allowed cost of capital for major disallowances stemming from QF contract management.

- Dr. Vilbert analyzed the economic need for a major natural gas pipeline expansion to the Midwest. This involved evaluating forecasts of natural gas use in various regions of the United States and the effect of additional supplies on the pattern of natural gas pipeline use. The analysis was used to justify the expansion before the FERC and the National Energy Board of Canada.

- For a Public Utility Commission in the Northeast, Dr. Vilbert analyzed the auction of an electric utility's purchase power agreements to determine whether the outcome of the auction was in the ratepayers' interest. The work involved the analysis of the auction procedures as well as the benefits to ratepayers of transferring risk of the PPA payments to the buyer.

- Dr. Vilbert led a team tasked to determine whether bridge tolls were "just and reasonable" for a non-profit port authority. Determination of the cost of service for the authority required estimation of the value of the authority's assets using the trended original cost methodology as well as evaluation of the operations and maintenance budgets. Investment costs, bridge traffic information and inflation indices covering a 75 year period were utilized to estimate the value of four bridges

and a passenger transit line valued in excess of $1 billion.

- Dr. Vilbert helped a recently privatized railroad in Brazil develop an estimate of its revenue requirements, including a determination of the railroad's cost of capital. He also helped evaluate alternative rate structures designed to provide economic incentives to shippers as well as to the railroad for improved service. This involved the explanation and analysis of the contribution margin of numerous shipper products, improved cost analysis and evaluation of bottlenecks in the system.

- For a utility in the Southeast, Dr. Vilbert quantified the company's stranded costs under several legislative electric restructuring scenarios. This involved the evaluation of all of the company's fossil and nuclear generating units, its contracts with Qualifying Facilities and the prudence of those QF contracts. He provided analysis concerning the impact of securitizing the company's stranded costs as a means of reducing the cost to the ratepayers and several alternative designs for recovering stranded costs.

- For a recently privatized electric utility in Australia, Dr. Vilbert evaluated the proposed regulatory scheme of the Australian Competition and Consumer Commission for the company's electric transmission system. The evaluation highlighted the elements of the proposed regulation which would impose uncompensated asymmetric risks on the company and the need to either eliminate the asymmetry in risk or provide additional compensation so that the company could expect to earn its cost of capital.

- For an electric utility in the Southwest, Dr. Vilbert helped design and create a model to estimate the stranded costs of the company's portfolio of Qualifying Facilities and Power Purchase contracts. This exercise was complicated by the many variations in the provisions of the contracts that required modeling in order to capture the effect of changes in either the performance of the plants or in the estimated market price of electricity.

- Dr. Vilbert helped prepare the testimony responding to a FERC request for further comments on the appropriate return on equity for electric transmission facilities. In addition, Dr. Vilbert was a member of the team that made a presentation to the FERC staff on the expected risks of the unbundled electric transmission line of business.

- Dr. Vilbert and Mr. Frank C. Graves, also of The Brattle Group, prepared testimony evaluating an innovative Canadian stranded cost recovery procedure involving the auctioning of the output of the province's electric generation plants instead of the plants themselves. The evaluation required the analysis of the terms and conditions of the long-term contracts specifying the revenue requirements of the plants for their entire forecasted remaining economic life and required an estimate of the cost of capital for the plant owners under this new stranded cost recovery concept.

- Dr. Vilbert served as the neutral arbitrator for the valuation of a petroleum products

tanker. The valuation required analysis of the Jones Act tanker market and the supply and demand balance of the available U.S. constructed tanker fleet.

- Dr. Vilbert evaluated the appropriate "bareboat" charter rate for an oil drilling platform for the renewal period following the end of a long-term lease. The evaluation required analysis of the market for oil drilling platforms around the world including trends in construction and labor costs and the demand for platforms in varying geographical environments.

PRESENTATIONS

"Utility Distribution Cost of Capital," *EEI Electric Rates Advanced Course*, Bloomington, IN, 2002, 2003.

"Issues for Cost of Capital Estimation," with Bente Villadsen, *Edison Electric Institute Cost of Capital Conference*, Chicago, IL, February 2004.

"Not Your Father's Rate of Return Methodology," *Utility Commissioners/Wall Street Dialogue*, NY, May 2004.

"Utility Distribution Cost of Capital," *EEI Electric Rates Advanced Course*, Madison, WI, July 2004.

"Cost of Capital Estimation: Issues and Answers," *MidAmerican Regulatory Finance Conference*, Des Moines, IA, April 7, 2005.

"Cost of Capital - Explaining to the Commission - Different ROEs for Different Parts of the Business," *EEI Economic Regulation & Competition Analysts Meeting*, May 2, 2005.

"Current Issues in Cost of Capital," with Bente Villadsen, *EEI Electric Rates Advanced Course*, Madison, WI, 2005.

"Current Issues in Estimating the Cost of Capital," *EEI Electric Rates Advanced Course*, Madison, WI, 2006, 2007, 2008, 2009, 2010 and 2011.

"Revisiting the Development of Proxy Groups and Relative Risk Analysis," Society of Utility and Regulatory Financial Analysts: 39th Financial Forum, April 2007.

"Current Issues in Explaining the Cost of Capital to Utility Commissions" Cost of Capital Seminar, Philadelphia, PA, 2008.

"Impact of the Ongoing Economic Crisis on the Cost of Capital of the U.S. Utility Sector", New York Public Service Commission, Albany, NY, April 20, 2009.

"Impact of the Ongoing Economic Crisis on the Cost of Capital of the U.S. Utility Sector", National

Association of Water Companies: New York Chapter, Albany, NY, May 21, 2009.

ARTICLES

"Flaws in the Proposed IRS Rule to Reinstate Amortization of Deferred Tax Balances Associated with Generation Assets Reorganized in Industry Restructuring," by Frank C. Graves and Michael J. Vilbert, white paper for *Edison Electric Institute* (EEI) to the IRS, July 25, 2003.

"The Effect of Debt on the Cost of Equity in a Regulatory Setting," by A. Lawrence Kolbe, Michael J. Vilbert, Bente Villadsen and The Brattle Group, *Edison Electric Institute*, April 2005.

"Measuring Return on Equity Correctly: Why current estimation models set allowed ROE too low," by A. Lawrence Kolbe, Michael J. Vilbert and Bente Villadsen, *Public Utilities Fortnightly*, August 2005.

"Understanding Debt Imputation Issues," by Michael J. Vilbert, Bente Villadsen and Joseph B. Wharton, *Edison Electric Institute*, August 2008.

"Review of Regulatory Cost of Capital Methodologies," (with Bente Villadsen and Matthew Aharonian), Canadian Transportation Agency, September 2010.

"The Impact of Decoupling on the Cost of Capital – An Empirical Study," Joseph B. Wharton, Michael J. Vilbert, Richard E. Goldberg, and Toby Brown, Discussion Paper, *The Brattle Group*, March 2011.

TESTIMONY

Direct and rebuttal testimony before the Alberta Energy and Utilities Board on behalf of TransAlta Utilities Corporation in the matter of an application for approval of its 1999 and 2000 generation tariff, transmission tariff, and distribution revenue requirement, Docket U99099, October 1998.

Direct testimony before the Federal Energy Regulatory Commission on behalf of Central Maine Power in Docket No. ER00-982-000, December 1999.

Direct testimony before the Alberta Energy and Utilities Board on behalf of TransAlta Utilities Corporation for approval of its 2001 transmission tariff, May 2000.

Direct testimony before the Federal Energy Regulatory Commission on behalf of Mississippi River Transmission Corporation in Docket No. RP01-292-000, March 2001.

Written evidence, rebuttal, reply and further reply before the National Energy Board in the matter of an application by TransCanada PipeLines Limited for orders pursuant to Part I and Part IV of the *National Energy Board Act*, Order AO-1-RH-4-2001, May 2001, Nov. 2001, Feb. 2002.

Written evidence before the Public Utility Board on behalf of Newfoundland & Labrador Hydro - Rate Hearings, October 2001, Order No. P.U.7 (2002-2003), dated June 2002.

Direct testimony (with William Lindsay) before the Federal Energy Regulatory Commission on behalf of DTE East China, LLC in Docket No. ER02-1599-000, April 2002.

Direct and rebuttal reports before the Arbitration Panel in the arbitration of stranded costs for the City of Casselberry, FL, Case No. 00-CA-1107-16-L, July 2002.

Direct reports before the Arbitration Board for Petroleum products trade in the Arbitration of the Military Sealift Command vs. Household Commercial Financial Services, fair value of sale of the Darnell, October 2002.

Direct testimony and hearing before the Arbitration Panel in the arbitration of stranded costs for the City of Winter Park, FL, In the Circuit Court of the Ninth Judicial Circuit in and for Orange County, FL, Case No. C1-01-4558-39, December 2002.

Direct testimony before the Federal Energy Regulatory Commission on behalf of Florida Power Corporation, dba Progress Energy Florida, Inc. in Docket No. SC03-1-000, March 2003.

Direct report before the Arbitration Panel in the arbitration of stranded costs for the Town of Belleair, FL, Case No. 000-6487-C1-007, April 2003.

Direct and rebuttal reports before the Alberta Energy and Utilities Board in the matter of the Alberta Energy and Utilities Board Act, R.S.A. 2000, c. A-17, and the Regulations under it; in the matter of the Gas Utilities Act, R.S.A. 2000, c. G-5, and the Regulations under it; in the matter of the Public Utilities Board Act, R.S.A. 2000, c. P-45, as amended, and the Regulations under it; and in the matter of Alberta Energy and Utilities Generic Cost of Capital Hearing, Application No. 1271597, July 2003, November 2003, Decision 2004-052, dated July 2004.

Written evidence before the National Energy Board in the matter of the National Energy Board Act, R.S.C. 1985, c. N−7, as amended, (Act) and the Regulations made under it; and in the matter of an application by TransCanada PipeLines Limited for orders pursuant to Part IV of the *National Energy Board Act*, for approval of Mainline Tolls for 2004, RH-2-2004, January 2004.

Direct and rebuttal testimony before the Public Service Commission of West Virginia, on Cost of Capital for West Virginia-American Water Company, Case No 04-0373-W-42T, May 2004.

Direct and rebuttal testimony before the Federal Energy Regulatory Commission on Energy Allocation of Debt Cost for Incremental Shipping Rates for Edison Mission Energy, Docket No. RP04-274-000, December 2004 and March 2005.

Direct testimony before the Arizona Corporation Commission, Cost of Capital for Paradise Valley Water Company, a subsidiary of Arizona-American Water Company, Docket No. WS-01303A-05, May 2005.

Written evidence before the Ontario Energy Board, Cost of Capital for Union Gas Limited, Inc., Docket No. EB-2005-0520, January 2006.

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Direct and supplemental testimony before the Federal Energy Regulatory Commission, Docket No. ER06-427-003, on behalf of Mystic Development, LLC on the Cost of Capital for Mystic 8 and 9 Generating Plants Operating Under Reliability Must Run Contract, August 2006 and September 2006.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER07-46-000, on behalf of Northwestern Corporation on the Cost of Capital for Transmission Assets, October 2006.

Direct and rebuttal testimony before the Tennessee Regulatory Authority, Case No. 06-00290, on behalf of Tennessee American Water Company, on the Cost of Capital, November, 2006 and April 2007.

Direct and rebuttal testimony before the Public Service Commission of Wisconsin, Docket No. 5-UR-103, on behalf of Wisconsin Energy Corporation, on the Cost of Capital for Wisconsin Electric Power Company and Wisconsin Gas LLC, May 2007 and October 2007.

Rebuttal testimony before the California Public Utilities Commission, Docket No. A. 07-01-036-39, on behalf of California-American Water Company, on the Cost of Capital, May 2007.

Direct testimony before the Public Utilities Commission of the State of South Dakota, Docket No. NG-07-013, on behalf of NorthWestern Corporation, on the Cost of Capital for NorthWestern Energy Company's natural gas operations in South Dakota, June 2007.

Direct, supplemental and rebuttal testimony before the Public Utilities Commission of Ohio, Case No. 07-551-EL-AIR, Case No. 07-552-EL-ATA, Case No. 07-553-EL-AAM, and Case No. 07-554-EL-UNC, on behalf of Ohio Edison Company, The Toledo Edison Company, and The Cleveland Electric Illuminating Company, on the cost of capital for the FirstEnergy Company's Ohio electric distribution utilities, June 2007, January 2008 and February 2008.

Direct testimony before the Public Service Commission of West Virginia, Case No. 07-0998-W-42T, on behalf of West Virginia American Water Company on cost of capital, July 2007.

Direct and rebuttal testimony before the State Corporation Commission of Virginia, Case No. PUE-2007-00066, on behalf of Virginia Electric and Power Company on the cost of capital for its southwest Virginia coal plant, July 2007 and December 2007.

Direct and Supplemental testimony before the Public Utilities Commission of Ohio, Case No. 07-829-GA-AIR, Case No. 07-830-GA-ALT, and Case No. 07-831-GA-AAM, on behalf of Dominion East Ohio Company, on the rate of return for Dominion East Ohio's natural gas distribution operations, September 2007 and June 2008.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-92-000 to Docket No. ER08-92-003, on behalf of Virginia Electric and Power Company, on the Cost of Capital for Transmission Assets, October 2007.

Direct and rebuttal testimony before the California Public Utilities Commission, Docket No. A. 07-01-022, on behalf of California-American Water Company, on the Effect of a Water Revenue Adjustment Mechanism on the Cost of Capital, October 2007 and November 2007.

Written direct and reply evidence before the National Energy Board in the matter of the National Energy Board Act, R.S.C. 1985, c. N−7, as amended, and the Regulations made thereunder; and in the matter of an application by Trans Québec & Maritimes PipeLines Inc. ("TQM") for orders pursuant to Part I and Part IV of the *National Energy Board Act*, for determining the overall fair return on capital for tolls charged by TQM, December 2007 and September 2008, Decision RH-1-2008, dated March 2009.

Comments in support of The Interstate Natural Gas Association of America's Additional Initial Comments on the FERC's Proposed Policy Statement with regard to the Composition of Proxy Companies for Determining Gas and Oil Pipeline Return on Equity, Docket No. PL07-2-000, December, 2007.

Direct and rebuttal testimony on the Cost of Capital before the Tennessee Regulatory Authority, Case No. 08-00039, on behalf of Tennessee American Water Company, March and August 2008.

Post-Technical Conference Affidavit on behalf of The Interstate Natural Gas Association of America in response to the Reply Comments of the State of Alaska with regard the FERC's Proposed Policy Statement on to the Composition of Proxy Companies for Determining Gas and Oil Pipeline Return on Equity, Docket No. PL07-2-000, March, 2008

Direct and rebuttal testimony before the California Public Utilities Commission, Docket No. A.08-05-003, on behalf of California-American Water Company, concerning Cost of Capital, May 2008 and August 2008.

Rebuttal testimony on the financial risk of Purchased Power Agreements, before the Public Utilities Commission of the State of Colorado, Docket No. 07A-447E, in the matter of the application of Public Service Company of Colorado for approval of its 2007 Colorado Resource Plan, June 2008.

Direct and rebuttal testimony before the Federal Energy Regulatory Commission, Docket No. RP08-426-000, on behalf of El Paso Natural Gas Company, on the Cost of Capital for Natural Gas Transmission Assets, June 2008 and August 2009.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-1207-000, on behalf of Virginia Electric and Power Company, on the incentive Cost of Capital for investment in New Electric Transmission Assets, June 2008

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER08-1233-000, on behalf of Public Service Electric and Gas Company, on the Cost of Capital for Electric Transmission Assets, July 2008.

Direct and rebuttal testimony before the Public Service Commission of West Virginia, Case No. 08-0900-W-42t, on behalf of West Virginia-American Water Company concerning the Cost of Capital for Water Utility assets, July 2008 and November 2008.

Direct and rebuttal testimony before the Public Utilities Commission of Ohio, Case No. 08-935-EL-SSO, on behalf of Ohio Edison Company, The Toledo Edison Company, and The Cleveland Electric Illuminating Company, with regard to the test to determine Significantly Excessive Earnings within the context of Senate Bill No. 221, September 2008 and October 2008.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-249-000, on behalf of Public Service Electric and Gas Company, on the incentive Cost of Capital for Mid-Atlantic Power Pathway Electric Transmission Assets, November 2008.

Direct and rebuttal testimony before the Public Service Commission of West Virginia, Case No. 08-1783-G-PC, on behalf of Dominion Hope Gas Company concerning the Cost of Capital for Gas Local Distribution Company assets, November 2008 and May 2009.

Written Evidence before the Alberta Utilities Commission in the matter of the Alberta Utilities Commission Act, S.A. 2007, c. A-37.2, as amended, and the regulations made thereunder; and IN THE MATTER OF the Gas Utilities Act, R.S.A. 2000, c. G-5, as amended, and the regulations made thereunder; and IN THE MATTER OF the Public Utilities Act, R.S.A. 2000, c. P-45, as amended, and the regulations made thereunder; and IN THE MATTER OF Alberta Utilities Commission 2009 Generic Cost of Capital Hearing, Application No. 1578571/Proceeding No. 85. 2009 Generic Cost of Capital Proceeding on behalf of NGTL, November 2008.

Written and Reply Evidence before the Alberta Utilities Commission in the matter of the Alberta Utilities Commission Act, S.A. 2007, c. A-37.2, as amended, and the regulations made thereunder; and IN THE MATTER OF the Gas Utilities Act, R.S.A. 2000, c. G-5, as amended, and the regulations made thereunder; and IN THE MATTER OF the Public Utilities Act, R.S.A. 2000, c. P-45, as amended, and the regulations made thereunder; and IN THE MATTER OF Alberta Utilities Commission 2009 Generic Cost of Capital Hearing, Application No. 1578571/Proceeding No. 85. 2009 Generic Cost of Capital Proceeding on behalf of AltaGas Utilities Inc., November 2008 and May 2009.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-548-000, on behalf of ITC Great Plains, LLC, on the Cost of Capital for Electric Transmission Assets, January 2009.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER09-681-000, on behalf of Green Power Express, LLP, on the Cost of Capital for Electric Transmission Assets, February 2009.

Written evidence before the Régie de l'Énergie on behalf of Gaz Métro Limited Partnership, Cause Tarifaire 2010, R-3690-2009, on the Cost of Capital for natural gas transmission assets, May 2009.

Direct and rebuttal testimony before the Public Service Commission of Wisconsin, Docket No. 6680-UR-117, on behalf of Wisconsin Power and Light Company, on the cost of capital for electric and natural gas distribution assets, May 2009 and September 2009.

Direct and rebuttal testimony before the State of New Jersey Board of Public Utilities in the Matter of the Petition of Public Service Electric and Gas Company for Approval of an Increase in Electric and Gas Rates and for Changes in the Tariffs for Electric and Gas Service, B.P.U.N.J. No. 14 Electric and B.P.U.N.J No. 14 Gas Pursuant to N.J.S.A. 48:2-21 and N.J.S.A. 48:2-21.1 and for Approval of a Gas Weather Normalization Clause; a Pension Expense Tracker and for other Appropriate Relief BPU Docket No. GR09050422, June 2009 and December 2009.

Rebuttal testimony before the Florida Public Service Commission in re: Petition for Increase in Rates by Progress Energy Florida, Inc., Docket No. 090079-EI, August 2009.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER10-159-000, on behalf of Public Service Electric and Gas Company, on the incentive Cost of Capital for the Branchburg-Roseland-Hudson 500 kV Line electric transmission project ("BRH Project"), October 2009.

Direct and Rebuttal Testimony before the California Public Utilities Commission regarding cost of service for San Joaquin Valley crude oil pipeline on behalf of Chevron Products Company, Docket Nos. A.08-09-024, C.08-03-021, C.09-02-007 and C.09-03-027, December 2009 and April 2010.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER10-516-000, on behalf of South Caroline Gas and Electric Company, on the Cost of Capital for Electric Transmission Assets, December 2009.

Direct testimony before the Oklahoma Corporation Commission, Cause No. PUD 201000050, on behalf of Public Service Company of Oklahoma, regarding cost of service for a regulated electric utility, June 2010.

Direct testimony before the Michigan Public Service Commission, Case No. U-16400, on behalf of Michigan Consolidated Gas Company, regarding cost of service for natural gas distribution assets, July 15, 2010

Direct testimony before the Public Utilities Commission of Ohio, Case No. 10-1265-EL-UNC, In the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2009 Under the Electric Security Plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, September 2010.

Direct and rebuttal testimony before the Federal Energy Regulatory Commission, Docket No. RP10-1398-000, on behalf of El Paso Natural Gas Company, on the Cost of Capital for Natural Gas Transmission Assets, September 2010 and September 2011.

Direct and rebuttal testimony before the Michigan Public Service Commission, In the matter of the application of The Detroit Edison Company, for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority, Case No. U-16472, October 2010 and April 2011.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. RP11-1566-000, on behalf Tennessee Gas Pipeline Company, on the Cost of Capital for Natural Gas Transmission Assets, November 2010.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER11-013-000, on behalf of the Atlantic Wind Connection Companies, on the Cost of Capital and Cost of Capital incentive adders for Electric Transmission Assets, December 2010.

Direct and rebuttal testimony before the Public Utilities Commission of the State of California, Docket No. A.11-05-001, on behalf of California Water Service Company, on the Cost of Capital for Water Distribution Assets, April 2011 and September 2011.

Rebuttal testimony before the Public Utilities Commission of the State of California, Docket No. A.10-09-018, on behalf of California American Water Company, on Application of California American Water Company (U210W) for Authorization to Implement the Carmel River Reroute and San Clemente Dam Removal Project and to Recover the Costs Associated with the Project in Rates, June 2011.

Initial testimony before the Public Utilities Commission of Ohio, Case No. 11-4553-EL-UNC, In the Matter of the Determination of the Existence of Significantly Excessive Earnings for 2010 Under the Electric Security Plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, July 2011.
Direct testimony before the Federal Energy Regulatory Commission, Docket No. PA10-13-000, on behalf of ITC Holdings Corp. in response to FERC Staff, Office of Enforcement, Division of Audits, Draft Report on the appropriate accounting for goodwill for the acquisition of ITC Midwest assets from Interstate Power and Light Company, July 2011.

Written direct evidence before the National Energy Board in the matter of the National Energy Board Act, R.S.C. 1985, c. N−7, as amended, and the Regulations made thereunder; and in the matter of an application by TransCanada PipeLines Limited for orders pursuant to Part I and Part IV of the *National Energy Board Act*, for determining the overall fair return on capital in the business and services restructuring and Mainline 2012 – 2013 toll application, September 2011.

Report before the Arbitrator on behalf of Canadian National Railway Company in the matter of a Submission by Tolko Marketing and Sales LTD for Final Offer Arbitration of the Freight Rates and Conditions Associated with Respect to the Movement of Lumber by Canadian National Railway Company from High Level, Alberta to Various Destinations in the Vancouver, British Columbia Area, October, 2011.

Rebuttal Evidence before the National Energy Board in the matter of AltaGas Utilities Inc., 2010-2012 GRA Phase I, Application No. 1606694; Proceeding I.D. 904, October, 2011.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. ER12-296-000, on behalf of Public Service Electric and Gas Company on the Cost of Capital and for Incentive Rate Treatment for the Northeast Grid Reliability Transmission Project, October 2011.

Rebuttal testimony before the Florida Public Service Commission, Docket No. 110138-EL, on behalf of Gulf Power, a Southern Company, on the method to adjust the return on equity for differences in financial risk, November 2011.

Direct testimony before the Federal Energy Regulatory Commission, Docket No. PA10-13-000, on behalf of ITC Holdings Corp. regarding a rehearing for FERC Staff, Office of Enforcement, Division of Audits, Report on the appropriate accounting for goodwill for the acquisition of ITC Midwest assets from Interstate Power and Light Company, February 2012.

Direct testimony before the Michigan Public Service Commission, Case No. U-16999, on behalf of Michigan Consolidated Gas Company, regarding cost of service for natural gas distribution assets, April 2012.

Deposition testimony in *Primex Farms, LLC, Plaintiff, v. Roll International Corporation, Westside Mutual Water Company, LLC, Paramount Farming Company, LLC, Defendants*, April 2012.

Deposition testimony in *Tahoe City Public Utility District, Plaintiff vs. Case No. SCV 27283 Tahoe Park Water Company, Lake Forest Water Company, Defendants*, May 2012.

APPENDIX B

EMPIRICAL IMPLEMENTATION AND TECHNICAL DETAILS

I. SAMPLE SELECTION.

Q1. Please describe the universe of companies that you believe have business risk comparable to the Ohio EDUs.

A1. I started by selecting industries that share several essential business characteristics with an electric distribution utility, without restricting the potential sample to regulated companies. The initial criteria I used were (1) companies that operate in industries relying on a network of assets to provide services to a customer mix that includes residential, commercial and industrial customers and (2) that exhibit high capital intensity. Capital intensity means that the capital investment required for each dollar of revenue is high. I started with the universe of 102 industries and approximately 1700 companies covered by the *Value Line Standard Edition.* The following twelve industries satisfy the first criterion outlined above: Electric Utilities,[1] Natural Gas Utilities, Oil and Gas Distribution, Pipeline MLPs, Water Utilities, Air Transportation, Cable TV, Environmental, Railroads, Telecommunications Services, Telecommunications Utilities, Trucking. The total number of companies covered by the *Value Line Standard Edition* in these twelve industries is 167.[2]

Q2. What additional criteria did you use?

[1] *Value Line* breaks the electric utilities down into three categories, based on geographical location: East, Central, and West.

[2] Because *Value Line* drops coverage of a company once it has been the target of a completed acquisition, the list of companies that the *Value Line Investment Analyzer* currently returns for these industries does not include three companies that have been acquired since January 1, 2012 and would otherwise have been classified in one of these industries (and were classified as such in 2011): NSTAR and Constellation Energy in Electric Utilities, and Southern Union in Oil and Gas Distribution. I have manually added those companies to the sample because they meet the criteria for comparable companies for the full year 2011.

A2. I further limited the sample to companies with an investment-grade credit rating, using Standard & Poor's credit ratings provided by Compustat and Bloomberg.[3] I also eliminated foreign companies.

Q3. How did you apply the capital intensity screen?

A3. The electric utility industry is one of the most capital intensive industries, so I eliminated industries whose average capital intensity was substantially below that of an electric utility. There are several possible measures of capital intensity. I used asset turnover, which is defined as the ratio of revenues to total assets. In order to account for asset disposals or purchases during the year, I used an average of the beginning and end of year total asset figures for the denominator of the fraction. This ratio provides an indicator of the amount of capital invested to generate a dollar of revenue. Using this measure and eliminating industries with an average asset turnover in excess of 1.00 for the 2007-2011 (five-year) period results in nine industries for inclusion in the sample: Electric Utilities, Natural Gas Utilities, Water Utilities, Oil and Gas Distribution, Pipeline MLPs, Environmental, Railroads, Cable TV, and Telecommunications Services.[4]

Q4. How many companies were excluded by restricting the sample to domestic, investment grade companies?

A4. From the starting universe of 167 companies, 92 remained in the sample after applying these two filters. More specifically, I identified and excluded 15 foreign companies and 62 below-investment grade companies (two companies were both foreign and below investment grade).

Q5. How many companies were included in the sample used to compute capital intensity?

[3] Not all companies are covered by both databases. The ratings are as of 12/31/2011.

[4] The Telecommunications Utilities industry contains no domestic company with a credit rating above investment grade. Therefore, neither the capital intensity calculation nor the return on total capital threshold calculation can include this industry.

A5. The sample consisted of 91 companies, because one of the 92 companies otherwise qualifying lacked the necessary data to calculate the capital intensity average. The companies in the sample, by industry classification, are presented in Table B 1 below, which shows the average asset turnover by industry, as well as the average industry beta and equity thickness. The individual companies are in Table B 5 at the end of this Appendix.

Table B 1. Industry Statistics

Industry	Number of Companies	Average Asset Turnover	Common Equity Percentage	Beta as of 2011
Electric Utilities				
Electric Utility (Central)	19	0.41	49%	0.74
Electric Utility (East)	16	0.42	48%	0.71
Electric Utility (West)	12	0.35	50%	0.72
Electric Utilities	***47***	***0.40***	***48.7%***	***0.73***
Other Regulated Utilities				
Natural Gas Utility	10	0.67	56%	0.69
Water Utility	5	0.24	50%	0.70
Oil/Gas Distribution	2	0.73	39%	0.95
Pipeline MLP	8	0.82	47%	0.85
All Regulated Utilities	***72***	***0.48***	***49.4%***	***0.74***
Other Capital Intensive Industries				
Railroad	3	0.39	58%	1.15
Telecommunications Services	4	0.57	71%	0.86
Environmental	3	0.54	49%	0.83
Cable TV	3	0.66	16%	0.98
All Capital Intensive Industries	***85***	***0.49***	***49.5%***	***0.77***
Other Industries				
Air Transport	3	1.24	66%	0.93
Telecommunications Utility	0	--	--	--
Trucking	3	1.49	41%	1.18
All Industries	***91***	***0.55***	***49.8%***	***0.79***

Q6. Is this the same sample that you used to compute the earnings metric?

A6. Approximately. Several differences arise due to data availability. In order to compute the capital intensity metric, I used all domestic investment-grade companies for which I could obtain revenue and total assets data in each of the five years included in the average. When computing the return on total capital, I restricted the sample to the companies that had the necessary data available for 2011. The data availability criterion generated some differences between the list of companies used to choose the list of industries, and the list used to compute the return metrics.

However, most companies appear in both calculations. The list of all companies is provided in Table B 5**,** which also indicates whether a particular company was not included in one of the sample calculations. The final sample used to derive the earnings threshold, consisting of the more capital intensive companies, contains 81 companies.

Q7. Are there any other data availability issues that you think are important to raise?

A7. Yes. First, because of the process used by *Value Line* to update its database, it does not publish the fiscal-year end data as soon as it becomes available. As a result, relying on *Value Line* alone will result in a smaller sample when the test is conducted relatively early in the year. Because *Value Line* still lacks some data at this time for a substantial number of companies that have published their 2011 financial statements, I supplemented the *Value Line* dataset with Bloomberg figures for the following variables: Total Assets, Long Term Debt, Preferred Equity, Preferred Dividends, and Shareholder Equity. For the other variables used in my analysis *Value Line* provided information for most sample companies.[5]

A second potential issue is that because not all companies' fiscal years coincide with the calendar year, there are timing differences between the data reported for different companies in the sample. If a company's fiscal year ends in the first four months of the calendar year, then *Value Line* will assign the previous year's label to the data. As a result, if the test of significantly excessive earnings is conducted comparatively early in the year, the sample size may be substantially reduced. Because the filing date for the SEET proceeding is early in the year, information for companies whose fiscal year ends after December 31, 2011 is not available. From the initial universe of 167 companies, only 2 had a fiscal year that ended in the first four months of 2012. Of those, none would have passed the initial screens (domestic company and credit rating), so there is no impact on the test results from omitting these companies.

[5] In order to ensure that I match correctly the Bloomberg variables with their *Value Line* counterparts, I checked that the numbers matched for 2010 and earlier years, for which both Bloomberg and *Value Line* report the data. Only variables for which the match was reliable were supplemented with Bloomberg data.

Finally, for the three companies that have been acquired since January 1, 2012 and are no longer covered by *Value Line*, I used Bloomberg and the last available *Value Line* sheets to obtain the necessary data.

II. MEASURING THE RETURN ON TOTAL CAPITAL

Q8. Please describe the metric that you propose to determine significantly excessive earnings.

A8. For each sample company, I compute an adjusted annual return on total capital, using the following formula:

$$R = \frac{(NI - Nonrec) + (1 - t)LT\ Int}{Average\ Total\ Capital}$$

Where:

- *NI* = Net Income
- *Nonrec* = Nonrecurring gains/losses
- *t* = Company's effective tax rate
- *LT Int* = Interest expense on long-term debt
- *Average Total Capital* = the sum of the book values of common equity, preferred equity and long-term debt, measured as the average of beginning-of-year and end-of-year balance sheet values.

Q9. What is the source of the data necessary to perform this calculation?

A9. *Value Line Investment Analyzer* provides an electronic source for historical data collected or computed in *Value Line* reports. This data set, last updated on May 4, 2012, is used in the analysis.[6] I obtained the S&P credit ratings for the sample companies from Compustat and Bloomberg. Finally, when restricting the sample based on percentage of regulated assets, I use *Edison Electric Institute's* classification for each electric utility.

[6] As discussed above, the data set was supplemented with Bloomberg data when certain items were unavailable.

Q10. Does *Value Line* report each of the required variables separately?

A10. No, but they can be obtained by straightforward manipulation of the electronic data provided. *Value Line* computes a measure that is very close to the adjusted return on total capital defined above, namely:

$$R_{ValueLine} = \frac{Net\ profit + \frac{1}{2} LT\ Int}{Total\ Capital}$$

Because *Value Line* excludes non-recurring gains and losses from the computation of the Net Profit measure, the only differences from the metric I propose are that *Value Line* multiplies the long-term interest expense by 0.5 instead of the company's effective income tax rate, and that *Value Line* uses the end-of-year balance for total capital instead of the average of beginning and end-of-year values. Net Profit and the components of Total Capital are reported separately so long-term interest can be calculated, and then used to calculate the adjusted return on total capital that I propose.

Q11. Did you make any other adjustment to the return on total capital?

A11. Yes. The components of total capital are reported as of the end of the fiscal year. If the company issues or retires equity or debt during the year, the end-of-year value is different from the average value for the year. Because net profit and interest expense are based on the entire year, it is more accurate to use the average value for common equity, preferred equity, and long-term debt. Therefore, I use an average of the end-of-year total capital values for the current and previous year in the calculation.

Q12. Which data items exactly did you use for the return on total capital calculation?

A12. I used the following data items reported in the *Value Line Investment Analyzer*:

- Net Profit: this item excludes nonrecurring gains and losses, as determined by the *Value Line* analysts, and includes preferred dividends;
- Shareholders' Equity: this item includes both common and preferred equity, and excludes minority interest;

- Long-Term Debt;
- Return on Total Capital: this item is defined as the ratio of Net Profit to the sum of end-of-year shareholders' equity and long-term debt;
- Income Tax Rate: this is the effective tax rate, determined as the ratio of taxes to earnings before taxes.

Q13. Apart from data availability, did you apply any additional filter to the data before calculating the return on total capital?

A13. Yes, I performed a test to identify any potential outliers in the data. The test was designed to identify any company with a return on capital that was more than three standard deviations away from the average return on capital in the sample. No such company was identified in this year's sample.

Q14. What were the results of your analysis of sample companies' returns on total capital?

A14. Using only the capital intensive industries, I obtained an average adjusted return on total capital of 7.48 percent, with a standard deviation of 2.24 percent. For the initial universe of companies (which also includes the Air Transportation and Trucking industries), I obtained an average of 7.84 percent, with a standard deviation of 3.33 percent. The results for each sample are provided in Table B 2 below.

Table B 2. Return on Total Capital for Sample Industries

Industry	Number of Companies	Return on Total Capital (2011)
Electric Utilities		
Electric Utility (Central)	19	6.92%
Electric Utility (East)	16	7.14%
Electric Utility (West)	11	6.88%
Other Regulated Utilities		
Natural Gas Utility	10	7.37%
Water Utility	5	6.02%
Oil/Gas Distribution	3	7.93%
Pipeline MLP	5	10.46%
Other Capital Intensive Industries		
Railroad	3	12.90%
Telecommunications Services	4	6.83%
Environmental	3	7.77%
Cable TV	2	7.60%
All Capital Intensive Industries	***81***	
Mean		***7.48%***
Standard deviation		***2.24%***
Other Industries		
Air Transport	3	12.80%
Telecommunications Utility	0	-
Trucking	3	12.59%
All Industries	***87***	
Mean for All Industries		***7.84%***
Standard Deviation for All Industries		***3.33%***

Q15. Did you consider any subsamples?

A15. Yes. In order to test the sensitivity of the results to including electric utilities that own a large share of unregulated generation assets, I first excluded companies classified as Diversified by the *Edison Electric Institute* (EEI), and then those classified as either Diversified or Mostly Regulated by the EEI. The EEI classifies an electric utility as Diversified if less than 50 percent of its assets are regulated, and as Mostly Regulated if between 50 and 80 percent of its assets are regulated. The results of these two subsamples are summarized in Table B 3 below.

Table B 3. Return on Capital Thresholds for Subsamples Obtained Based on EEI Classification

Statistical Significance Threshold	**95.0%**			
		Capital Intensive Industries	Excluding Electric Utilities Classified "D" by EEI	Excluding Electric Utilities Classified "D" or "MR" by EEI
Sample Average Return on Total Capital	[1]	7.48%	7.53%	7.59%
Sample Standard Deviation	[2]	2.24%	2.23%	2.31%
Return on Total Capital Threshold	[3]	**11.16%**	**11.20%**	**11.38%**

Sources and Notes:
[1]: Sample average of return on total capital for the corresponding sample.
[2]: Sample standard deviation of return on total capital for the corresponding sample.
[3] = [1] + 1.645 x [2]. See Table 3 for supporting evidence for 1.645.

III. THE THRESHOLD FOR SIGNIFICANTLY EXCESSIVE EARNINGS

Q16. How did you use the sample information about the adjusted return on total capital to determine a threshold for significantly excessive earnings?

A16. First, I used the sample information to determine a threshold for what could be termed "significantly excessive return on total capital" – a value of the adjusted return on total capital above which only approximately 5 percent of the observations are likely to occur. According to statistical theory, if observations from a normal distribution with mean μ and standard deviation σ are drawn, then 95 percent of them would, on average, fall below a threshold of approximately $\mu + 1.645\sigma$.

Of course, it is not possible to know with certainty what statistical distribution characterizes the return on total capital. However, if the sample size is sufficiently large, then the sample average will be approximately described by a normal distribution, whose expected value is the true, unknown population mean. I derive a threshold measure of return on total assets of $R_{\max} = m + 1.645s$, where m is the sample average adjusted return on total capital, and *s* is the sample standard deviation of the adjusted return on total capital.

Q17. How do you propose using this threshold to determine significantly excessive earnings?

A17. First, compute the measure of adjusted return on total capital for the utility whose earnings are being examined. Then compare that value to the threshold measure of

significantly excessive earnings for the period described above. If the utility's adjusted return on total capital exceeds the threshold $R_{\max}$, then the test would indicate that the utility may have significantly excessive earnings.

Q18. How would the amount of earnings in excess of the threshold be determined?

A18. Because the expected payments to debt holders and preferred shareholders are known, variation in earned return on total capital would be owed to common equity investors. Therefore, it is reasonable to impute any significant excess in the return to total capital to net profit earned on common equity. This amount can be computed simply by multiplying the average total capital by the difference between the utility's return on total capital, and the threshold $R_{\max}$ determined above:

$$Excess\ Earnings = (R_{utility} - R_{\max}) \times Average\ Total\ Capital$$

Q19. Can you use the return on total capital threshold to compute a corresponding threshold in terms of return on common equity?

A19. Yes. This can be done using the utility's capital structure information, as well as information about its cost of debt and cost of preferred equity for the year under analysis. Specifically, using the $R_{\max}$ threshold, it is straightforward to compute an implied threshold for the amount of net income accruing to common equity holders, taking into account interest expense on long-term debt and preferred dividends paid:

$$Net\ Income\ to\ CE_{\max} = (R_{\max} \times AverageTotal\,Capital) - (1-t)LT\ Int - PDiv$$

where *PDiv* stands for "preferred dividends" and the other notation is as defined before. The ROE threshold is then simply:

$$ROE_{\max} = \frac{Net\ Income\ to\ CE_{\max}}{Average\ Common\ Equity}$$

Q20. Can you provide an example of how the threshold you determined using 2011 sample information can be used to determine an ROE threshold for the Companies?

A20. Yes. The testimony of Mr. Kevin R. Burgess provides the capital structure, embedded cost of debt, and effective tax rate for each of the Companies. Table B 4 shows how the calculated ROE thresholds for each company vary with the confidence level selected for the test, both in the baseline sample of capital intensive companies, and in the subsamples obtained by excluding some electric utilities based on the EEI classification. At a confidence level of 95 percent, and using the results based on the full sample of capital intensive industries, the implied ROE thresholds are 20.51 percent for Cleveland Electric Illuminating, 19.97 percent for Ohio Edison, and 22.24 percent for Toledo Edison. These values are in bold type in Table B 4.

Table B 4. ROE Thresholds for the Companies at Different Confidence Levels

	Baseline Analysis - Capital Intensive Industries	Excluding EEI Diversified	Further Excluding EEI Diversified and Mostly Regulated
Number of Companies	**81**	**79**	**63**
Return on Total Capital Thresholds			
Sample Average	7.48%	7.53%	7.59%
Sample Standard Deviation	2.24%	2.23%	2.31%
Threshold at 97.5% Confidence Level	11.86%	11.91%	12.11%
Threshold at 95.0% Confidence Level	11.16%	11.20%	11.38%
Threshold at 90.0% Confidence Level	10.35%	10.39%	10.55%
Return on Equity Thresholds			
Cleveland Electric Illuminating			
Threshold at 97.5% Confidence Level	22.17%	22.27%	22.75%
Threshold at 95.0% Confidence Level	**20.51%**	20.61%	21.04%
Threshold at 90.0% Confidence Level	18.59%	18.70%	19.06%
Ohio Edison			
Threshold at 97.5% Confidence Level	21.62%	21.72%	22.20%
Threshold at 95.0% Confidence Level	**19.97%**	20.08%	20.50%
Threshold at 90.0% Confidence Level	18.07%	18.18%	18.54%
Toledo Edison			
Threshold at 97.5% Confidence Level	24.09%	24.21%	24.74%
Threshold at 95.0% Confidence Level	**22.24%**	22.35%	22.83%
Threshold at 90.0% Confidence Level	20.10%	20.22%	20.62%

Table B 5. Complete List of Companies Included in Analysis

No	Company	Ticker	Value Line Industry	EEI Classification	Included in Capital Intensity Calculation	Included in Returns Calculation	Average Asset Turnover	Return on Total Capital	Return on Equity
1	Consol Edison	ED	Electric Utility (East)	R	x	x	0 41	6 32%	9 34%
2	Dominion Resources	D	Electric Utility (East)	MR	x	x	0 36	7 56%	13 80%
3	Duke Energy	DUK	Electric Utility (East)	MR	x	x	0 24	6 12%	8 12%
4	Exelon Corp	EXC	Electric Utility (East)	MR	x	x	0 38	10 98%	17 94%
5	FirstEnergy Corp	FE	Electric Utility (East)	MR	x	x	0 40	4 93%	7 23%
6	NextEra Energy	NEE	Electric Utility (East)	MR	x	x	0 34	8 18%	13 75%
7	Northeast Utilities	NU	Electric Utility (East)	R	x	x	0 40	6 48%	9 99%
8	Pepco Holdings	POM	Electric Utility (East)	MR	x	x	0 56	5 74%	6 65%
9	PPL Corp	PPL	Electric Utility (East)	MR	x	x	0 34	8 06%	15 13%
10	Public Serv Enterprise	PEG	Electric Utility (East)	MR	x	x	0 43	10 53%	15 85%
11	SCANA Corp	SCG	Electric Utility (East)	MR	x	x	0 40	7 14%	10 20%
12	Southern Co	SO	Electric Utility (East)	R	x	x	0 33	7 72%	13 04%
13	TECO Energy	TE	Electric Utility (East)	R	x	x	0 48	7 70%	12 29%
14	UIL Holdings	UIL	Electric Utility (East)	R	x	x	0 43	5 30%	9 22%
15	NSTAR	NST	Electric Utility (East)	R	x	x	0 39	7 19%	13 71%
16	Constellation Energy	CEG	Electric Utility (East)	D	x	x	0 78	4 26%	4 76%
17	ALLETE	ALE	Electric Util (Central)	R	x	x	0 40	6 78%	9 13%
18	Alliant Energy	LNT	Electric Util (Central)	R	x	x	0 42	7 28%	9 74%
19	Amer Elec Power	AEP	Electric Util (Central)	R	x	x	0 31	7 24%	10 66%
20	Ameren Corp	AEE	Electric Util (Central)	R	x	x	0 34	5 86%	7 62%
21	CenterPoint Energy	CNP	Electric Util (Central)	MR	x	x	0 48	7 32%	14 72%
22	Cleco Corp	CNL	Electric Util (Central)	R	x	x	0 31	7 59%	11 53%
23	CMS Energy Corp	CMS	Electric Util (Central)	R	x	x	0 43	6 76%	13 12%
24	DTE Energy	DTE	Electric Util (Central)	R	x	x	0 36	6 54%	9 19%
25	Empire Dist Elec	EDE	Electric Util (Central)	R	x	x	0 31	5 93%	8 13%
26	Entergy Corp	ETR	Electric Util (Central)	R	x	x	0 32	9 15%	15 43%
27	G't Plains Energy	GXP	Electric Util (Central)	R	x	x	0 35	5 36%	5 91%
28	Integrys Energy	TEG	Electric Util (Central)	R	x	x	0 75	6 05%	7 77%
29	ITC Holdings	ITC	Electric Util (Central)	R	x	x	0 17	7 15%	14 45%
30	MGE Energy	MGEE	Electric Util (Central)	MR	x	x	0 45	8 31%	11 32%
31	OGE Energy	OGE	Electric Util (Central)	MR	x	x	0 57	8 93%	14 13%
32	Otter Tail Corp	OTTR	Electric Util (Central)	MR	x	x	0 72	4 37%	2 55%
33	Vectren Corp	VVC	Electric Util (Central)	R	x	x	0 50	6 68%	9 75%
34	Westar Energy	WR	Electric Util (Central)	R	x	x	0 27	5 87%	8 27%
35	Wisconsin Energy	WEC	Electric Util (Central)	R	x	x	0 34	8 36%	13 21%
36	Avista Corp	AVA	Electric Utility (West)	R	x	x	0 42	6 05%	8 67%
37	Black Hills	BKH	Electric Utility (West)	MR	x	x	0 34	4 09%	3 50%
38	Edison Int'l	EIX	Electric Utility (West)	MR	x	x	0 31	6 83%	10 21%
39	El Paso Electric	EE	Electric Utility (West)	R	x	x	0 43	8 60%	13 18%
40	Hawaiian Elec	HE	Electric Utility (West)	D	x	x	0 30	6 76%	9 17%
41	IDACORP, Inc	IDA	Electric Utility (West)	R	x		0 24		
42	PG&E Corp	PCG	Electric Utility (West)	R	x	x	0 34	6 62%	9 56%
43	Pinnacle West Capital	PNW	Electric Utility (West)	R	x	x	0 28	6 94%	8 75%
44	Portland General	POR	Electric Utility (West)	R	x	x	0 37	6 82%	9 03%
45	Sempra Energy	SRE	Electric Utility (West)	MR	x	x	0 34	7 67%	11 45%
46	Xcel Energy Inc	XEL	Electric Utility (West)	R	x	x	0 41	6 97%	10 12%
47	NorthWestern Corp	NWE	Electric Utility (West)	R	x	x	0 42	8 37%	11 02%

No	Company	Ticker	Value Line Industry	EEI Classification	Included in Capital Intensity Calculation	Included in Returns Calculation	Average Asset Turnover	Return on Total Capital	Return on Equity
48	AGL Resources	GAS	Natural Gas Utility		x	x	0 34	4 12%	6 68%
49	Atmos Energy	ATO	Natural Gas Utility		x	x	0 86	6 98%	8 99%
50	Laclede Group	LG	Natural Gas Utility		x	x	1 09	8 81%	11 51%
51	New Jersey Resources	NJR	Natural Gas Utility		x	x	1 23	10 20%	14 19%
52	NiSource Inc	NI	Natural Gas Utility		x	x	0 37	5 15%	6 03%
53	Northwest Nat Gas	NWN	Natural Gas Utility		x	x	0 41	4 82%	9 08%
54	Piedmont Natural Gas	PNY	Natural Gas Utility		x	x	0 56	8 96%	11 58%
55	South Jersey Inds	SJI	Natural Gas Utility		x	x	0 51	10 29%	14 96%
56	Southwest Gas	SWX	Natural Gas Utility		x	x	0 52	6 65%	9 39%
57	WGL Holdings Inc	WGL	Natural Gas Utility		x	x	0 82	7 71%	9 69%
58	ONEOK Inc	OKE	Oil/Gas Distribution		x	x	1 12	8 31%	15 29%
59	Spectra Energy	SE	Oil/Gas Distribution			x		8 79%	14 84%
60	Southern Union	SUG	Oil/Gas Distribution		x	x	0 33	6 67%	9 89%
61	Boardwalk Pipeline	BWP	Pipeline MLP		x	x	0 16	4 53%	6 83%
62	Buckeye Partners L P	BPL	Pipeline MLP		x		0 70		
63	Energy Transfer	ETP	Pipeline MLP		x	x	0 70	10 74%	13 98%
64	Enterprise Products	EPD	Pipeline MLP		x	x	1 21	10 04%	16 23%
65	Kinder Morgan Energy	KMP	Pipeline MLP		x	x	0 50	12 99%	24 09%
66	Magellan Midstream	MMP	Pipeline MLP		x	x	0 50	14 01%	28 20%
67	Plains All Amer Pipe	PAA	Pipeline MLP		x		2 24		
68	Williams Partners L P	WPZ	Pipeline MLP		x		0 53		
69	Amer States Water	AWR	Water Utility		x	x	0 33	6 37%	10 68%
70	Amer Water Works	AWK	Water Utility		x	x	0 18	5 10%	7 29%
71	Aqua America	WTR	Water Utility		x	x	0 18	7 20%	11 80%
72	California Water	CWT	Water Utility		x	x	0 30	5 84%	8 16%
73	Middlesex Water	MSEX	Water Utility		x	x	0 21	5 61%	7 66%
74	Republic Services	RSG	Environmental		x	x	0 53	7 27%	9 55%
75	Waste Connections	WCN	Environmental		x	x	0 47	8 18%	12 18%
76	Waste Management	WM	Environmental		x	x	0 62	7 85%	16 33%
77	CSX Corp	CSX	Railroad		x	x	0 39	12 79%	21 23%
78	Norfolk Southern	NSC	Railroad		x	x	0 36	12 40%	18 01%
79	Union Pacific	UNP	Railroad		x	x	0 42	13 51%	18 12%
80	AT&T Inc	T	Telecom Services		x	x	0 46	9 14%	12 04%
81	Telephone & Data	TDS	Telecom Services		x	x	0 60	3 11%	4 76%
82	U S Cellular	USM	Telecom Services		x	x	0 73	3 85%	4 85%
83	Verizon Communic	VZ	Telecom Services		x	x	0 49	11 21%	9 83%
84	Comcast Corp	CMCSA	Cable TV		x	x	0 33	7 52%	9 55%
85	DIRECTV	DTV	Cable TV		x		1 29		
86	Time Warner Cable	TWC	Cable TV		x	x	0 37	7 68%	18 49%
87	FedEx Corp	FDX	Air transport		x		1 48	9 93%	10 71%
88	Southwest Airlines	LUV	Air transport		x		0 77	4 44%	5 03%
89	United Parcel Serv	UPS	Air transport		x		1 46	24 04%	55 85%
90	Con-way Inc	CNW	Trucking		x		1 64	7 59%	10 87%
91	Hunt (J B)	JBHT	Trucking		x		1 97	23 94%	45 07%
92	Ryder System	R	Trucking		x		0 85	6 23%	13 05%

Summary: Application In the matter of the application for the determination of the existence of significantly excessive earnings for 2011 under the electric security plan of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company electronically filed by Ms. Tamera J Singleton on behalf of FirstEnergy Corp