

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Association of Businesses Advocating Tariff Equity Docket No. EL14-12-002
Coalition of MISO Transmission Customers
Illinois Industrial Energy Consumers
Indiana Industrial Energy Consumers, Inc.
Minnesota Large Industrial Group
Wisconsin Industrial Energy Group

v.

Midcontinent Independent System Operator, Inc.
ALLETE, Inc.
Ameren Illinois Company
Ameren Missouri
Ameren Transmission Company of Illinois
American Transmission Company LLC
Cleco Power LLC
Duke Energy Business Services, LLC
Entergy Arkansas, Inc.
Entergy Gulf States Louisiana, LLC
Entergy Louisiana, LLC
Entergy Mississippi, Inc.
Entergy New Orleans, Inc.
Entergy Texas, Inc.
Indianapolis Power & Light Company
International Transmission Company
ITC Midwest LLC
Michigan Electric Transmission Company, LLC
MidAmerican Energy Company
Montana-Dakota Utilities Co.
Northern Indiana Public Service Company
Northern States Power Company-Minnesota
Northern States Power Company-Wisconsin
Otter Tail Power Company
Southern Indiana Gas & Electric Company

CORRECTED INITIAL DECISION

(Issued December 29, 2015)

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Table of Contents

- I. INTRODUCTION
- II. BACKGROUND
 - A. The MISO TOsø Current Base ROE
 - B. Statement of the Proceedings
 - C. Complaint in Docket No. EL15-45-000
- III. ISSUES
 - A. Is the MISO TOsø Existing Base ROE Unjust and Unreasonable?
 - 1. Burden of Proof
 - a. Generally
 - b. Relevance of the Zone of Reasonableness
 - 2. Development of the Zone of Reasonableness in this Proceeding
 - a. Determination of the Market Cost of Equity Capital
 - (1) The DCF Formula
 - (2) Rationale Underlying DCF Methodology
 - (3) Matters in Controversy
 - (a) Calculation of Dividend Yields
 - (b) Acceptable Sources of Analyst Growth Rate Data
 - (i) Short-Term Growth Rate
 - (ii) Long-Term Growth Rate
 - (iii) Appropriate Study Period
 - b. Composition of the Proxy Group
 - (1) The 100 Basis-Point Screen
 - (2) Coverage in Value Line
 - (3) Credit Rating
 - (4) Merger and Acquisition Activity
 - c. Final Zone of Reasonableness
 - B. What Is a Just and Reasonable Base ROE for the MISO TOs?
 - 1. Burden of Proof
 - 2. Market-Capital Conditions
 - a. Evidence of Anomalous and Distortive Conditions
 - (1) Impact of Federal Reserveø Actions
 - (2) Investor Expectations of Change
 - (3) Distortion of DCF Inputs
 - b. Evidence and Arguments Offered in Rebuttal
 - (1) Federal Reserveø Role in Suppressing Bond and Dividend Yields
 - (2) Investor Expectations of Change
 - (3) Distortions of DCF Inputs
 - c. Determination

3. Data Provided by Alternative Benchmarks
 - a. Alternative Pricing Models
 - (1) Risk Premium Analysis
 - (a) Dr. Averø Model
 - (b) The Non-Utility Participantsø Critiques and Alternative Models
 - (c) Determination
 - (2) Capital Asset Pricing Model
 - (a) Dr. Averø Model
 - (b) The Non-Utility Participantsø Critiques and Alternative Models
 - (c) Determination
 - (3) Expected Earnings Analysis
 - (a) Dr. Averø Analysis
 - (b) Staffø Critique
 - (c) Dr. Averø Response
 - (d) Determination
 - (4) Pricing Models Rejected by the Commission in Opinion No. 531
 - (5) Pricing Models Not Before the Commission in Opinion No. 531
 - b. Base ROEs Authorized by State Commissions
 - (1) Evidence Presented by the MISO TOs
 - (2) Challenges to the MISO TOsø Evidence
 - (a) Objections to the Relevance and/or Validity of Ms. Lapsonø Study
 - (b) Objections Based on Comparative Risks of Investment in the MISO TOsø Electric Transmission and Investment in State-Regulated Utility Operations
 - (3) Determination
- C. Other Considerations
 1. Impact of Base ROE on Planned Investment
 - a. The MISO TOsø Evidence
 - b. Evidence and Arguments Offered in Rebuttal
 - c. Determination
 2. Capital Structure
 - a. Proposals of Mr. Gorman and Mr. Hill
 - b. Determination

IV. ORDER

Appendix A

Appendix B

I. INTRODUCTION

1. This Initial Decision addresses a portion of a complaint (Complaint) filed by a group of large industrial customers (Joint Complainants)¹ under section 206 of the Federal Power Act (FPA)² and Rule 206 of the Commission's Rules of Practice and Procedure.³ The Complaint seeks to lower the base return on common equity (Base ROE) of transmission-owning members (MISO TOs)⁴ of Midcontinent Independent System Operator, Inc. (MISO).

2. All of the MISO TOs except one are authorized to collect a Base ROE of 12.38 percent. The one exception is American Transmission Company LLC (ATC), which is authorized to collect a Base ROE of 12.20 percent. Joint Complainants ask that MISO TOs' Base ROE be lowered to 9.15 percent. This Initial Decision authorizes the MISO TOs to collect a Base ROE of 10.32 percent.

¹ Joint Complainants consist of: Association of Businesses Advocating MISO Tariff Equity; Coalition of MISO Transmission Customers; Illinois Industrial Energy Consumers; Indiana Industrial Energy Consumers, Inc.; Minnesota Large Industrial Group; and Wisconsin Industrial Energy Group.

² 16 U.S.C. § 824e (2012).

³ 18 C.F.R. § 385.206 (2015).

⁴ MISO TOs named in the Complaint are: ALLETE, Inc. (for its operating division Minnesota Power, Inc. and its wholly-owned subsidiary Superior Water, Light, & Power Company); Ameren Illinois Company; Union Electric Company (identified as Ameren Missouri); Ameren Transmission Company of Illinois; American Transmission Company LLC; Cleco Power LLC; Duke Energy Business Services, LLC d/b/a Duke Energy Indiana, Inc.; Entergy Arkansas, Inc.; Entergy Gulf States Louisiana, LLC; Entergy Louisiana LLC; Entergy Mississippi, Inc.; Entergy New Orleans, Inc.; Entergy Texas, Inc.; Indianapolis Power & Light Company; International Transmission Company d/b/a ITC Transmission (ITC Transmission); ITC Midwest LLC; Michigan Electric Transmission Company; MidAmerican Energy Company; Montana-Dakota Utilities Co., Northern Indiana Public Service Company; Northern States Power Company-Minnesota; Northern States Power Company-Wisconsin; Otter Tail Power Company; and Southern Indiana Gas & Electric Company d/b/a Vectren Energy Delivery of Indiana, Inc.

II. BACKGROUND

A. The MISO TOs' Current Base ROE

3. MISO operates a transmission system in the central United States spanning from the Canadian border to the Gulf of Mexico. The MISO TOs collect formula rates from transmission customers through the MISO Open Access Transmission, Energy and Operating Reserve Markets Tariff (MISO Tariff).

4. On December 3, 2001, MISO, in conjunction with the MISO TOs, filed proposed changes to the MISO Tariff to, *inter alia*, increase the Base ROE received by MISO TOs from 10.5 percent to 13 percent for all MISO pricing zones, except for the ATC transmission zone. As relevant here, the Commission set the Base ROE for hearing⁵ and subsequently affirmed the initial decision,⁶ which approved a Base ROE of 12.38 percent for MISO TOs.

5. The 12.38 percent Base ROE that resulted from the proceedings detailed above is located in Attachment O of the MISO Tariff and is used by all MISO TOs except for ATC. ATC's Base ROE of 12.2 percent was established as part of a settlement agreement that was filed with the Commission on March 26, 2004.⁷

B. Statement of the Proceedings

6. Joint Complainants filed the Complaint on November 12, 2013. The Complaint sought relief in three areas. First, as discussed, it sought a reduction of the MISO TOs' Base ROE to 9.15 percent. Second, it asked the Commission to cap the capital structures of the MISO TOs at an equity ratio of 50 percent equity. Third, it sought removal of incentive adders received by ITC Transmission for being a member of an independent system operator (ISO) and by ITC Transmission and its subsidiary, Michigan Electric Transmission Company, for being independent transmission owners.⁸ A number of entities submitted motions to intervene.

⁵ *Midwest Indep. Transmission Sys. Operator, Inc.*, 98 FERC ¶ 61,064, *reh'g denied*, 98 FERC ¶ 61,356 (2002).

⁶ *Midwest Indep. Transmission Sys. Operator, Inc.*, 99 FERC ¶ 63,011 (2002).

⁷ *American Transmission Co., LLC*, 107 FERC ¶ 61,117 (2004).

⁸ *See Association of Businesses Advocating MISO Tariff Equity v. Midcontinent Independent Sys. Operator, Inc.*, 148 FERC ¶ 61,049, at P 1 (2014) (Hearing Order).

7. The Hearing Order, issued October 16, 2014, set the portion of the Complaint seeking reduction of the MISO TOsøBase ROE for hearing and settlement judge procedures.⁹ The Commission set an effective date of November 12, 2013 for the 15-month refund period (Refund Period) prescribed in FPA section 206(b).¹⁰ The Hearing Order denied the portions of the Complaint addressing capital structure and incentive adders, and dismissed MISO as a respondent.¹¹

8. On January 5, 2015, after two settlement conferences, the Chief Administrative Law Judge (Chief Judge) issued an Order Terminating Settlement Judge Procedures, Designating Presiding Administrative Law Judge and Establishing Track II Procedural Time Standards, designating the undersigned as the Presiding Judge.¹² On January 22, 2015, the parties convened for a prehearing conference.

9. On February 23, 2015, Joint Complainants, Joint Consumer Advocates,¹³ Joint Customer Intervenors,¹⁴ and The Resale Power Group of Iowa (RPGI)¹⁵ each filed direct

⁹ *Id.* PP 183, 187.

¹⁰ *Id.* P 188.

¹¹ *Id.* PP 190, 200, Ordering PP (A), (B), (E), (G), (H).

¹² All pleadings and orders cited in this section were filed or issued in this docket. They are not footnoted. Some procedural developments that have no relevance to the outcome of this Initial Decision are omitted.

¹³ Joint Consumer Advocates consist of several state agencies within the MISO footprint charged with consumer protection in utility ratemaking proceedings, and one non-profit corporation with a substantially similar purpose. Joint Consumer Advocates includes the Illinois Citizens Utility Board, the Indiana Office of Utility Consumer Counselor, the Iowa Office of Consumer Advocate, the Minnesota Department of Commerce, the Missouri Office of the Public Counsel, the Citizens Utility Board of Wisconsin, and Michigan Citizens Against Rate Excessô the only member of the Joint Consumer Advocates that is not a state agency.

¹⁴ Joint Customer Intervenors constitute a coalition of municipal and cooperative entities that own transmission facilities subject to the MISO Tariff. Joint Customer Intervenors consist of: Arkansas Electric Cooperative Corporation; Mississippi Delta Energy Agency and two of its members, Clarksdale Public Utilities Commission and the Public Service Commission of Yazoo City; South Mississippi Electric Power Association; and Hoosier Energy Rural Electric Cooperative, Inc.

testimony. Joint Complainants sponsored the testimony of Michael P. Gorman. Joint Consumer Advocates sponsored the testimony of Stephen G. Hill. Joint Customer Intervenors sponsored the testimony of J. Bertram Solomon. RPGI sponsored the testimony of David C. Parcell.

10. On April 6, 2015, the MISO TOs filed answering testimony. The MISO TOs sponsored the testimony of three witnesses, Dr. William E. Avera, Ellen Lapson, and Dennis D. Kramer.

11. On May 15, 2015, Commission Trial Staff (Staff) filed direct and answering testimony. Staff sponsored the testimony of Robert Keyton. On June 15, 2015, the MISO TOs filed cross-answering testimony, sponsoring additional testimony by Dr. Avera and Ms. Lapson.

12. On July 17, 2015, Joint Complainants, Joint Consumer Advocates, Joint Customer Intervenors, and RPGI each filed rebuttal testimony, sponsoring the same witnesses who gave direct testimony on their behalf. Southwestern Electric Cooperative (SWC)¹⁶ also filed rebuttal testimony, sponsoring the testimony of Jatinder Kumar.

13. On July 27, 2015, Joint Complainants, Joint Consumer Advocates, Joint Customer Intervenors, RPGI, and Staff each filed testimony updating their data through June 30, 2015. Joint Complainants and Joint Consumer Advocates updated their short-term growth data through July 13, 2015.

14. A hearing was conducted from August 17 through August 21, 2015. On August 28, 2015, the participants filed the official copies of the hearing exhibits and the Joint Final Exhibit List. By Order dated September 16, 2015, the undersigned directed corrections to the transcript.

¹⁵ RPGI is a special-purpose state government entity charged with obtaining wholesale electric energy, transmission, and related services on behalf of its members, which include 23 Iowa municipal utilities, one cooperative, and one privately-owned utility. RPGI's members purchase electricity under transmission rates set by the MISO Tariff.

¹⁶ SWC is an electric distribution cooperative serving rural customers in southwestern Illinois. SWC is a transmission customer on the MISO system and purchases electricity for its customers under the MISO Tariff.

15. All of the participants sponsoring testimony filed initial and reply briefs, as did the Organization of MISO States (OMS).¹⁷ The participants filed initial briefs on September 21, 2015 and reply briefs on October 13, 2015. An oral argument on the merits was conducted on October 26, 2015.

16. By Order dated November 3, 2015, the undersigned directed an additional correction to the transcript of the hearing. By Order dated November 30, 2015, the undersigned directed corrections to the transcript of the oral argument on the merits.

C. Complaint in Docket No. EL15-45-000

17. On February 12, 2015, certain intervenors in this proceeding filed a second complaint challenging the MISO TOS Base ROE in Docket No. EL15-45-000.¹⁸ By Order dated June 18, 2015, the Commission set this matter for hearing, and prescribed an effective date of February 12, 2015 for the 15-month Refund Period.¹⁹ Thus, the Refund Period in that docket will commence on the day after the Refund Period in this proceeding ends.

18. The Commission left the issue of whether that proceeding should be consolidated with the instant docket to the discretion of the Chief Judge. By Order dated June 24, 2015, the Chief Judge declined to consolidate the dockets, appointed the undersigned as Presiding Judge, and directed that an initial decision be issued no later than June 30, 2016.

¹⁷ OMS is a non-profit company with representatives from each of the states with regulatory jurisdiction over entities participating in MISO. OMS was established to coordinate regulatory oversight among the states in the MISO footprint, including with regard to issues before FERC. The member of OMS supporting its position in this proceeding are: Arkansas Public Service Commission, Illinois Commerce Commission, Indiana Utility Regulatory Commission, Iowa Utilities Board, Louisiana Public Service Commission, Michigan Public Service Commission, Minnesota Public Utilities Commission, Mississippi Public Service Commission, Missouri Public Service Commission, Montana Public Service Commission, City of New Orleans, North Dakota Public Service Commission, South Dakota Public Utilities Commission, and Public Utility Commission of Texas.

¹⁸ The complainants in that proceeding consist of all members of Joint Customer Intervenors except South Mississippi Electric Power Association.

¹⁹ *Arkansas Elec. Coop. Corp. v. ALLETE, Inc., et al.*, 151 FERC ¶ 61,219 at P 1 (2015), *reh'g pending*.

III. ISSUES

A. Is the MISO TOs' Existing Base ROE Unjust and Unreasonable?

1. Burden of Proof

a. Generally

19. To modify a rate under FPA section 206, the Commission or complainant has the burden of showing that the existing rate is unjust and unreasonable.²⁰ The complainant shows that a Base ROE is unjust and unreasonable by establishing that it is higher than is necessary to meet the requirements set forth in *In Bluefield Waterworks & Improvement Co. v. Public Service Commission of West Virginia*²¹ and *Federal Power Commission v. Hope Natural Gas Company*.²²

20. In those cases, the Supreme Court prescribed the criteria for determining a just and reasonable Base ROE. The Court prescribed two basic requirements.

21. The first requirement was that the utility's Base ROE be equivalent to the returns earned by companies with comparable risks. In *Bluefield*, the Court stated that the return should be "equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties."²³ In *Hope*, the Court explained that the return should be "commensurate with returns on investments in other enterprises having corresponding risks."²⁴

22. The second requirement was that the return be sufficient to assure the utility's financial integrity to the point that the utility could attract capital and maintain its credit standing. In *Bluefield*, the Court said, "The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to

²⁰ *Coakley v. Bangor Hydro-Electric Company*, 150 FERC ¶ 61,165 at P 29 (Opinion No. 531-B) (2015), *appeal pending*.

²¹ 262 U.S. 679, 692-93 (1923).

²² 320 U.S. 591, 603 (1944).

²³ 262 U.S. at 693.

²⁴ 320 U.S. at 603.

raise the money necessary for the proper discharge of its public duties.²⁵ In *Hope*, the Court put it more succinctly, explaining that the return should be "sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital."²⁶

23. This second requirement warrants further elaboration. By discussing a Base ROE that assures financial integrity sufficient to attract capital and maintain credit-worthiness, *Hope* assumes that a Base ROE that would attract capital would also have to assure financial integrity and credit-worthiness. In addition, when each decision refers to the attraction of capital, it is necessarily referring to capital contributed by long-term investors. Short-term investors will be much less interested in the utility's financial integrity and credit-worthiness.

24. A Base ROE that authorized a utility to collect more than is necessary to satisfy the requirements of *Hope* and *Bluefield* would exploit consumers and, therefore, would be unjust and unreasonable.²⁷ The Joint Complainants and other participants seeking reduction of the MISO TO's Base ROEs (collectively, the "Non-Utility Participants") have the burden of proving that the MISO TO's Base ROEs exceed that level.

b. Relevance of the Zone of Reasonableness

25. To determine a Base ROE for multiple transmission owners that satisfies the requirements of *Hope* and *Bluefield*, the Commission prescribes a process that includes the following: selection of a "proxy group" of utilities, the operations of which entail risks comparable to those of the transmission owners; calculation of the market cost of equity capital (COE) for each proxy-group utility; creation of a "zone of reasonableness," ranging from the lowest proxy-group COE to the highest; and designation of a Base ROE for the transmission owners equivalent to the midpoint of the zone of reasonableness (Midpoint).

²⁵ 262 U.S. at 693.

²⁶ 320 U.S. at 603.

²⁷ *Jersey Cent. Power & Light Co. v. FERC*, 810 F.2d 1168, 1180 (D.C. Cir. 1987) (*en banc*) ("In addition to prohibiting rates so low as to be confiscatory, the holding of [*Hope*] makes clear that exploitative rates are illegal as well."); *see also Washington Gas Light Co. v. Baker*, 188 F.2d 11, 15 (D.C. Cir. 1950).

26. If the MISO TOs Base ROEs exceed the high end of the zone of reasonableness, those ROEs are clearly unjust and unreasonable. If the evidence establishes that the MISO TOs exceed this zone, the Non-Utility Participants will have met their burden.

2. Development of the Zone of Reasonableness in this Proceeding

27. The Commission set forth its most recent DCF model for electric utilities in *Coakley v. Bangor Hydro-Electric Company*.²⁸ There the Commission prescribed a Base ROE for owners of transmission facilities operated by ISO New England, Inc. (these owners are referred to herein as the "NETOs").

a. Determination of the Market Cost of Equity Capital

(1) The DCF Formula

28. The COE is the return necessary to attract capital.²⁹ The Commission uses the discounted cash-flow (DCF) methodology to calculate the COE of each-proxy group utility. The DCF model utilizes the following formula:

$$K = (D/P) (1 + 0.5g) + g$$

29. In this formula, K=COE, D=Dividend, P=Stock Price, and g=growth rate. The analyst (1) calculates the company's dividend yield (D/P), (2) calculates its growth rate (g), (3) adjusts the dividend yield, adding it to the product of half the growth rate multiplied by that yield ((D/P) + (0.5 g x D/P)), and (4) finally adds the adjusted dividend yield to the growth rate. The DCF model assumes that the sum of the adjusted dividend yield and the growth rate (Total Return) is equivalent to the company's COE.

30. The inputs into this formula are derived from a six-month "study period." As discussed *infra*, the Commission generally seeks the most recent data available.

(2) Rationale Underlying DCF Methodology

31. In *Boston Edison Co. v. FERC*,³⁰ then Judge Breyer described the assumptions underlying the DCF methodology:

²⁸ 147 FERC ¶ 61,234 (Opinion No. 531), *order on paper hearing*, 149 FERC ¶ 61,032 (2014) (Opinion No. 531-A), *order on reh'g*, 150 FERC ¶ 61,165 (2015) (Opinion No. 531-B) (2015), *appeal pending*.

²⁹ Opinion No. 531 at P 14.

[The] [DCF is] a method that asks, “what is the minimum amount that one must pay new investors to offer the utility the money that it needs for investment?” This amount is the minimum cost of equity capital; it pays investors a “fair return,” but no more, while obtaining for the company the capital that it needs.³¹

32. Judge Breyer described the DCF calculation as a determination of what those who have invested in the proxy-group companies have been earning:

To answer this question [(what is the minimum amount one must pay new investors)], the “DCF” method looks to see what investors *have been* earning on comparable equity investment; it determines what they *have been* earning by looking at the past price of shares, by noticing how large a dividend the share paid, and then adding an amount designed to reflect the “added earnings” that, in a sense, “accrued” to each shareholder in light of the fact that each shareholder expected the dividend to grow over time, reflecting the company’s growth in profits.³²

Judge Breyer characterized the return investors have been earning to include not only the current dividend yield but also the “added earnings” that “accrue” to the investor in the form of anticipated future dividends.

33. Determining the investor’s expectation of future dividend growth lies at the heart of the DCF model. Indeed, Opinion No. 531 explained, “The underlying premise of the DCF model is that an investment in common stock is worth the present value of the infinite stream of dividends discounted at a market rate commensurate with the investment’s risk.”³³ The DCF model assumes that in deciding what to pay for a utility stock, the investor will consider the current dividend, estimate the extent to which that dividend will grow over time, and balance the risk that financial adversity will diminish or extinguish that dividend flow and the investor’s capital.

³⁰ 885 F.2d 962 (1st Cir. 1989) (Breyer, J.).

³¹ *Id.* at 965.

³² *Id.* (emphasis in original).

³³ Opinion No. 531 at P 14. *See, e.g., Southern Calif. Edison Co. v. FERC*, 717 F.3d 177,179 (D.C. Cir. 2013).

34. The DCF component that measures the investor's expectation of future dividend growth is the growth-rate component. That component reflects investors' expectations as to growth rate of the company's earnings. In Opinion No. 531, the Commission explained that "earnings forecasts made by investment analysts are considered to be the best available estimates of short-term dividend growth because they are likely relied on by investors when making their investment decisions."³⁴

35. Judge Breyer explained that the Commission assumes that the amount the proxy-group companies have been earning represents the amount necessary to attract capital:

The "DCF" method then assumes that the shareholders will currently insist upon, or new investors will insist upon, that same rate of return as their minimum "price" for putting up new investment³⁵

Although Judge Breyer did not mention *Hope* or *Bluefield* in his DCF analysis, this passage effectively links the two criteria the cases prescribe for determining whether a Base ROE is just and reasonable. To use the language of *Hope*, the cases require that to be just and reasonable, a Base ROE must be (1) "commensurate with returns on investments in other enterprises having corresponding risks" and (2) "sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital."³⁶ Judge Breyer explained that the DCF model assumes that a Base ROE that meets the first requirement will necessarily meet the second.

36. One way of looking at the DCF methodology is that it seeks to determine the Base ROE that will permit the utility to provide a gradually increasing stream of dividends sufficient to attract capital. The capital targeted is that of the long-term investor; short-term investors are not interested in future dividend growth. The DCF model makes this determination by estimating the flow of gradually increasing dividends that investors can reasonably expect to receive from each proxy-group company. The model makes this estimate by determining each proxy-group company's Total Return: The adjusted dividend yield accounts for immediate dividend growth; the growth rate accounts for future dividend growth. In using this model, the Commission assumes that investors demanding this Total Return from the proxy-group companies will demand a comparable Total Return from the utility at issue.

³⁴ Opinion No. 531 at P 17.

³⁵ 885 F.2d 962, 965.

³⁶ 320 U.S. at 603.

37. Thus viewed, the DCF model is not foolproof. The model assumes that long-term investors seeking dividend growth are supporting the proxy-group companies' stock prices. To the extent other investors, such as short-term investors, are supporting the stock price, the Total Returns of the proxy-group companies become less reliable in determining the COEs of the proxy-group companies and the COE of the utility at issue.

(3) Matters in Controversy

(a) Calculation of Dividend Yields

38. The first DCF dispute between the participants relates to calculation of the dividend yield (D/P). In Opinion No. 510, the Commission determined that the dividend yield of each proxy company should be calculated by using a three-step process: (1) averaging the high and low stock prices as reported by the New York Stock Exchange or NASDAQ for each of the six months in the study period; (2) calculating a dividend yield for each such month by dividing the company's indicated annual dividend by the company's average stock price for the month; and (3) averaging those monthly dividend yields.³⁷ The Commission reiterated this position in Opinion No. 528³⁸ and Opinion No. 531.³⁹

39. In all three decisions the Commission expressly found this method preferable to calculating the estimated dividend yield for each proxy group member based on the latest dividend declared in the period.⁴⁰ Under the latter approach, the latest dividend amount is divided by the stock price for each month of the six-month study period even if the dividends applicable to the earlier months were lower. The Commission rejected that approach, reasoning as follows:

Using only the dividend declared in the final month results in a mismatch between the stock prices and the dividends used to calculate a firm's dividend yield. This can result in overstated dividend yields, particularly when a firm raises its dividends or distributions during the six-month study

³⁷ *Portland Natural Gas Transmission Co.*, 134 FERC ¶ 61,129 at P 234 (2011) (Opinion No. 510).

³⁸ *El Paso Natural Gas Co.*, 145 FERC ¶ 61,040 at P 658 (2013) (Opinion No. 528).

³⁹ Opinion No. 531 at P 77.

⁴⁰ Opinion No. 510 at P 234; Opinion No. 528 at P 658; Opinion No. 531 at P 78.

period, because earlier stock prices do not reflect the increased value of the stock resulting from the increased dividend or distribution.⁴¹

40. The MISO TOs advocate use of the "latest-dividend" methodology. Dr. Avera notes correctly that in the Appendix to Opinion No. 531, the Commission actually calculated the proxy-group dividend yields based on that methodology.⁴²

41. The Commission's express repudiation of the latest-dividend approach dictates the conclusion that Commission advisory staff inadvertently used the wrong methodology to calculate the yields set forth in the Appendix, and that the Commission was unaware of staff's mistake. The Commission would not use calculations in an appendix to depart from a position articulated not only in the body of the Order, but also in two previous Orders. Accordingly, the undersigned interprets Opinion No. 531 as requiring the "average-dividend" methodology endorsed in the text of Opinion Nos. 510, 528 and 531.

42. This Initial Decision adopts the dividend yields utilized by Mr. Hill.⁴³ For companies in the final proxy group for which Mr. Hill did not prepare dividend data, this Initial Decision adopts the dividend yields utilized by Mr. Solomon.⁴⁴ Both witnesses use the correct methodology and have supported their calculations with work-papers.⁴⁵

(b) Acceptable Sources of Analyst Growth Rate Data

43. In Opinion No. 531, the Commission calculated the growth-rate component of its DCF analysis (g) by combining short-term and long-term growth rate data. The Commission based its short-term growth rate on five-year earnings projections made by the Institutional Brokers' Estimate System (IBES). The Commission based its long-term growth rate on various entities' predictions as to the growth rate of gross domestic

⁴¹ Opinion No. 531 at P 78.

⁴² Exh. MTO-23 at 63:14-65:11. *Compare* Opinion No. 531, Appendix *with* Exh. MTO-25.

⁴³ *See* Exh. JCA-22.

⁴⁴ Exh. JCI-9 at 1.

⁴⁵ *Id.* at 2-7; Exh. JCA-21.

product (GDP) over various time horizons. The Commission weighted the short-term growth component at two-thirds and the long-term component at one-third.⁴⁶

(i) Short-Term Growth Rate

44. This Initial Decision adopts the five-year growth rate data contained in Mr. Gorman's final DCF analysis.⁴⁷ For companies not included in Mr. Gorman's proxy group, this Initial Decision adopts the five-year IBES rate utilized by Mr. Hill.⁴⁸ Both provide projected IBES growth rates published by *Yahoo! Finance* obtained on July 13, 2015, and together they provide such rates for each proxy company that has been included in the proxy group of at least one participant.

45. In Opinion No. 531, the Commission explained why it had adopted IBES growth-rate projections:

The growth rate used in the DCF model should be the growth rate expected by the market. That growth rate may not necessarily prove to be the correct growth forecast, but the cost of common equity to a regulated enterprise depends upon what the market expects, not upon what ultimately happens. Accordingly, it is appropriate to look to the most recent record evidence of the growth rates actually expected by the investment community.⁴⁹

46. The Commission explained that it had long relied on IBES growth projections as evidence of the growth rates expected by the investment community. The Commission pointed out that since the discontinuation of the IBES Monthly Summary Data Book in 2008, it had consistently used the IBES growth rate estimates published by *Yahoo! Finance* as the source of analysts' consensus growth rates.⁵⁰

47. The MISO TOs argue for use of growth rates published for each proxy company in Value Line. They point out that in Opinion No. 531, the Commission indicated that publications of growth rates by investment services comparable to IBES could serve as

⁴⁶ Opinion No. 531 at P 39.

⁴⁷ Exh. JC-25.

⁴⁸ Exh. JCA-22.

⁴⁹ Opinion No. 531 at P 88 (citations omitted).

⁵⁰ *Id.* P 89 (citations omitted).

an acceptable substitute for the IBES growth rates.⁵¹ The Non-Utility Participants oppose use of Value Line growth rates and allege that those growth rates are unreliable in various ways.

48. One need not probe these arguments in detail to conclude that use of the IBES growth rates is preferable in this case. One can only use one set of growth rates, and the Commission has expressed full confidence in the use of IBES growth rates for its two-step DCF process. At oral argument, counsel for the MISO TOs conceded that for a study period outside the Refund Period, the IBES growth rates are as reliable as those developed by Value Line.⁵² Thus, use of the IBES growth rates in this case is, at the very least, appropriate.

49. Moreover, the decision to calculate a Base ROE in this proceeding based on the most recent data available actually dictates use of IBES growth rates. As noted, Mr. Gorman and Mr. Hill have provided IBES growth-rate data obtained on July 13, 2015. In contrast, the only MISO TO witness providing DCF data, Dr. Avera, has provided Value Line growth-rate data obtained for various proxy-group companies on March 20, May 1 and May 22, 2015.⁵³

(ii) Long-Term Growth Rate

50. In Opinion No. 531-A, the Commission decided to use the projected long-term growth of GDP to determine the long-term growth-rate component of its DCF analysis.⁵⁴ In Opinion No. 531, the Commission explained that it currently uses GDP data published by IHS Global Insight (IHS), the Energy Information Agency (EIA), and the Social Security Administration (SSA) to determine a GDP growth rate.⁵⁵

⁵¹ MISO TOs Initial Brief at 29.

⁵² Tr. 735:23-736:8.

⁵³ Exh. MTO-28 at 2. In selecting IBES growth-rate data obtained after the close of the study period, this Initial Decision follows Opinion No. 531. In that case, the Commission utilized IBES growth-rate data obtained by Dr. Avera on April 23, 2013, 23 days after the close of the study period. Exh. MTO-23 at 69:5-8 & n.138.

⁵⁴ Opinion No. 531-A at P 1.

⁵⁵ Opinion No. 531 at P 39 n.67.

51. Dr. Avera, Mr. Parcell and Mr. Keyton⁵⁶ all use these components to calculate their GDP growth rates. However, whereas Dr. Avera and Mr. Keyton calculate GDP growth rates of 4.39 percent,⁵⁷ Mr. Parcell calculates a GDP growth rate of 4.33 percent.⁵⁸ No discussion of this discrepancy appears in the testimony or in the briefs.

52. The basis of this discrepancy is the participants' differing accounts of the GDP growth rate calculated by the SSA component. Dr. Avera and Mr. Keyton state that SSA calculates a GDP growth rate of 4.48 percent. Mr. Parcell represents that SSA calculates a GDP growth rate of 4.41 percent. All three witnesses cite the 2014 OASDI Trustees Report, but they each appear to rely on different components. Dr. Avera cites "Table VI.G6-Selected Economic Variables."⁵⁹ Mr. Keyton cites Table VI.G4 "OASDI and HI Annual and Summarized Income, Cost, and Balance Sheet as a Percentage of GDP, Calendar Years 2014-2090, Intermediate Assumptions."⁶⁰ Mr. Parcell does not cite to any table, but creates his own. This table purports to average SSA's projections of nominal GDP growth for each year from 2020 through 2088.⁶¹

53. The SSA data relied upon by Mr. Keyton most closely parallels the SSA data relied upon by the Commission in Opinion No. 531. In the Appendix to that Opinion, the Commission cites "The 2012 OASDI Trustees Report" as the source of its SSA projection for GDP growth. The portion of the Trustees report the Commission cites is "Table VI.F4 "OASDI and HI Annual and Summarized Income, Cost, and Balance Sheet as a Percentage of GDP, Calendar Years 2012-2090, Intermediate Assumptions."⁶² This most closely parallels the part of the 2014 trustees report cited by Mr. Keyton, particularly with respect to the years surveyed. Specifically, both Opinion No. 531 and Mr. Keyton use an SSA projection based on the years 2012-2090. In contrast, Mr. Parcell uses an SSA projection based on the years 2020-2088. Because Mr. Keyton's SSA source data most closely parallels that used by the Commission in Opinion No. 531,

⁵⁶ Exh. MTO-1 at 86:5616; Exh. RPG-9 at 8:11617; Exh. S-1 at 55:17621.

⁵⁷ Exh. MTO-28 at 3; Exh. S-5 at 7.

⁵⁸ Exh. RPG-15 at 3.

⁵⁹ Exh. MTO-28 at 3.

⁶⁰ Exh. S-5 at 7.

⁶¹ Exh. RPG-15 at 1.

⁶² Opinion No. 531, Appendix at 3.

this initial decision adopts his SSA projection of GDP growth of 4.48 percent and his GDP growth rate of 4.39 percent.⁶³

(iii) Appropriate Study Period

54. Under FPA section 206(a), if the Non-Utility Participants demonstrate that the MISO TOs' Base ROE is unjust and unreasonable, the Commission shall fix a just and reasonable Base ROE. If the Commission were to prescribe a Base ROE lower than the MISO TOs' current Base ROE, FPA section 206(b) would require the MISO TOs to refund the difference between (1) what the owners have collected over the 15-month Refund Period and (2) what the owners would have collected using the just and reasonable Base ROE. The Refund Period runs from November 12, 2013, to February 11, 2015. The MISO TOs would be required to incorporate the new Base ROE in their rates prospectively on the date prescribed by the Commission.

55. At issue is whether the DCF study period applicable to the MISO TOs should encompass (1) the last six calendar months of the Refund Period, from August 2014 through January 2015, or (2) the most recent six-month period in the record, from January through June 2015. Use of data from the former period will produce a Base ROE that better reflects market-capital conditions during the Refund Period, and, therefore, results in a more appropriate refund. Use of data from the latter period will produce a Base ROE that better reflects current market-capital conditions and, therefore, better meets the prospective needs of ratepayers.⁶⁴

⁶³ Mr. Gorman, Mr. Hill and Mr. Solomon deviate from these sources, but give no viable reasons for doing so. Mr. Gorman also used the GDP forecasts of EIA and SSA, but substituted the GDP forecast published by Moody's Analytics in place of IHS Global Insight. Exh. JC-25. His only explanation for this substitution was that "IHS Global Insight GDP source was not available without significant subscription cost." Exh. JC-1 at 32 n.24. Mr. Hill relied on EIA and IHS estimates, but without explanation, relied on the long-term GDP estimate provided by the Congressional Budget Office, instead of that provided by the SSA. See Exh. JCA-22. Mr. Solomon did not make an independent determination of the long-term growth rate, but instead relied on the long-term growth rate advocated by a Staff witness in another Commission proceeding. Exh. JCI-1 at 19:8614.

⁶⁴ In Opinion No. 531, the Commission found it inappropriate to prescribe a Base ROE for the Refund Period and a second Base ROE for subsequent periods. Opinion No. 531 at P 64.

56. The Commission has long expressed a preference for the latter, explaining that the use of the most recent data in the record is appropriate, even if that data is partly outside the Refund Period, "because the market is always changing and later figures more accurately reflect current investor needs."⁶⁵ In Opinion No. 531, the Commission reiterated that its "general policy has been to base the zone of reasonableness on the most recent financial data in the record."⁶⁶ The Commission explained that the Commission's discontinuance of its practice of updating Base ROEs subsequent to the close of the evidentiary record made it even more important to determine Base ROEs based on the most recent data.⁶⁷

57. The MISO TOs and RPGI assert that the study period should coincide with the last six months of the Refund Period. They note that in Opinion No. 531, the Commission relied on its finding that the "most recent financial data in the record" were also "reasonably representative of the refund period."⁶⁸ The MISO TOs note that in this case there is less than a six-week overlap between the Refund Period and the most recent six-month study period. They contend that data for such a period are not "reasonably representative" of the Refund Period, and therefore should not serve as the inputs for the DCF analysis.⁶⁹

58. The undersigned does not believe the Commission's finding in Opinion No. 531 that the data in the most recent study period were also "reasonably representative of the data in the refund period" to have been an essential element of its selection of the former period. The Commission's statements regarding the need to base DCF studies on the most recent information, including post-study period information, evidence a belief that ratepayers have a greater interest in paying a future rate that best reflects current market-capital conditions than they do in receiving the refund that best reflects their overpayments during the Refund Period. The Commission's discontinuance of its practice of updating Base ROEs after the evidentiary record has closed makes the use of the most recent market-capital data available all the more essential.

⁶⁵ *SFPP, LP*, Opinion No. 511, 134 FERC ¶ 61,121, at P 208 (2011); *see also Portland Natural Gas Transmission System*, Opinion No. 510, 134 FERC ¶ 61,129, at P 242 (2011).

⁶⁶ Opinion No. 531 at P 64 (citations omitted).

⁶⁷ *Id.*

⁶⁸ MISO TOs Reply Brief at 9-10 (citing Opinion No. 531 at P 64).

⁶⁹ *Id.* at 10 n.30.

59. In any event, the amount by which the most recent study period and the Refund Period overlapped in Opinion No. 531 is not that much greater than the amount by which the two periods overlap in the instant case. In Opinion No. 531, the two periods overlapped by three months, or to be more precise, 92 days. In the instant case, the two periods overlap by six weeks, or 42 days. The undersigned does not believe that the Commission would depart from its policy of using the most recent DCF study period available based on a 50-day difference between the two overlaps.

60. In arguing for a study period that coincides with the last six months of the Refund Period, the MISO TOs also point to the complaint brought against them in Docket No. EL15-45-000. They point out that the refund period in that proceeding runs from February 12, 2015 into May 2016. The MISO TOs contend that any new Base ROE established in this proceeding would apply through February 11, 2015, and any Base ROE that would apply from February 12, 2015, forward will be established in Docket No. EL15-45-000, and not in this case.⁷⁰ Given that the Base ROE in this proceeding will only be effective during the Refund Period, they contend, the Base ROE should be derived from data calculated during the last six months of that period.

61. The great likelihood is that a Base ROE awarded in this proceeding will be effective for an appreciable period of time outside of the Refund Period. In the Hearing Order, the Commission estimated that it would be able to issue on Order ruling on this Initial Decision 10 months after the issuance of the decision.⁷¹ If that estimate proves accurate, the Commission will issue a decision authorizing a Base ROE in this proceeding on or about October 22, 2016. The initial decision in Docket No. EL15-45-000 is due to be issued on June 30, 2016. If the Commission takes another 10 months to rule on that initial decision, the Base ROE authorized in Docket No. EL15-45-000 will become effective on or about April 30, 2017. Under that scenario, a Base ROE issued in this proceeding will be effective not only during the Refund Period, but also, prospectively, from approximately October 22, 2016 through April 30, 2017. The Base ROE might be effective for a shorter period, but it might also be effective for a longer period. Given these possibilities, the better course is to fashion a Base ROE based on the most recent data available.

⁷⁰ *Id.* at 8.

⁷¹ Hearing Order, 148 FERC ¶ 61,049 at P 189. The Commission estimated it would be able to issue the Order addressing this Initial Decision eight months after the filing of briefs opposing exceptions, *i.e.*, 10 months after this Initial Decision.

b. Composition of the Proxy Group

62. In Opinion No. 531, the Commission prescribed the proper methodology for screening the proxy group. The Commission set out several bases to exclude electric utilities from the group, including the following: (1) the utility's COE did not exceed the average yield of a specified class of public utility bonds by more than 100 basis points; (2) the utility did not have a credit rating within a specified range of bond ratings; (3) the utility was not among the companies followed as public utilities by Value Line; and (4) the utility engaged in major merger and/or acquisition activity during the six-month study period.⁷² For reasons that will be explained, the other Commission criteria are not relevant to this proceeding.

63. Using the DCF methodology prescribed above, it is possible to calculate an up-to-date COE for each company that has been included in one or more of the active participants' proxy groups.⁷³ A DCF analysis of these companies, 42 in all, starting with the lowest Base ROE and ending with the highest, is set out in Appendix A to this Initial Decision. Of the proxy companies included in all of the active participants' proxy groups, Public Service Enterprise Group has the lowest COE, 7.23 percent, and ITC Holdings Corporation (ITC Holdings) has the highest COE, 11.10 percent.

64. The Commission uses the Midpoint to determine COEs for multiple transmission owners.⁷⁴ In assessing whether to exclude companies from the 42-company list, it is necessary to consider only those companies with COEs below that of Public Service Enterprise Group or above that of ITC Holdings. Exclusion of other utilities will not affect the Midpoint.

(1) The 100 Basis-Point Screen

65. The three proxy-group utilities with the lowest COEs are Edison International, with a Base ROE of 4.38 percent, FirstEnergy Corporation with a Base ROE of 5.01 percent, and Entergy Corporation with a Base ROE of 5.36 percent. Utilization of the Commission's 100 basis-point screen requires exclusion of these three utilities.

⁷² Opinion No. 531 at P 92.

⁷³ See Exh. JC-25; Exh. JCA-22; Exh. JCI-9; Exh. MTO-28 at 1; Exh. RPG-14; Exh. S-5 at 5.

⁷⁴ Opinion No. 531 at P 144.

66. In Opinion No. 531, the Commission explained its policy of excluding any public utility company with a Base ROE that fails to exceed a specified average bond yield by more than 100 basis points. The purpose of the low-end outlier test is to exclude from the proxy group those companies whose Base ROE estimates are below the average bond yield or are above the average bond yield but are sufficiently low that an investor would consider the stock to yield essentially the same return as debt.⁷⁵

67. The participants all agree that the average bond yield to be used in this proceeding is the yield for public utility bonds rated Baa (Baa Bonds) by Moody's Investor Service (Moody's). As of June 30, 2015, the average yield for those bonds was 4.65 percent.⁷⁶ The Base ROEs of Edison International, FirstEnergy Corporation, and Entergy Corporation either fall below the average Baa Bond yield or exceed that yield by less than 100 basis points. Accordingly, all three companies should be excluded from the proxy group.

(2) Coverage in Value Line

68. The utility with the next lowest Base ROE is Unitil, with a Base ROE of 6.79 percent. Unitil must be excluded, because it is not followed by Value Line.

69. In Opinion No. 531, the Commission used the 49 companies that Value Line classifies as being in the electric utility industry as a starting point for its proxy group.⁷⁷ In so doing, the Commission cited the NETO's Workpapers for the Respondents' Supplemental Testimony of Dr. William Avera under EL11-66, dated April 19, 2013.⁷⁸ Dr. Avera's workpapers included a single sheet, titled "Value Line Electric Utilities," which listed 49 electric utilities. This group did not include Unitil.⁷⁹

⁷⁵ *Id.* P 122.

⁷⁶ Exh. S-5 at 5.

⁷⁷ Opinion No. 531 at P 102.

⁷⁸ *Id.* P 102 n.197.

⁷⁹ The 49 companies were as follows: ALLETE, Inc.; Alliant Energy Corp.; Ameren Corp.; American Electric Power Co., Inc.; Avista Corp.; Black Hills Corp.; CenterPoint Energy, Inc.; CH Energy Group, Inc.; Cleco Corp.; CMS Energy Corp.; Consolidated Edison, Inc.; Dominion Resources, Inc.; DTE Energy Co.; Duke Energy Corp.; Edison International; El Paso Electric Co.; Empire District Electric Co.; Entergy Corp.; Exelon Corp.; FirstEnergy Corp.; Great Plains Energy Inc.; Hawaiian Electric

70. Mr. Gorman is the only witness who included Unitil in his final proxy group. However, Mr. Gorman admitted that Unitil is not followed by Value Line, but rather by The Value Line Investment Survey Plus (öPlusö), which is a ödifferent service than the Value Line Investment Survey.ö⁸⁰

71. From an investor's perspective, the difference between the two services is material. As shown in Exhibit MTO-54⁸¹ and acknowledged by Mr. Gorman, the Plus service öincludes both large cap companies and small and medium cap companies,ö⁸² while the regular service öincludes only large cap companies.ö⁸³ The Plus service also does not provide öcommentary from a Value Line analyst,ö unlike the far more widely used Value Line, which provides the name of the analyst on each company's report.⁸⁴ Mr. Keyton explained that he excluded Unitil from his proxy group because Plus ödoes not provide extensive estimates for Unitil as [Value Line] does for the other electric utilities, and Unitil's report has no identified author.ö⁸⁵ Plus evaluates a different universe of companies and provides an investor substantially less information.

Industries, Inc.; IDACORP, Inc.; Integrys Energy Group, Inc.; ITC Holdings Corp.; MGE Energy, Inc.; NextEra Energy, Inc.; Northeast Utilities; NorthWestern Corp.; NV Energy, Inc.; OGE Energy Corp.; Otter Tail Corp.; Pepco Holdings, Inc.; PG&E Corp.; Pinnacle West Capital Corp.; PNM Resources, Inc.; Portland General Electric Co.; PPL Corp.; Public Service Enterprise Group Inc.; SCANA Corp.; Sempra Energy; Southern Company; TECO Energy, Inc.; UIL Holdings Corp.; Unisource Energy Corp.; Vectren Corp. (Vectren); Westar Energy, Inc.; Wisconsin Energy Corp.; and Xcel Energy, Inc.

⁸⁰ Tr. 74:265.

⁸¹ A comparison of the reports for Unitil and Vectren (Exh. MTO-54 at 43, 44) demonstrate the material differences in the level and type of information provided between the Plus service for Unitil (Exh. MTO-54 at 43) and the usual Value Line service for Vectren (Exh. MTO-54 at 44).

⁸² Tr. 74:465.

⁸³ Tr. 75:22623.

⁸⁴ Tr. 76:4612.

⁸⁵ Exh. S-1 at 28:15617. For a comparison of the different information and commentary provided by Value Line and Plus, compare Value Line's report on Vectren with Plus's report on Unitil. See Exh. MTO-54 at 43-44.

Therefore, reliance on Plus to define the universe of potential proxy group companies is improper.

72. Exclusion of Unitil from the proxy group is proper for the additional reason that it is not comparable to the electric utilities followed by Value Line. Unlike the companies in the proxy group, Unitil is a "small cap" company. Value Line defines a "small cap" company as one with a "market capitalization (the stock price multiplied by the outstanding shares) of less than \$1 billion[.]"⁸⁶ and Unitil has a market capitalization of only approximately \$480 million.⁸⁷ Accordingly, Unitil is not comparable to the other proxy-group companies.

73. Joint Complainants argue that Opinion No. 531 did not distinguish between Value Line and Plus. Accordingly, classification as an electric utility by either service qualifies a company for inclusion in the proxy group.⁸⁸ However, the fact that Unitil was not included in the 49-company list utilized by the Commission strongly suggests that the Commission did not intend to include Unitil or companies like it in its proxy group.

(3) Credit Rating

74. Of the remaining companies, MGE has the lowest COE, 6.86 percent. MGE should be excluded from the proxy group, because it does not have its own credit rating from either Standard and Poor's or Moody's.

75. In Opinion No. 531, the Commission found it appropriate to exclude from the proxy group those utilities with corporate credit ratings more than one notch above or below those of the transmission owners. The Commission explained that "[t]he purpose of the credit rating band screen is to include in the proxy group only those companies whose credit ratings approximate those of the utilities whose rate is at issue."⁸⁹

76. The Commission further found that ratings from both of the major credit ratings services, Standard and Poor's and Moody's, should be considered when developing the

⁸⁶ Value Line, Glossary, <http://www.valueline.com/Glossary/GlossaryDisplay.aspx?taxonomyid=4294967316> (last visited Dec. 20, 2015).

⁸⁷ Exh. S-1 at 28:10612.

⁸⁸ Joint Complainants Reply Brief at 17-18.

⁸⁹ Opinion No. 531 at P 106.

comparable risk band, when both are available. The Commission reasoned that investors rely upon credit ratings from both of these services and that basing the credit rating screen on data from only one of the services does not necessarily provide an accurate estimate of the transmission owner's risk. Indeed, the Commission concluded that if a company were more than one notch above or below the credit ratings of the utilities whose rates were at issue based on *either* the Standard and Poor's ratings *or* the Moody's ratings, that company should be excluded from the proxy group.⁹⁰

77. Mr. Gorman and Mr. Solomon excluded MGE from their proxy groups because it has no credit rating from either Standard and Poor's or Moody's.⁹¹ Mr. Gorman explained that MGE's electric utility subsidiary has a bond rating, but that MGE does not.⁹² Mr. Hill was the only witness to include MGE in a proxy group.⁹³ He provided no reason why MGE should be included in the proxy group, and did not rebut the contentions of Mr. Gorman and Mr. Solomon that MGE has no bond rating.

78. Accordingly, MGE must be excluded from the proxy group. The company, having no credit rating at all, fails the screening criterion of having a credit rating of no more than one notch above or below that of the MISO TOs.

(4) Merger and Acquisition Activity

79. The utility with the highest COE is TECO Energy, with a COE of 11.35 percent. Mr. Gorman, Mr. Solomon, Mr. Parcell and Mr. Keyton seek to exclude TECO from their proxy groups based on its acquisition and/or divestiture activity. Dr. Avera and Mr. Hill include TECO in theirs.

80. In Opinion No. 531, the Commission explained that its practice is to eliminate from the proxy group any company engaged in [merger and acquisition] activity significant enough to distort the DCF inputs.⁹⁴ The Non-Utility Participants seek to exclude TECO from the proxy group based on the company's participation in two transactions. First, TECO acquired New Mexico Gas Company on September 2, 2014.

⁹⁰ *Id.* P 107.

⁹¹ Exh. JC-1 at 26:13620; Exh. JCI-1 at 17:27629.

⁹² Exh. JC-1 at 26:16619.

⁹³ *See* Exh. S-2 at 11.

⁹⁴ Opinion No. 531 at P 114 (citations omitted).

Second, TECO attempted to sell TECO Coal, its coal mining subsidiary, throughout the study period.

81. Neither transaction was significant enough to distort TECO's DCF inputs in any meaningful way. Accordingly, TECO is included in the proxy group.

82. Mr. Gorman and Mr. Parcell seek to remove TECO from the proxy group based on TECO's acquisition of New Mexico Gas. Mr. Gorman is the principal advocate for excluding TECO on this ground.⁹⁵ In reaching this conclusion he reversed his earlier position on this issue.

83. In his direct testimony, filed February 23, 2015, Mr. Gorman included TECO in his original proxy group in spite of the fact that the September 2, 2014 acquisition occurred during his initial DCF study period (July 2014 through December 2014). In his rebuttal testimony, filed July 17, 2015, Mr. Gorman retained TECO in his proxy group.⁹⁶ In that testimony he stated:

[T]he companies' growth rate projections are not significantly out of line with those of the other companies in the proxy group. I did this by a comparison of IBES short-term growth rates for these companies relative to the other companies in the proxy group.⁹⁷

84. However, in his update testimony, filed just 10 days later on July 27, 2015, Mr. Gorman removed TECO despite the fact that the acquisition occurred four months prior to the beginning of his final study period (January through June 2015). He asserted that he had reversed his position because of "Value Line's projection that the merger is causing an accretion in earnings which will impact its earnings growth rate over the next five years."⁹⁸ Later, he elaborated further:

Value Line noted that [TECO's] acquisition of New Mexico Gas "had the effect of creating earnings accretion that impacted its earnings growth outlooks over the next five years. In fact, I/B/E/S growth estimates have

⁹⁵ In Exhibit RPG-5, Mr. Parcell cites the acquisition as a ground for excluding TECO, but does not elaborate.

⁹⁶ Exh. JC-9 at 36:6-37:8.

⁹⁷ *Id.* at 36:20-37:2

⁹⁸ Exh. JC-22 at 6:18-19.

increased approximately 280 basis points, a 43% increase since my Direct Testimony.⁹⁹

85. At the hearing, Mr. Gorman testified that he was excluding TECO from his proxy group based on Value Line's conclusion that the acquisition would cause a "temporary enhancement in earnings" or, put another way, "an accreted value to the earnings"¹⁰⁰ *i.e.*, value derived from the combination of TECO's earnings with those of New Mexico Gas. Thus, earnings would "increase relative to where they had been, and the earnings growth going forward would be based on expected earnings growth at that point."¹⁰¹

86. Mr. Gorman based his conclusion that the acquisition would bring about only a temporary increase in TECO's earnings on "Value Line's" advice to the investment community that "TECO [will] realize an accreted earnings impact from the acquisition."¹⁰² Mr. Gorman elaborated:

Once all those synergy benefits are created, then the merged company's earnings will reflect that combined company, but up until it's combined and you reach that point of ongoing earnings outlooks for the combined company, there is an impact on the earnings growth for that company.

That impacts the DCF parameters because it can impact the short-term earnings growth outlook in a way that will not be repeated unless there [are] additional synergies found from that acquisition or another acquisition. So the bottom line is because there is an impact on the DCF parameters caused by merger and acquisition activity, it failed the proxy group criteria.¹⁰³

⁹⁹ *Id.* at 7:13-17.

¹⁰⁰ Tr. 51:6-8.

¹⁰¹ Tr. 51:8-11.

¹⁰² Tr. 51:20-23.

¹⁰³ Tr. 51:23-52:10. *See* Tr. 53:1-4 ("So I didn't reject the company as a reasonable proxy group based on impacts on stock price. I rejected it based on whether or not the earnings growth would reflect a reasonable parameter for a [DCF] study.").

87. On cross-examination, Mr. Gorman acknowledged he was referring to the Value Line report on TECO contained in its May 22, 2015 issue.¹⁰⁴

88. Mr. Gorman characterizes the May 22, 2015 issue of Value Line as stating that the "earnings accretion" and the synergies resulting from the acquisition will create an increase in TECO's earnings growth rate that cannot be sustained. While TECO's *earnings* may continue at the new level, the growth rate will flatten out once that new level is achieved. Mr. Gorman suggests that this development will distort IBES's growth rate projection for TECO, because one, unsustainably high growth-rate year can skew the entire five-year period.

89. Mr. Gorman's analysis appears plausible at first glance. However, his testimony contains inaccuracies, and his analysis is otherwise flawed.

90. Mr. Gorman is incorrect in stating that IBES increased its growth-rate estimates for TECO by approximately 280 basis points between the filing of his Direct and Update Testimony. IBES did increase its growth-rate estimates for TECO from 6.43 percent on January 31, 2013 to 9.20 percent by June 30, 2015, an increase of 277 basis points. However, by July 13, 2015, two weeks before Mr. Gorman filed his Update Testimony, IBES had reduced the estimate to 7.68 percent.¹⁰⁵ Thus, between the filings of Mr. Gorman's Direct and Update Testimony, IBES's growth-rate estimate for TECO increased by 125 basis points, not 280.

91. Mr. Gorman's characterization of the May 22, 2015 Value Line report is also inaccurate. In the paragraph upon which Mr. Gorman relies, Value Line stated that TECO's earnings were "likely to advance considerably," but only during the current year, 2015. Moreover, the language of the paragraph shows that Value Line viewed the accretion in earnings from the New Mexico Gas Company acquisition as only one of several reasons for the advance:

Earnings are likely to advance considerably this year. The acquisition of New Mexico Gas should be accretive to earnings, over and above the fact that merger related expenses reduced share profits by \$0.08 in 2014. Tampa Electric and Peoples Gas are experiencing strong customer growth as the Florida economy expands. Tampa Electric is benefiting from a \$7.5 million rate hike that took effect last November, and will receive an additional \$5.0 million increase in November. Each Florida utility is likely

¹⁰⁴ Tr. 59:18-60:2; Exh. MTO-54 at 41.

¹⁰⁵ Exh. JCA-20 at 1:21-23; Exh. JCA-22.

to earn a return on equity in the upper half of its allowed range í . Finally, the company plans to replace maturing high-cost debt with borrowings that have a much lower interest rate. All told, our earnings estimate is within management's guidance of \$1.08-\$1.11 a share.¹⁰⁶

92. As can be seen, Value Line based its determination that TECO's 2015 earnings were "likely to advance considerably" not only on the accretive earnings resulting from the New Mexico Gas acquisition, but also on favorable prospects for TECO's Florida utilities and TECO's plans to roll over its debt at lower interest rates.

93. The next paragraph of the May 22, 2015 report shows that Value Line does not expect the New Mexico Gas acquisition's accretive earnings impact to extend beyond 2015:

We forecast continued bottom-line growth in 2016. We expect the favorable trends at the Florida utilities to persist, and New Mexico Gas is also experiencing some growth, albeit modest. We estimate that earnings will rise 4%-5%, to \$1.15 a share. A more significant increase is likely in 2017, as Tampa Electric's rates will be raised by \$110 million once an upgrade to a power plant is completed.¹⁰⁷

94. Value Line does not forecast that the acquisition's accretive growth impact will extend into 2016. Rather, New Mexico Gas's contribution to TECO's growth during that year will derive not from the two companies' combination of earnings, but from New Mexico Gas's own "modest" increase in earnings. The report offers no reason to believe that this non-accretive contribution to earnings should not be sustainable. Value Line's prediction of more "significant" growth for TECO in 2017 has nothing to do with the acquisition of New Mexico Gas, but instead turns upon Tampa Electric's pending rate increase.¹⁰⁸

¹⁰⁶ Exh. MTO-54 at 41.

¹⁰⁷ *Id.*

¹⁰⁸ Joint Complainants claim that Mr. Gorman changed his views on TECO, because of differing descriptions of the impact of the New Mexico Gas in two issues of Value Line: Whereas the November 21, 2014 issue of Value Line stated the acquisition would be only "modestly accretive to earnings," the May 22, 2015 issue forecast that TECO's earnings were "likely to advance considerably," because the acquisition would be "accretive to earnings." Joint Complainants Initial Brief at 28-29. Putting the incomplete description of the May 22 issue aside, that issue's description of the impact of

95. As discussed, the May 22, 2015 issue of Value Line does not forecast the accreted earnings from the acquisition of New Mexico Gas to extend beyond 2015. Accordingly, there is no reason to believe that this earnings accretion would have affected IBES's July 13, 2015 five-year growth-rate projections for TECO. A review of the latest IBES projection for TECO, published on July 24, 2015, reveals that the year 2015 is not among the five years for which the projection is made. IBES makes projections for "This Year," *i.e.*, 2015, "Next Year," *i.e.*, 2016, and the "Next 5 Years," which would encompass 2016-2020 but not 2015.¹⁰⁹

96. Accordingly, there is no basis in the record for concluding that TECO's acquisition of New Mexico Gas had any material impact on IBES's growth-rate projections. That acquisition, which occurred well outside the study period, is not a basis for excluding TECO from the proxy group.

97. Mr. Keyton and Mr. Solomon relied on TECO's attempts to sell TECO Coal, its coal mining subsidiary, in removing TECO from their proxy groups. The chronology of those attempts, principally described by Mr. Keyton, is as follows:

98. The November 21, 2014 issue of Value Line reported that on October 20, 2014, TECO had entered into an agreement to sell TECO Coal to Cambrian Coal Corp. for \$120 million cash and up to \$50 million more through 2019 if coal prices rose.¹¹⁰ On February 6, 2015, TECO announced that the parties had amended the sales agreement to provide for a lower sales price, \$80 million cash and up to \$60 million more if coal prices rose, a development Value Line subsequently reported.¹¹¹

99. Subsequently, the transaction began to unravel. On March 13, 2015, BMO Capital Markets expressed doubts that the sale would close. On April 20, 2015, TECO again amended its sales agreement with Cambrian. On April 29, 2015, TECO announced that it was talking to other potential buyers for TECO Coal should the agreement with

TECO's acquisition of New Mexico Gas did not differ materially from that in the November 21, 2014 issue. Value Line's earnings-per-share projections for TECO in 2015 were the same in both issues, \$1.10. Similarly, both issues projected that TECO's earning per share would reach \$1.40 during the next three to five years. *Compare* Exh. MTO-54 at 41, *with* Exh. MTO-55.

¹⁰⁹ See Exh. S-6 at 140.

¹¹⁰ Exh. S-1 at 38:2-3; Exh. S-3 at 58.

¹¹¹ Exh. S-1 at 38:5-7; Exh. S-3 at 60-61.

Cambrian fall through.¹¹² On June 8, 2015, TECO announced that it had not closed the sale to Cambrian, but had received a non-binding letter of intent from a new, unnamed buyer.¹¹³ On July 6, 2015, it announced that it had not reached an agreement with the unnamed buyer prior to the expiration of the letter of intent, but that the sale to Cambrian was still a possibility.¹¹⁴

100. TECO's halting efforts to sell TECO Coal affected investors' perceptions of TECO. According to Value Line, TECO's stock price rose 8.0 percent in the month following the October 20, 2014 announcement of the sale.¹¹⁵ On February 10, 2015, a UBS securities analyst advised SNL Financial (SNL) that the sale of TECO Coal would remove a large drag on shares. ¹¹⁶ Conversely, on July 6, 2015, Standard and Poor's removed TECO from CreditWatch due to its failure, so far, to find a buyer for TECO Coal.¹¹⁷

101. Growth-rate projections for TECO rose and then fell during the study period. The projected growth rate was 6.43 percent on January 31, 2015, 7.08 percent in February and March, 9.20 percent from March through June, and 7.68 percent on July 13, 2015.¹¹⁸

102. Mr. Keyton argues that IBES's projection of 9.20 percent growth rate for TECO may recently have been shown to not be sustainable or taken into consideration by

¹¹² See Exh. S-1 at 10:13-20; Exh. S-6 at 149.

¹¹³ Exh. S-6 at 151.

¹¹⁴ *Id.* at 156. Mr. Keyton testified that on July 16, 2015, TECO announced that it was exploring strategic alternatives, including the sale of the company and had retained Morgan Stanley & Company as an investment advisor in this regard. Exh. S-4 at 10:4-6, Exh. S-6 at 144-157. However, this announcement occurred after the close of the study period, and did not change IBES's short-term growth projection. Compare Exh. JCA-22 (showing the projection for TECO on July 13, 2015), with Exh. S-6 at 140 (showing the projection for TECO on July 24, 2015).

¹¹⁵ Exh. S-1 at 38:3-5; Exh. JCI-10 at 263.

¹¹⁶ Exh. S-6 at 145.

¹¹⁷ Exh. S-4 at 10:6-10.

¹¹⁸ Exh. S-4 at 15:3-11; Exh. S-6 at 171, 173, 175, 177, 179, 181, 183; Exh. JCA-22.

investors.¹¹⁹ However, as discussed, the DCF analysis for TECO utilizes IBES's July 13, 2015 7.68 percent growth rate estimate, not the earlier 9.20 percent forecast. The former estimate is only 125 basis points higher than the January 31, 2015 estimate of 6.43 percent.

103. Nor is there any evidence that the 7.68 percent projection was the result of distortions resulting from TECO's attempts to sell TECO Coal. From January through June 2015, the IBES growth-rate projections for TECO grew more optimistic as its prospects for completing the sale worsened.¹²⁰ These increasingly optimistic, albeit temporary, growth-rate projections for TECO during this period do not appear to have been related in any way to TECO's increasingly desperate attempts to find a buyer for TECO Coal.

104. Mr. Solomon argues that TECO's very public attempts to sell TECO Coal distorted TECO's dividend yield. He prepared a graph comparing the percentage changes in TECO's stock price with those of the SNL Energy Group average.¹²¹ His graph shows TECO's stock price closely tracked the SNL average from July to early October 2014. However, in October 2014, TECO's stock price began to increase at a faster percentage rate than that of the SNL average. TECO's stock prices stayed above the SNL average, compared to where they were in July 2014, throughout the study period. The greatest divergence appears to have occurred during late January/early February 2015, when TECO's stock price was up approximately 20 percent relative to July 2014, whereas the SNL average was down approximately 2 percent. Noting that the divergence began when TECO announced its intention to sell TECO Coal, Mr. Solomon attributes TECO's higher stock price during the study period to its announced intention to sell its subsidiary.¹²²

105. Dr. Avera prepared his own graph, which shows TECO's stock price moving in virtual lock step with the Dow Jones Utility Average (DJUA) from November 3, 2014 through April 28, 2015.¹²³ However, Dr. Avera's chart creates an optical illusion,

¹¹⁹ Exh. S-4 at 14:20-21.

¹²⁰ See Exh. S-1 at 38:2-8; Exh. S-3 at 60-61; Exh. S-4 at 10:6-10, 15:3-11; Exh. S-6 at 149, 151, 171, 173, 175, 177, 179, 181, 183; & Exh. JCA-22, the contents of which are discussed in the preceding paragraphs.

¹²¹ Exh. JCI-8 at 7, Figure 1.

¹²² *Id.* at 7:3-8:4.

¹²³ Exh. MTO-23 at 99, Figure 1.

because the TECO stock prices on the left-hand side of the graph range from 17 to 23, whereas the range of DJUA prices on the right-hand side of the graph range from 54 to 68. Thus, while the stock prices shown on the graph vary by 35.2 percent (the percentage by which 23 exceeds 17), the DJUA varies by only 25.9 percent. Creating a percentage range for the DJUA comparable to that of TECO's stock prices would likely result in a price pattern comparable to that shown on Mr. Solomon's graph.¹²⁴

106. Thus, Mr. Solomon makes a credible case that TECO's very public attempts to sell TECO Coal caused a spike in TECO's stock price that may have distorted the company's dividend yield downward during the study period. This downward distortion of the dividend yield would, in turn, lower TECO's COE. However, the possibility of such a distortion does not warrant excluding TECO from the proxy group.

107. TECO is at the top of the DCF range. If TECO's divestiture activities have downwardly distorted its dividend yield, TECO's COE of 11.35 percent is lower than it should be. Thus, if TECO is included in the proxy group, the COE at the top of the range, 11.35 percent will likewise be lower than it should be. However, excluding TECO from the proxy group will lower the top of the range even more. In that event, ITC Holdings, with a COE of 11.10 percent, will top the proxy-group COEs. Therefore, removing TECO from the proxy group makes the zone of reasonableness produced by the DCF analysis a less reliable guide in determining a just and reasonable COE for the MISO TOs.

108. By attempting to exclude TECO from the proxy group based on the company's attempts to sell its coal unit, the Non-Utility Participants seek to expand the Commission's merger and acquisition screen. A sale of a unit (much less an attempted sale) is neither a merger nor an acquisition.

109. Accordingly, TECO is included in the proxy group.

c. Final Zone of Reasonableness

110. The final proxy group is contained in Appendix B. The final zone of reasonableness ranges from 7.23 percent to 11.35 percent.¹²⁵

¹²⁴ To show the same percentage variance for TECO's stock and the DJUA, one would have to multiply the top DJUA number by 1.352. Then the numbers on the right-hand side of the graph would run from 54 to 73, while those on the left continued to run from 17 to 23. The result would be a DJUA line with less upside.

¹²⁵ See Appendix B.

111. The MISO TOs have Base ROEs ranging from 12.20 percent to 12.38 percent. Thus, these Base ROEs exceed the high end of the zone of reasonableness by 85 to 103 basis points.

112. In Opinion No. 531, the Commission rejected the premise “that every ROE within the ‘zone of reasonableness’ is necessarily ‘just and reasonable,’” reasoning that “the determination of a zone of reasonableness is simply the first step in the determination of a just and reasonable ROE for a utility or group of utilities.”¹²⁶ If Base ROEs falling within the zone of reasonableness may be deemed unjust and unreasonable, Base ROEs falling outside that zone are clearly unjust and unreasonable.

113. The Non-Utility participants have met their burden. The MISO TOs’ Base ROE is unjust and unreasonable.

B. What Is a Just and Reasonable Base ROE for the MISO TOs?

114. Determination of a just and reasonable Base ROE for the MISO TOs turns on placement of that Base ROE in the zone of reasonableness. In Opinion No. 531, the Commission reiterated that its normal practice was to assign multiple utilities operating under an independent system operator a Base ROE at the Midpoint.¹²⁷ However, the Commission reasoned, “[t]he midpoint does not represent a just and reasonable outcome if the midpoint does not appropriately represent the utilities’ risks.”¹²⁸

115. Earlier, in Opinion No. 531, the Commission had stated that it might consider the possibility that a DCF calculation had been tainted by “potentially unrepresentative inputs, including those produced by historically anomalous conditions”:

[W]e understand that any DCF analysis may be affected by potentially unrepresentative financial inputs to the DCF formula, including those produced by historically anomalous capital market conditions. Therefore the Commission may consider the extent to which economic anomalies may have affected the reliability of DCF analyses in determining where to

¹²⁶ Opinion No. 531 at PP 51-55.

¹²⁷ *Id.* P 142.

¹²⁸ *Id.* P 144 (citing *Petal Gas Storage, L.L.C. v. FERC*, 496 F.3d 695, 699 (D.C. Cir. 2007) (emphasis in original)).

set a public utility's ROE within the range of reasonable returns established by the two-step constant growth DCF methodology.¹²⁹

116. In discussing whether to provide the NETOs a Base ROE equivalent to the Midpoint, the Commission stated:

We are concerned that market conditions are anomalous, thereby making it more difficult to determine the return necessary to attract capital. In these circumstances, we have less confidence that the midpoint of the zone of reasonableness established in this proceeding accurately reflects the equity returns necessary to meet the *Hope* and *Bluefield* capital attraction standards.¹³⁰

117. The Commission found it is necessary to consider additional record evidence, including evidence of alternative benchmark methodologies and state commission-approved Base ROEs, to gain insight into the potential impacts of these unusual capital-market conditions on the appropriateness of using the Midpoint.¹³¹ After reviewing this data, the Commission decided that the just and reasonable Base ROE for the NETOs should be set halfway between the Midpoint and the top of the zone of reasonableness (Upper Midpoint). The Commission explained:

[We have] traditionally looked to the central tendency to identify the appropriate return within the zone of reasonableness. Similarly, we believe that here í we likewise should look to the central tendency to identify the appropriate return but, in light of the record in this proceeding, we should look to the central tendency for the top half of the zone of reasonableness . . .

¹³²

118. To determine a Base ROE applicable to multiple transmission owners, the Commission has thus far designated a Base ROE equivalent to either the Midpoint or, if circumstances have warranted, the Upper Midpoint. These are the only two places within the zone of reasonableness that have thus far proved consistent with the Commission's

¹²⁹ *Id.* P 41.

¹³⁰ *Id.* P 145.

¹³¹ *Id.* (citations omitted).

¹³² *Id.* P 151 (citations omitted).

preference for the central tendency. In this case, the Midpoint is 9.29 percent and the Upper Midpoint is 10.32 percent.

119. Accordingly, the threshold question in the instant proceeding is (1) whether the Midpoint should be used to determine the appropriate Base ROE for the MISO TOs or (2) whether that decision should be deferred pending an examination of COEs produced by alternative pricing methods and a review of Base ROEs authorized by state utility commissions. Given the previously quoted passages, this question should turn on whether capital-market conditions during the study period were anomalous and make it more difficult to determine whether the Midpoint will produce a Base ROE that appropriately reflects the risks of investing in the MISO TOs transmission operations. The record supports a finding that current capital-market conditions are anomalous and do produce this level of difficulty.

1. Burden of Proof

120. If the MISO TOs seek a Base ROE above the Midpoint, they have the burden of establishing the following. First, they must establish that anomalous current market-capital conditions make it more difficult to determine whether the Midpoint will produce a Base ROE that reflects the risks of investing in the MISO TOs transmission operations. Second, they must establish that credible alternative pricing models and/or the level of state-authorized ROEs justify awarding the MISO TOs a Base ROE higher than the Midpoint.

121. In Opinion No. 531, the Commission based its decision to authorize the NETOs to collect a Base ROE equivalent to the Upper Midpoint on the evidence contained in the record. In her concurring statement to Opinion No. 531-B, Commissioner Honorable explicitly made this point with respect to the finding of anomalous capital-market conditions. She reasoned that Opinion No. 531 did not create a bright line test nor did it create a presumption that market conditions will be found to be anomalous going forward.¹³³ Elaborating on that point, she stated:

Any public utility that seeks to rely upon anomalous market conditions to justify placement of its base ROE in the upper end of the zone of reasonableness will be tasked with demonstrating, in each case, that market conditions are indeed anomalous and that the adequacy of a base ROE set at the midpoint of the zone of reasonableness should be scrutinized.¹³⁴

¹³³ Opinion No. 531-B, Concurring Opinion of Commissioner Honorable at p. 2

¹³⁴ *Id.* at p. 3.

122. To require the Non-Utility Participants to establish that these conditions do not exist would be improper, because it would require these participants to establish a negative.¹³⁵ Accordingly, the burden of establishing that these conditions exist falls on the MISO TOs.

2. Market-Capital Conditions

a. Evidence of Anomalous and Distortive Conditions

(1) Impact of Federal Reserve's Actions

123. Dr. Avera and Ms. Lapson testify that since the 2008 financial crisis, the Federal Reserve Board (Federal Reserve) has purchased U.S. Treasury bonds (Treasury bonds) and mortgage-backed securities (MBS) to an unprecedented degree. Dr. Avera testifies that from 2009 through 2014, the Federal Reserve increased the balances of these securities in its portfolio from \$410 billion to \$4.097 trillion.¹³⁶ According to Ms. Lapson these purchases increased the Federal Reserve's balance of debt securities by \$3.6 trillion, leaving it with a balance of \$4.25 trillion by the end of 2014.¹³⁷

124. Citing a Federal Reserve press release, Dr. Avera notes that the Federal Reserve is maintaining its current \$4.25-trillion portfolio by using repayments of principal from MBS to purchase new MBS and redemptions of Treasury Bonds to purchase new Treasury Bonds.¹³⁸ He represents that the Federal Reserve's reinvestment payments amount to approximately \$16 billion a month.¹³⁹

125. Ms. Lapson states that since 2008, the balance of securities held by the Federal Reserve has gone from 3.4 percent of annual GDP to 24 percent of annual GDP.¹⁴⁰ Based on a World Bank Report, she concludes that the \$4.25-trillion balance is greater

¹³⁵ *National Motor Freight Traffic Ass'n v. United States*, 242 F.Supp. 601, 605 (D.D.C. 1965).

¹³⁶ Exh. MTO-1 at 22, Table 1.

¹³⁷ Exh. MTO-16 at 18:8-11, 23:9-13.

¹³⁸ Exh. MTO-1 at 22:9-23:4 (citation omitted).

¹³⁹ *Id.* at 22:11-14.

¹⁴⁰ Exh. MTO-16 at 20:17-19.

than the \$3.7-trillion 2013 GDP of Germany and approximately 1.5 times the \$2.8 trillion 2013 GDP of France.¹⁴¹

126. Ms. Lapson testifies that in late 2011, the Federal Reserve changed the nature of its purchases. The Federal Reserve referred to its purchases of debt securities from December 2008 through October 2014 as “quantitative easing” or “QE.” During the first two phases of purchases, “QE1,” from December 2008 through June 2010, and “QE2,” from November 2010 through June 2011, the Federal Reserve purchased debt securities with relatively short maturities. However, starting in September 2011, the Federal Reserve implemented “Operation Twist” in which it sold debt securities with shorter-term maturities while purchasing an equivalent amount of long-term debt. Operation Twist continued through December 2012. It did not increase the Federal Reserve’s holdings, but did increase the ratio of long-term to short-term debt in its portfolio. From September 2012 through October 2014, the Federal Reserve implemented “QE3,” in which it purchased \$1.8 trillion in long-term debt securities. Whereas the Federal Reserve had not reinvested the proceeds of the short-term debt it acquired during implementation of QE1 and QE2, it did reinvest the proceeds of the long-term debt acquired during implementation of QE3.¹⁴²

127. Ms. Lapson asserts that the Federal Reserve has impacted capital-market conditions in another significant way. Since December 16, 2008, it has set targets for the federal-funds rate ranging from 0.0 percent to 0.25 percent, resulting in the lowest federal-funds rate in history.¹⁴³ This action has suppressed all short-term interest rates to near zero.¹⁴⁴

128. The foregoing description of the Federal Reserve’s actions is uncontested. Ms. Lapson’s description of the impact of those actions on market-capital conditions is not. Accordingly, a look at her credentials is warranted.

129. Ms. Lapson holds a Master of Business Administration degree from New York University.¹⁴⁵ She has 41 years of experience performing securities evaluation, financial

¹⁴¹ *Id.* at 21:1-3 (citation omitted).

¹⁴² Exh. MTO-39 at 20:10-21:11.

¹⁴³ Exh. MTO-16 at 22:18-23:2.

¹⁴⁴ *Id.* at 23:5-7.

¹⁴⁵ *Id.* at 5:17-19.

structuring and consulting services in the utilities sector. She was an officer at the predecessor of JPMorgan Chase & Co. (JPMorgan Chase), where her duties included structuring and arranging debt structuring for utility companies. She served as Managing Director of the utilities, power, and gas analytical team of Fitch Ratings, Inc. (Fitch). A major part of her responsibilities there was to interact with major domestic fixed-income investors, portfolio managers, and debt and equity securities analysts.¹⁴⁶ Staff, which disagrees with Ms. Lapson on most points, acknowledges that she is an investment professional with many years of experience observing and studying capital market trends¹⁴⁷

130. Ms. Lapson has testified in a number of Base ROE proceedings at the Commission and has also testified before state utilities commissions. In the proceedings that culminated in the issuance of Opinion No. 531, she testified on behalf of the NETOs.¹⁴⁸ In preparing her testimony in this case, she has spoken to equity investors and read numerous reports and interviews with portfolio managers in the press.¹⁴⁹

131. Ms. Lapson asserts that the Federal Reserve's actions, described above, have driven up bond and equity prices, causing a corresponding drop in those securities' yields. As she explained in her filed, answering testimony:

With the Federal Reserve bidding in the market to buy large amounts of long-term Treasury bonds and mortgage-backed securities and removing so many securities from the trading market, the market prices of bonds were bid up, resulting in declining yields on bonds throughout the market. As the prices of bonds rose and yields on bonds fell, we have seen the prices of dividend-paying stocks, including utility shares, bid up as bond substitutes, and their dividend yields have fallen accordingly.¹⁵⁰

132. Ms. Lapson contends that the foregoing developments are the result of a massive ripple effect that the Federal Reserve's actions have created in the investment

¹⁴⁶ *Id.* at 5:20-6:18.

¹⁴⁷ Staff Reply Brief at 10.

¹⁴⁸ Exh. MTO-16 at 4:12-5:16.

¹⁴⁹ Tr. 331:3-6.

¹⁵⁰ Exh. MTO-16 at 22:6-12.

community, starting with investors that had previously purchased high-quality, income-producing, financial assets:

[I]nvestors seeking high-quality fixed income investments, high-quality bonds, have found that the supply of high-quality bonds available in the market was reduced by the disappearance of \$4 trillion of high-quality long-term bonds that were purchased by the Federal Reserve and held in the system open market account and still are being held there.¹⁵¹

With those bonds removed from the market, investors who wanted high-quality bond-like returns could only bid up the prices of securities because the Federal Reserve was participating in auctions and buying more bonds, and it reduced the trading supply. So the yields available on bonds went down or the prices of bonds went up, meaning that investors began to seek further afield. They went to look for higher returns elsewhere in other categories of investment.

One category might be dividend-producing equities, such as utility shares, and we did see a significant increase in the values of utility shares and reduction in yields. [A]nother area was in more speculative grade of assets like sub[-]investment grade bonds or loans which also experienced a run[-]up. As investors moved gradually, as situations persisted, investors continued to move.¹⁵²

133. Ms. Lapson further testifies that the Federal Reserve's suppression of short-term rates have made it more profitable for investors to purchase long-term securities:

[W]hat the Federal Reserve did was to suppress the Fed fund's target rate by making money available to banks with a target rate of zero to one quarter percent. That made money so readily available in the short run that it flooded the market with ready cash. That also stimulated the tendency of investors to park money in alternatives to Treasury bills or high-quality treasuries and mortgage-backed securities, because on the one hand, they can borrow money very cheaply [at] short-term rates and reinvest in long-term instruments. ¹⁵³

¹⁵¹ Tr. 421:15-21.

¹⁵² Tr. 421:25-422:15.

¹⁵³ Tr. 423:24-424:11.

134. Conversely, the Federal Reserve's action has precluded investors from purchasing short-term debt. Rather, investors are forced to invest in the long-term investments because the returns on short-term assets are so far inferior to what the normalized or expected short-term rate would be.¹⁵⁴

135. Other evidence in the record supports Ms. Lapson's assertions that the Federal Reserve's actions have pushed down yields of long-term bonds and dividend-paying stocks, including electric-utility stocks. The Federal Reserve's actions have correlated with a drop in bond yields. From 2008 through 2014 the average annual yield for 10-year U.S. Treasury bonds dropped from 3.66 percent to 2.54 percent.¹⁵⁵ During that same period, the average annual yield of public utility bonds rated BBB by Standard and Poor's dropped from 7.25 percent to 4.80 percent.¹⁵⁶ Baa Bonds dropped from 7.22 percent to 4.80 percent.¹⁵⁷ Moody's public utility bond average dropped from 6.63 percent to 4.42 percent.¹⁵⁸

136. As the Federal Reserve continued to maintain the size of its portfolio, the decline in bond yields continued. During the study period: the six-month average yields for 10-year U.S. Treasury bonds dropped to 2.07 percent;¹⁵⁹ the six-month average yield of Baa Bonds dropped to 4.65 percent;¹⁶⁰ and Moody's public utility bond average dropped to 4.02 percent.¹⁶¹

¹⁵⁴ Tr. 424:20-23.

¹⁵⁵ Exh. S-5 at 1.

¹⁵⁶ Exh. MTO-29 at 3.

¹⁵⁷ Exh. S-5 at 2.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.* at 8.

¹⁶⁰ *Id.* at 2.

¹⁶¹ *Id.*

137. The Commission has explained that “when interest rates fall, stock prices generally rise”¹⁶² By driving down bond yields, the Federal Reserve also drove down dividend yields.

138. Other experts have provided support for the proposition that the Federal Reserve’s actions have caused drops in the yields of long-term bonds and dividend-paying stocks, including electric-utility stocks. Mr. Keyton agrees that the Federal Reserve’s actions have been principally responsible for the drop in the yields of bonds and of electric-utility stock dividends.¹⁶³ He cites a November 2, 2012 Value Line report, which states, “Since 2008, interest rates have been low as a result of Federal Reserve policy.”¹⁶⁴ The report further notes that as a result of these low rates, “many investors have chosen to turn to income stocks. Utilities are known for paying healthy dividends.”¹⁶⁵ In his direct testimony, Mr. Hill represented that electric-utility stock prices exceeded expected electric-utility book values by a range of 50 to 70 percent.¹⁶⁶

139. Mr. Gorman also acknowledges that capital markets have been affected by the Federal Reserve’s implementation of its QE programs and continue to be affected by the Federal Reserve’s maintenance of its portfolio:

The Fed does not plan a significant reduction immediately of its holding of Treasury and collateralized mortgage agreements. Hence, the impact on the capital markets caused by this quantitative easing effort by the Fed will remain in effect for some time. As such, the effect it has on the capital markets will likely impact capital costs for some time, and, therefore, it is reasonable to assume that capital market costs will continue to be impacted by the Fed’s balance sheet.¹⁶⁷

The testimony of Mr. Keyton and Mr. Gorman on this subject warrants attention, because both oppose raising the MISO TO’s Base ROE above the Midpoint.

¹⁶² *Orange & Rockland Utils.*, 44 FERC ¶ 61,253 at 61,952 n.11 (1988).

¹⁶³ Exh. S-1 at 107:18-108:10.

¹⁶⁴ *Id.* at 108:8-10; Exh. S-3 at 12.

¹⁶⁵ Exh. S-3 at 12.

¹⁶⁶ Exh. JCA-1 at 26:16-18.

¹⁶⁷ Exh. JC-9 at 34:22-27.

140. Another witness upon whom the Non-Utility Participants rely has acknowledged the role of the Federal Reserve and other central banks in driving up the price of financial assets. During February 2015, Scott A. Mather, PIMCO's Chief Investment Officer for U.S. Core Strategies, stated, "All financial assets, not just bonds, have seen their prices elevated over the past several years as a result of monetary policies around the world."¹⁶⁸

141. Finally, a news article published by Reuters on May 6, 2015 quotes Federal Reserve Chair Janet Yellen as stating:

I would highlight that equity market valuations are quite high. We've also seen the compression of spreads on high-yield debt, which certainly looks like a reach for yield type behavior.¹⁶⁹

Dr. Yellen, like Ms. Lapson, believes that investors are bidding the prices of debt and equity in order to obtain yield. In so stating, Dr. Yellen implies that she does not believe that investors are purchasing securities based on a comparison of the security's long-term return and risk.

(2) Investor Expectations of Change

142. The MISO TO witnesses contend that investors expect the Federal Reserve to normalize conditions and for interest rates to rise. Ms. Lapson notes that the Federal Reserve publicly announced its plans for effecting normalization of its portfolio in a September 17, 2014 press release, titled "Policy Normalization and Plans" (September 17, 2014 Release). According to the release, the Federal Reserve Open Market Committee (FOMC) intends first to increase "the target range for the federal funds rate" and thereby allow short-term interest rates to begin to return back to normal levels. Then, the FOMC "intends to reduce the Federal Reserve's securities holdings in a gradual and predictable manner primarily by ceasing to reinvest repayments of principal." The announcement states that the FOMC intends for the Federal Reserve to "hold no more securities than necessary to implement monetary policy efficiently and effectively" and hopes to minimize "the effect of Federal Reserve holdings on the allocation of credit

¹⁶⁸ Exh. S-8 at 3.

¹⁶⁹ Michael Flaherty and Anna Yukhanov, *Yellen Cites 'Potential Dangers' in U.S. Stock Valuations* (May 6, 2015), available at www.reuters.com/article/2015/05/06/us-usa-fed-yellen-idUSKBN0NR1JI20150506 (Reuters Article). The quotation is part of a larger quotation contained in Exh. MTO-39 at 18:6-19:2.

across sectors of the economy.¹⁷⁰ Ms. Lapson states that press releases issued by the Federal Reserve in 2015 and the minutes from the FOMC meetings in January, March and April 2015 show that the Federal Reserve and FOMC continue to take the position articulated above.¹⁷¹

143. Ms. Lapson reasons that investors expect that the Federal Reserve must implement the normalization plan described in the September 17, 2014 Release, even though the Federal Reserve has not yet done so:

[I]nvestors still believe that the Federal Reserve is going to normalize. The reason they believe that is because the Federal Reserve continues to make that policy statement. When an organization as credible as the U.S. Federal Reserve makes those statements, investors believe they will follow through on it. Otherwise, the Fed would lose its credibility.¹⁷²

Significantly, she believes that investors expect “higher yields and interest rates” as the Fed eventually moves to normalize its monetary policies.¹⁷³

144. Dr. Avera asserts that “there is a widespread expectation that interest rates will increase significantly from today’s anomalous levels as and if stable economic growth is achieved.”¹⁷⁴ In support of this assertion, he provides a graph in his direct testimony showing the combined forecasts of four highly respected investment services. The services are Value Line, IHS, EIA and Blue Chip Financial Forecasts (Blue Chip). As discussed, in Opinion No. 531, the Commission relied on the GDP growth forecasts of IHS and EIA to develop its long-term GDP projection that constitutes a component of its DCF analysis.¹⁷⁵

¹⁷⁰ Exh. MTO-16 at 24:9-28 provides the foregoing quotations and provides a citation to the Federal Reserve’s website:

www.federalreserve.gov/newsevents/press/monetary/20140917.

¹⁷¹ Exh. MTO-16 at 25 nn.26, 27; Exh. MTO-39 at n.20.

¹⁷² Tr. 434:2-9.

¹⁷³ Exh. MTO-39 at 24:7-10.

¹⁷⁴ Exh. MTO-1 at 23:8-10.

¹⁷⁵ Opinion No. 531 at P 39 n.67, Appendix at 3.

145. Value Line, IHS and Blue Chip issued their forecasts shortly after the September 17, 2014 Release; EIA issued its forecast a few months before, on May 7, 2014. The forecasters project that from January 2015 to 2019: the yields on 10-year government bonds (presumably Treasury bonds) will increase from 2.25 percent to 3.9 percent; the yields on 30-year government bonds will increase from 3.0 percent to 4.3 percent; the yields on AA corporate bonds will rise from 4.0 percent to 5.5 percent; and the yields on AA utility bonds will rise from 4.0 percent to 6.1 percent.¹⁷⁶ In his cross-answering testimony, Dr. Avera provided updated forecasts by IHS and EIA predicting yields on AA utility bonds would provide yields of, respectively, 5.98 percent and 6.17 percent during 2016-2020.¹⁷⁷

146. Rising interest rates normally mean a drop in the prices of yield-producing securities. Ms. Lapson believes that it is anomalous for investors to buy and hold such securities when they expect interest rates to rise. At the hearing, she stated:

[T]he anomaly may have a great deal to do with the fact that at every point investors expect the future interest rates and environment to change, but [are not able] to make investments that embody those views because investment vehicles aren't available [to them due to] Federal Reserve actions.¹⁷⁸

147. Later in the hearing, she elaborated further on this anomaly, explaining:

The investors have an expectation of higher yields but there's nothing they can do about it. That's where there's a disconnect in the marketplace. They can't do what they would normally do and shun those long-term investments because they can't go to short-term instruments to get any return. In a way, the disconnect is that the investors have continued and even bought more of these dividend-yielding equities or speculative sub-investment-grade securities. Whatever it is, they've continued that because there's no place else for them to go. That is where the market is so abnormal right now. The Federal Reserve's actions have been so pervasive and large [that] there's no place else to go. . . .

¹⁷⁶ Exh. MTO-1 at 23, Figure 2.

¹⁷⁷ Exh. MTO-23 at 104, Table 1.

¹⁷⁸ Tr. 314:22-315:3.

This is contrary to what would ordinarily happen if investors had an expectation of higher yields.¹⁷⁹

According to Ms. Lapson, one anomalous aspect of current market-capital conditions is that investors are so desperate for current yield that they are buying and holding securities that the investors believe will decline in price.

148. Ms. Lapson believes that a number of investors believe or are on notice that expected increases in long-term interest rates accompanying normalization could be sudden and pronounced. She testifies that the expectations of future higher yields and the unavailability of short-term investments have created a situation in which large investors holding long-term debt and dividend-paying equities stand ready to sell those securities immediately once the Federal Reserve initiates the normalization process by allowing short-term interest rates to increase. Ms. Lapson explains that investors expecting long-term interest rates to rise normally would invest in short-term securities:

[I]n typical normal market conditions if the investor expects future interest rates to rise and he currently cannot get that rate in the market on current long-term assets, that investor [will] put his money in short-term investment vehicles. If he [doesn't] want to commit his money to 10-year or 20-year or 30-year assets, he [can] invest in 30-day, 60-day, 10-day commercial paper or T-bills or other forms of short-term instruments.¹⁸⁰

149. However, in this case, the Federal Reserve has suppressed the Fed fund's target rate by making money available to banks with a target rate of zero to one quarter percent. This action has deprived investors of the option of keeping their money in short-term investments. Such investors are forced to invest in . . . long-term investments because the returns on short-term assets are so far inferior to what the normalized or expected short-term rate would be.¹⁸¹

150. Ms. Lapson notes that those investors financing their purchases of these assets with short-term loans are in a particularly precarious situation due to the mismatch of short-term funding and long-term assets¹⁸² However, they believe that the Federal

¹⁷⁹ Tr. 433:6-24.

¹⁸⁰ Tr. 423:9-23.

¹⁸¹ See Tr. 423:24-424:2, 424:19-23.

¹⁸² Tr. 424:11-13.

Reserve's continuation of its policies will suppress volatility in the markets and that as long as market volatility is suppressed they will be able to keep on going without as much of a risk of a loss on the long-term assets they hold.¹⁸³

151. In Ms. Lapson's view, normalization of those policies could change the financial landscape dramatically. She testifies that normalization could result in a sharp sell-off of long-term debt securities and electric-utility stocks and a corresponding jump in their yields. Federal Reserve actions have resulted in the acquisition of such stocks by investors who seek to hold such stocks for yield pending normalization. These investors stand ready to sell these stocks quickly once the Federal Reserve allows short-term rates to rise. As Ms. Lapson explains:

If I were speaking to a group of investors, they would be talking about hot money. . . investors who are there opportunistically to take advantage of the yields on the utility stocks as a bond substitute and will get their money out of there as soon as they perceive that the Federal Reserve is going to allow short-term interest rates to move upward, and then turn off the reinvestment of the proceeds of maturities in the Fed's portfolio.

[T]he hot money or opportunistic investors who are unlikely to be long-term investors in utility stocks will move away. It is the nature of very large investors that they believe they can act very quickly and can act ahead of the rest of the market and change their portfolio positions very rapidly.¹⁸⁴

152. According to Ms. Lapson, these "hot-money" investors include "very large financial institutions and private equity funds that move more rapidly in the market . . ."¹⁸⁵ They "buy based on yield alone with no expectation of growth."¹⁸⁶ They are "not expecting any growth, because they don't expect to stay around for that."¹⁸⁷

153. Ms. Lapson further testifies that these opportunistic investors not only purchase electric-utility stocks, but also purchase long-term debt instruments. She explains,

¹⁸³ Tr. 424:13-18.

¹⁸⁴ Tr. 425:3-21.

¹⁸⁵ Tr. 444:5-9.

¹⁸⁶ Tr. 438:7-8.

¹⁸⁷ Tr. 438:12-13.

“[I]nvestors have continued [to hold] and [have] even bought more of these dividend-yielding equities or speculative sub-investment grade securities. Whatever it is, they've continued that because there's no place else for them to go.”¹⁸⁸

154. The Reuters Article shows that Dr. Yellen has warned the investment community that normalization could result in an immediate spike in interest rates. The Article quotes Dr. Yellen as stating: “[W]hen the Fed decides it's time to begin raising rates, we could see a sharp jump in long-term rates.”¹⁸⁹ Her statement supports Ms. Lapson's view that many investors are likely to sell off their securities once normalization begins.

(3) Distortion of DCF Inputs

155. The MISO TOs assert that by driving down the yields of Baa Bonds and electric-utility stocks, the Federal Reserve has distorted two DCF inputs. By driving down the yields of Baa Bonds, the Federal Reserve has skewed the 100 basis-point screen that the Commission uses to eliminate low-end utilities from the proxy group.¹⁹⁰ By driving down the yields of electric-utility stocks, the Federal Reserve has skewed the dividend-yield component of the DCF.¹⁹¹

156. Dr. Avera asserts that anomalously low interest rates result in an artificial depression of the bond yield that serves as the basis for the Commission's 100 basis-point screen. Because these bond yields do not reflect expectations for the future they inevitably skew the 100 basis-point screen downward.¹⁹²

157. The participants have all used the average yield during the study period of Baa Bonds as the starting point for the 100 basis-point screen used to exclude electric utilities at the low end of the zone of reasonableness from the proxy group. The evidence shows that during the Federal Reserve's acquisition of Treasury bonds and MBS, from the end of 2008 through June 30, 2015, the end of the study period, the annual average of Baa Bonds dropped from 7.22 percent to 4.65 percent.¹⁹³ This drop affected the 100 basis-

¹⁸⁸ Tr. 433:6-16.

¹⁸⁹ Reuters Article, quoted in Exh. MTO- 39 at 18:23-25.

¹⁹⁰ MISO TOs Reply Brief at 40.

¹⁹¹ MISO TOs Initial Brief at 71-72.

¹⁹² Exh. MTO-1 at 24:13-20.

¹⁹³ Exh. S-5 at 2.

point screen. During the study period the screen served to exclude all utilities with a COE at or below 5.65 percent. During 2008, prior to the initiation of QE1, a comparable screen would have excluded all utilities with COEs at or below 8.22 percent.

158. Ms. Lapson contends that by artificially driving up the prices of electric-utility stocks, the Federal Reserve has artificially lowered the stocks' dividend yields and thereby distorted the dividend-yield component of the DCF analysis.¹⁹⁴ The evidence providing support for the contention that the Federal Reserve's actions have artificially raised the prices of electric-utility stocks is discussed *supra*.¹⁹⁵

b. Evidence and Arguments Offered in Rebuttal

(1) Federal Reserve's Role in Suppressing Bond and Dividend Yields

159. Some of the Non-Utility Participants argue that the MISO TOs overstate the Federal Reserve's role in suppressing bond and dividend yields. Staff makes a number of statements purportedly based on statements made by witnesses on cross-examination. However, the witness statements do not support Staff's contentions.

160. Citing Mr. Keyton's testimony on cross-examination, Staff contends "interest rates are low because of underlying macroeconomic conditions, in particular, because of subdued economic growth on a worldwide basis and low inflationary expectations."¹⁹⁶ The cited testimony does not support this conclusion. In that testimony Mr. Keyton explained why he believed that no consensus exists as to whether interest rates would rise. His first reason was that "the Fed hasn't raised short-term interest rates."¹⁹⁷ His second reason was that "global [] conditions affect whether interest rates are going to rise in the near future"¹⁹⁸ However, the only example he gave of such conditions was the existence of "quantitative easing programs" in "Europe and Japan,"¹⁹⁹ *i.e.*, central-

¹⁹⁴ Exh. MTO-16 at 9:4-16, 23:9-16, 25:4-9, 31:12-16.

¹⁹⁵ *See id.* at 22:6-12; Exh. JCA-1 at 26:16-18; Exh. S-1 at 107:18-108:10; Exh. S-3 at 12; Exh. S-8 at 3; Reuters Article quoted in Exh. MTO-39 at 18:6-19:12; Tr. 421:25-422:15, 423:23-424:11, 424:20-23.

¹⁹⁶ Staff Initial Brief at 54-55 (citing Tr. 706:20-707:8).

¹⁹⁷ Tr. 706:25.

¹⁹⁸ Tr. 707:2.

bank actions similar to those taken by the Federal Reserve. Mr. Keyton said nothing about subdued worldwide growth or inflationary expectations.

161. Citing Dr. Avera's testimony on cross-examination, Staff contends that the Federal Reserve's "ability to assert control over long-term rates is significantly attenuated."²⁰⁰ In the cited transcript, Dr. Avera said that the Federal Reserve's ability to control long-term rates was "less noticeable" than its ability to control short-term rates, "but still present, in the long term rates, especially when it has a very large portfolio of longer-term government and agency securities"²⁰¹

162. Citing Ms. Lapson's testimony on cross-examination, Staff asserts, "[l]ong-term bond rates are determined primarily by the worldwide interaction of the supply and demand for capital."²⁰² However, Staff concedes in a footnote that Ms. Lapson actually stated that while forces other than the Federal Reserve can affect capital market conditions, the Federal Reserve's actions are the primary cause of the current, anomalous market conditions.²⁰³

163. Citing Ms. Lapson's filed testimony and further discussion of that testimony on cross-examination, Staff contends that Ms. Lapson "concedes the role of international events in exacerbating the purported anomaly in capital market conditions."²⁰⁴ However, in the only part of the cited filed testimony pertinent to the study period, Ms. Lapson merely stated that the actions of the European Central Bank in January 2015 exacerbated the anomalous conditions that its United States counterpart, the Federal Reserve, has created.²⁰⁵ She confirmed this on her cross-examination.²⁰⁶ However, she emphatically stated that she did *not* believe it even possible that global events could sustain the current,

¹⁹⁹ Tr. 707:3-5.

²⁰⁰ Staff Initial Brief at 57 (citing Tr. 586:12-24).

²⁰¹ Tr. 586:19-24.

²⁰² Staff Initial Brief at 57 (citing Tr. 404:1-8, 413:11-22).

²⁰³ *Id.* n.153.

²⁰⁴ *Id.* at 59 (citing Exh. MTO-16 at 26; Tr. 411:17-414:3).

²⁰⁵ Exh. MTO-16 at 26:11-18.

²⁰⁶ Tr. 411:17-412:23.

aberrational capital-market conditions; rather, such events merely cause "noise around another trend which is being caused by the Federal Reserve actions."²⁰⁷

164. In a further attempt to establish that the Federal Reserve's maintenance of the *status quo* is not suppressing long-term interest rates, Staff asserts that "data from a recent JPMorgan Chase study support the position that even if the Federal Reserve failed to roll over any of the \$1.3 trillion in Treasury securities that come due through the end of 2019, yields on 10-year bonds would increase by less than 30 basis points."²⁰⁸

165. The only part of Staff's citation that supports this contention is Exhibit OMS-23, which is an August 16, 2015 article in Bloomberg Business (Bloomberg) purporting to describe the alleged JPMorgan Chase study. The exhibit was introduced by OMS through Dr. Avera, who had not previously read it. Thus, Staff's sole basis for its contention is a magazine writer's version of a necessarily complex report, introduced through a witness unfamiliar with the document. Had the article been written during the study period, it would be relevant to the issue of investor expectations, but it is entitled to little, if any, weight for purposes of establishing the content, much less the validity, of the JPMorgan Chase report.

166. Staff's position on this issue is not only unsupported by its own citations, but also flatly contradicted by the testimony of its sole witness, Mr. Keyton. As discussed, Mr. Keyton stated that he agreed with Ms. Lapson that the Federal Reserve's QE programs had caused the bidding up of financial assets and resulting declining yields on bonds.²⁰⁹

167. Joint Consumer Advocates argue that the failure of interest rates to rise after the cessation of the QE programs shows that Federal Reserve actions are not suppressing bond yields.²¹⁰ Joint Consumer Advocates further contend that the fact that "interest rates have remained steady" following cessation of quantitative easing shows that "current bond yields are market-based assessments of available capital costs and not unduly influenced by Federal Reserve policy."²¹¹

²⁰⁷ Tr. 413:23-414:3.

²⁰⁸ Staff Initial Brief at 57 (citing Tr. 613:24-614:10; Exh. OMS-23 at 2).

²⁰⁹ Exh. S-1 at 107:20-108:10.

²¹⁰ Joint Consumer Advocates Initial Brief at 74.

²¹¹ *Id.* (citing Exh. JCA-11 at 16).

168. However, the fact that bond yields have remained stable since the cessation of QE does not dictate the conclusion that the Federal Reserve's actions are not continuing to suppress interest rates. When the Federal Reserve was expanding its portfolio, interest rates fell. Now the Federal Reserve is spending approximately \$16 billion a month to maintain the portfolio and continuing to suppress short-term rates.²¹² One may infer that the Federal Reserve's actions are no longer forcing bond yields down, but are instead perpetuating these already suppressed yields. Dr. Yellen's assertion that normalization could be accompanied by a spike in long-term rates²¹³ indicates that she has made this inference.

169. Joint Consumer Advocates further contend that "the June 16 Federal Reserve minutes shown on Exhibit S-12 identify inflation expectations as the driver of the potential rise in yields."²¹⁴ However, the minutes do not do that. Though Exhibit S-12 is a 13-page document, Joint Consumer Advocates do not specify a page number. The only part of the exhibit that links inflation to bond yields is on page 5. That language merely states that "stronger-than-expected inflation data" was one of a "number of factors" that "may have contributed to the increase in German bund yields."²¹⁵ Otherwise the minutes do not appear to link inflation to yields in any way.

170. Joint Customer Intervenors discount Ms. Lapsone's contention that the Federal Reserve's QE programs artificially drove the yields of long-term bonds and of stocks. Joint Customer Intervenors claim the process she described as "simply the pricing process conducted by thousands of participants in public, open, competitive markets that determine the market cost of bonds and the market cost of equity."²¹⁶ Joint Customer Intervenors acknowledge that the Federal Reserve may "have an impact on the market-determined prices and costs," but assert that "such costs are nonetheless determined in the public markets, and all participants play a part in such markets and are subject to the market results."²¹⁷

²¹² Exh. MTO-1 at 22:11-14.

²¹³ Reuters Article quoted in Exh. MTO-39 at 18:23-25.

²¹⁴ Joint Consumer Advocates Initial Brief at 75 (citing Exh. S-12; Tr. 579-582).

²¹⁵ Exh. S-12 at 5 (emphasis supplied).

²¹⁶ Joint Customer Intervenors Initial Brief at 29 (quoting Exh. JCI-4 at 30:19-21).

²¹⁷ *Id.* (quoting Exh. JCI-4 at 30:21-24).

171. That fact that the decisions to purchase long-term bonds and dividend-paying stocks were made by numerous individuals acting in public markets does not refute Ms. Lapson's contention. She argues that the Federal Reserve's policies have driven large numbers of these investors to purchase securities solely for current yield without regard to whether the return offered by the securities justifies the risks of such purchases. It does not matter that the decisions were made by individuals acting in current markets.

172. Joint Customer Intervenors also take issue with Ms. Lapson's suggestion that Federal Reserve actions caused investors to purchase electric-utility stocks as bond substitutes. Joint Customer Intervenors assert that utility stocks, which pay higher dividend yields than most sectors in the market, have *always* been considered bond substitutes.²¹⁸

173. The record does not support Joint Customer Intervenors' assertion. The Commission has acknowledged that investors purchasing utility stocks demand a risk premium over bonds. The foregoing reality is the basis of the 100 basis-point screen that the Commission uses to eliminate utilities with low COEs from proxy groups used in DCF analyses²¹⁹ and the basis for the Commission's acceptance of risk-premium pricing models, discussed *infra*, as a guide to the reliability of DCF results in certain cases.²²⁰

174. Joint Customer Intervenors cite an article by Dr. Ben Bernanke, former Chairman of the Federal Reserve, addressing "confused criticism" that the Federal Reserve was "somehow distorting markets and investment decisions by keeping interest rates low."²²¹ Joint Customer Intervenors contend that Dr. Bernanke's statement refutes Ms. Lapson's contention that Federal Reserve's QE programs drove down bond and dividend yields.²²²

²¹⁸ Joint Customer Intervenors Reply Brief at 28 (emphasis in original).

²¹⁹ Opinion No. 531 at P 122.

²²⁰ *Id.* P 147.

²²¹ Joint Customer Intervenors Initial Brief at 29 (quoting Exh. JCI-6 at 3); Joint Customer Intervenors Reply Brief at 27-28 (quoting Exh. JCI-6 at 3).

²²² Joint Customer Intervenors Initial Brief at 29.

175. However, Dr. Bernanke was addressing the Federal Reserve's suppression of short-term rates, not its bond purchases. He contended that he set short-term rates at a level that best served the economy.²²³

176. OMS refers to a more pertinent part of the article in which Dr. Bernanke questioned the Federal Reserve's ability to affect yields over the long term and asserted that real interest rates are determined by a wide range of economic factors (including prospects of economic growth), not solely by Federal Reserve auctions.²²⁴ OMS appears to be referring to the following passage:

The Fed's ability to affect real rates of return, especially longer-term real rates, is transitory and limited. *Except in the short run*, real interest rates are determined by a wide range of economic factors, including prospects for economic growth not by the Fed.²²⁵

177. It is not clear that Dr. Bernanke's statement supports OMS's point. First, Dr. Bernanke was discussing the Federal Reserve's ability to control *real* long-term yields. A real yield is the nominal yield, the actual percentage return, minus the inflation percentage.²²⁶ However, the DCF analysis relies on nominal stock and bond yields. Second, the italicized portion of Dr. Bernanke's statement shows an implicit acknowledgement of the Federal Reserve's ability to control long-term rates in the "short run." The period of the Federal Reserve's actions, a massive expansion of its portfolio over a period of almost six years and maintenance of its portfolio for another eight months (as of the end of the study period), may qualify as short-term.

178. To the extent Dr. Bernanke's statements may be interpreted as supporting OMS's position, they are contradicted by those of Dr. Yellen. Her statement that normalization could cause a spike in long-term rates²²⁷ indicates that she believes the Federal Reserve's current stance may be suppressing long-term rates. Dr. Yellen may have more credibility

²²³ Exh. JCI-6 at 3.

²²⁴ OMS Initial Brief at 23-24 (citing Exh. JCI-6 at 2).

²²⁵ Exh. JCI-6 at 2 (emphasis supplied).

²²⁶ See Exh. S-12 at 4 (quoting minutes of the June 2015 FOMC meeting, noting that "[m]ost of the increase in nominal yields was attributable to a rise in real yields, as measures of inflation compensation were relatively stable").

²²⁷ Reuters Article, quoted in Exh. MTO-39 at 18:23-25.

on this point, because Dr. Bernanke's article responds to the accusation that he and members of the FOMC were "throwing seniors under the bus" by keeping interest rates low.²²⁸ Such criticism would give Dr. Bernanke an incentive to portray the Federal Reserve as having only limited ability to control long-term rates.

179. OMS points to a graph contained in a Moody's report showing Federal debt as a percentage of annual GDP to have doubled since 2008, from 35 percent to 70 percent. OMS contends that the upward effect on bond yields resulting from issuance of Federal debt securities over this period would have more than offset the alleged downward effect on those yields resulting from quantitative easing.²²⁹

180. Whether and if so, how these ongoing transactions might have offset each other are intriguing questions. However, these questions are highly technical, and, therefore, their proper resolution requires expert testimony. No such testimony is available here. The witness sponsoring the exhibit, Mr. Solomon, did not choose to discuss its implications. None of the participants confronted Dr. Avera or Ms. Lapson with the argument that OMS now attempts to make. Accordingly, the lack of expert testimony regarding the issues raised by OMS's argument requires that the argument be disregarded.

(2) Investor Expectations of Change

181. Joint Consumer Advocates and OMS argue that Ms. Lapson has neither conducted a formal study nor published a single peer-reviewed article that would support her conclusions regarding investor expectations arising from the Federal Reserve's monetary policies.²³⁰ In responding to these assertions, Ms. Lapson's explained that she was neither an economist nor an academician.²³¹

182. The foregoing assertions do not diminish the force of Ms. Lapson's testimony. Preliminarily, it is not at all clear how one would conduct a "formal study" of investors' perceptions in this context. In any event, Ms. Lapson's testimony that investors believe the Federal Reserve's announcements that it intends at some point to normalize monetary

²²⁸ Exh. JCI-6 at 2.

²²⁹ OMS Initial Brief at 24 (citing Exh. JCI-7 at 84).

²³⁰ Joint Consumer Advocates Initial Brief at 76-77; OMS Initial Brief at 20-21, 25.

²³¹ See Tr. 331:3-17.

conditions is inherently plausible.²³² Finally, Dr. Averas's graph shows that major investment forecasters have predicted significant rises of interest rates over the next few years.²³³

183. Joint Complainants and Staff both challenge the MISO TO's contention that investors expect interest rates to rise significantly in the future.²³⁴ Joint Complainants and Staff assert that the minutes of the July 2015 FOMC meeting are likely to dampen any investor expectations of higher interest rates that might exist. They both point out that the FOMC has indicated that potential increases in the Federal Funds rate are dependent on improvements in labor market conditions and an assurance that inflation will rise to 2 percent. They argue that the minutes make clear that such an increase is not imminent and that there is no certainty as to when it shall occur.²³⁵ Joint Complainants contend that the minutes further show that after the initial increase, the expected target range for the federal funds rate is expected to rise only gradually.²³⁶

184. The FOMC minutes cited by Joint Complainants and Staff were prepared and published after the close of the study period. However, because the pronouncements cited by Joint Complainants and Staff echo those made in FOMC minutes published during the study period,²³⁷ the participants' interpretations of the minutes warrant an answer.

185. A closer look at these minutes shows that they are likely to reinforce investors' expectations that interest rates will rise. The minutes are consistent with the Federal Reserve's announcement in the September 17, 2014 Press Release that the FOMC would raise its target range for the federal funds rate when economic conditions and the economic outlook warrant[ed] a less accommodative monetary policy²³⁸ The

²³² See Tr. 434:1-9.

²³³ Exh. MTO-1 at 23:8-14.

²³⁴ Joint Complainants Initial Brief at 49-50; Staff Initial Brief at 55-69.

²³⁵ Joint Complainants Initial Brief at 48-49; Staff Initial Brief at 57.

²³⁶ Joint Complainants Initial Brief at 48-49.

²³⁷ Compare Exh. S-15 at 10, with Exh. S-10 at 20; Exh. S-12 at 11.

²³⁸ Exh. OMS-18 at 1.

statement that raising the federal-funds target will depend on the economy's progress toward full employment and 2 percent inflation simply define those economic conditions.

186. Accordingly, the Federal Reserve has made it clear from the start that the commencement of normalization will depend on the progress of the economy. The economy could dictate this change at any time. The minutes of the June 2015 FOMC meeting reported that most FOMC members saw September 2015 as the "most likely time for the first increase in the target range for the federal funds rate."²³⁹ However, an attachment to the minutes stated that the outlook for the "federal funds rate is subject to considerable uncertainty."²⁴⁰ Not surprisingly, the FOMC has said that it "would continue making decisions about the appropriate target range for the federal funds rate on a meeting-by-meeting basis."²⁴¹

187. The minutes make clear that the Federal Reserve is determining whether to commence normalization on a "meeting-by-meeting basis." When the Federal Reserve will act depends on the progress of the economy, and as the Federal Reserve makes clear, that is the least certain of guides. Any investor reading these FOMC minutes would have to know that normalization could start any month.

188. Joint Complainants and Staff cite additional publicly-available documents that they contend support their position: a February 2015 statement by Mr. Mather, stating that interest rates will rise "gradually" and that the "ultimate destination of equilibrium rates is going to be much lower than it has been at any other time in the past several decades";²⁴² and an August 16, 2015 article in Bloomberg Business alleging that JPMorgan Chase has concluded that if the Federal Reserve ceases to replace its maturing Treasury-bond portfolio over the next 10 years, the yield on 10-year Treasury bonds will increase by only 30 basis points.²⁴³

²³⁹ Exh. S-12 at 5.

²⁴⁰ *Id.* at 25.

²⁴¹ *Id.* at 9.

²⁴² Joint Complainants Initial Brief at 48 and Staff Initial Brief at 56 (both citing Exh. S-8 at 3).

²⁴³ Joint Complainants Initial Brief at 48 (citing Exh. OMS-23 at 1); Staff Initial Brief at 57 (citing Exh. OMS-23 at 2).

189. The Bloomberg article, having been published well after June 30, 2015, would have had no impact on investor expectations during that the study period. Mr. Mather's forecast would not appear to carry the weight of those made by Value Line, IHS, EIA and Blue Chip. In any event, his forecast differs from these other forecasts only in degree. Accordingly, Staff's evidence does not dictate a different finding regarding this issue.²⁴⁴

190. Joint Complainants also cite a Wall Street Journal article published on August 16, 2015.²⁴⁵ As that article was published well after June 30, 2015, it could not have affected investor expectations during the test period.²⁴⁶

191. Staff argues that if investors truly believed that interest rates were going to rise, such investors would sell long-term securities and buy short-term securities, regardless of their yield, to avoid capital loss.²⁴⁷ Joint Customer Intervenors make a similar argument regarding an increase in dividend yields of utility stocks:²⁴⁸ The fact that "hot money" investors remain invested in long-term bonds and in utility stocks can only mean that

²⁴⁴ Staff also offers its own theories as to why interest rates should not rise in the immediate future. One argument is based on its unsupported assertion, discussed *supra*, that the Federal Reserve has minimal control over long-term rates. The other is an argument that low inflation should keep interest rates low. See Staff Initial Brief at 59-60. Staff, which did not attempt to make this argument through its own expert witness, attempts to develop a position through statements elicited from Dr. Avera and Ms. Lapson. A comparison of the relevant text and footnotes shows that the elicited statements do not support Staff's argument. The larger point is that neither of the arguments discussed in this footnote foregoing tells us anything about investor expectations.

²⁴⁵ Joint Complainants Initial Brief at 50 (citing Exh. OMS-22 at 2).

²⁴⁶ Joint Complainants also assert that investors expect interest rates to increase only gradually, whether as a result of Federal Reserve action or otherwise. Joint Complainants Reply Brief at 33. Joint Complainants's sole citation in support of this claim is Exh. S-7, a one-page graph prepared by Moody's that shows Baa Bond rates falling through July 2015. The exhibit provides no support for Joint Complainants's assertion.

²⁴⁷ Staff Reply Brief at 52-53.

²⁴⁸ Joint Customer Intervenors Initial Brief at 30.

these investors believe that a rising interest rate scenario is not imminent, that it will proceed slowly once it starts, or that any rise will not be material.²⁴⁹

192. Ms. Lapson testified that investors believe that the Federal Reserve's continuation of its policies will suppress volatility in the markets and that as long as market volatility is suppressed they will be able to keep on going without as much of a risk of a loss on the long-term assets they hold.²⁵⁰ However, she believes once normalization occurs, the situation [will] rapidly tip²⁵¹

193. Moreover, the record makes clear that investors have no way of knowing exactly when normalization will begin. FOMC minutes state that the FOMC is considering normalization on a meeting-by-meeting basis and will commence normalization when economic conditions warrant such action.²⁵² This necessarily vague guidance signals to investors that if they invest in short-term securities pending normalization, they cannot know for how long a period they will have to forego receipt of any meaningful income from their investments. Thus, exiting from income-producing investments in anticipation of normalization is not necessarily an acceptable course of action for many investors. As Ms. Lapson contends, these investors have no place else to go.²⁵³

194. Ms. Lapson clearly agrees with Staff and Joint Customer Intervenors that under ordinary conditions no rational investor would retain securities that it believed were likely to decline in value. That is the basis for her belief that many investors will quickly sell off their long-term debt and their utility stocks once the Federal Reserve allows short-term rates to rise to an acceptable level.

195. OMS asserts that the MISO TOs acknowledge there are differences in investors' views about what capital market conditions will be in the future.²⁵⁴ OMS cites two alleged admissions by Dr. Avera. The first is that there is no consensus that interest

²⁴⁹ Staff Reply Brief at 53.

²⁵⁰ Tr. 424:13-18.

²⁵¹ Tr. 436:9-10.

²⁵² Exh. S-12 at 9.

²⁵³ Tr. 433:18-19.

²⁵⁴ OMS Initial Brief at 21.

rates are going to rise.²⁵⁵ The second is that many financial services are counseling different actions to investors based on these services' differing predictions of what the Federal Reserve will do.²⁵⁶

196. As to the first alleged admission, the assertion that there is no consensus among investors that interest rates will rise comes from Mr. Keyton, not Dr. Avera.²⁵⁷ As to the second alleged admission, Dr. Avera did acknowledge that "there are many voices counseling different actions" regarding what the Federal Reserve may do and what consequences such actions may have on capital markets.²⁵⁸ However, immediately prior to that statement, he explained that "most investors look to respected forecasters like the one this Commission uses for their GDP forecast which I cite in [Exhibit] MTO-23."²⁵⁹ He was speaking of IHS and EIA, which have predicted that the yield on AA utility bonds will rise significantly during the period 2016-2020. IHS predicts a rise to 5.98 percent; EIA predicts a rise to 6.17 percent.²⁶⁰

197. Joint Complainants and Joint Consumer Advocates dispute Ms. Lapson's contention that the Federal Reserve's normalization of monetary policies will result in an immediate sell-off of long-term debt and electric utility stocks. Joint Complainants point to the Federal Reserve's September 17, 2014 press release which states that the Federal Reserve does not intend to reduce its MBS holdings and will only reduce the Treasury-bond component of its portfolio in a gradual and predictable manner.²⁶¹ Joint Consumer Advocates cite Ms. Lapson's acknowledgement on cross-examination that the FOMC has

²⁵⁵ *Id.* at 21 n.93 (quoting Tr. 706:23-25).

²⁵⁶ *Id.* (citing Tr. 509:23-25).

²⁵⁷ *See* Tr. 669:2, 706:23-25.

²⁵⁸ Tr. 509:23-24.

²⁵⁹ Tr. 509:15-17.

²⁶⁰ Exh. MTO-23 at 104, Table 1.

²⁶¹ Joint Complainants Initial Brief at 47 (citing Exh. OMS-18); Joint Consumer Advocates Initial Brief at 75.

indicated that even when normalization begins, the FOMC is likely to keep the federal-funds target rate below what the FOMC believes normal for some time.²⁶²

198. The FOMC's announced plan to reduce only a part of its portfolio and that only gradually may not reassure investors that the effect on interest rates and dividend yields will be gradual. The FOMC has also announced that the first step of normalization will be to raise its federal-funds target rate,²⁶³ thus allowing short-term rates to rise. Ms. Lapson has testified that investors seeking yield are holding long-term debt securities and dividend-paying stocks that they would not hold if they had a viable short-term alternative.²⁶⁴ It follows that if a rise in short-term rates provides these investors such an alternative they can be expected to seize it quickly, regardless of the pace at which the Federal Reserve disposes of its securities.

199. Thus, this record indicates that the Federal Reserve's calibration of its increase in the federal-funds target rate will determine when such investors find that the resulting increase in short-term rates constitutes such an alternative. Such calibration may delay the rate impact of normalization, but will not prevent the suddenness of that impact once short-term rates start to provide an acceptable yield.

200. Accordingly, the Federal Reserve's announcement that it intends to normalize gradually does not undermine Ms. Lapson's contention that a number of investors stand ready to quickly sell off long-term debt securities and electric utility shares once short-term rates permit. Dr. Yellen's prediction that normalization could be accompanied by a sharp increase in long-term rates²⁶⁵ has put the investment community on notice that the change in the financial landscape could be sudden.

(3) Distortions of DCF Inputs

201. The Non-Utility Participants make arguments that, in essence, amount to the following: The Midpoint produced by the DCF analysis in this case is the proper measure of the MISO TOs' COE, regardless of whether anomalous market-capital conditions exist. The arguments are detailed below.

²⁶² Joint Consumer Advocates Initial Brief at 75 (citing Tr. 398-400); *see* Tr. 400:10-15.

²⁶³ Exh. OMS-18 at 1.

²⁶⁴ Tr. 423:9-424:2, 424:19-23, 433:6-16.

²⁶⁵ Reuters Article quoted in Exh. MTO-39 at 18:23-25.

202. Staff contends that the DCF model is designed to estimate the required cost of equity existing at the *present time, i.e.,* “an instant period of time or a certain moment in time, as measured by the six-month DCF study period”²⁶⁶ Likewise, RPGI explains that the DCF methodology assumes that all market-capital conditions are known, understood and taken into account by investors in formulating their forward-looking expectations. The methodology further assumes that the current market price of stocks and bonds represents investors’ expectations for the future, including changes in interest rates.²⁶⁷

203. Joint Complainants contend that a sophisticated financial model like the DCF methodology is designed to incorporate the impact of public and long-term public policies to produce reliable results.²⁶⁸ Joint Complainants quote a recent initial decision addressing this point:

“Investors necessarily act with knowledge of [such policies] and the DCF methodology reflects this knowledge. Investor expectations are already reflected in stock prices and dividend growth rates applied in the DCF analysis.”²⁶⁹

Thus, contend Joint Complainants, the current market conditions are already reflected in the DCF and have no impact on the MISO TOs' capital attraction capabilities.

204. Staff asserts that if equity costs do rise in the future, the DCF inputs that are generated at that time will reflect the COE that exists at that future time. If, at that time, the MISO TOs believe that their Base ROE is too low to attract investment, they may file to increase that Base ROE.²⁷⁰

205. In Opinion No. 531-B, the Commission rejected an argument substantially similar to the foregoing contentions. The Commission stated:

²⁶⁶ Staff Reply Brief at 51 (emphasis in original).

²⁶⁷ RPGI Initial Brief at 38.

²⁶⁸ Joint Complainants Initial Brief at 51.

²⁶⁹ *Id.* (quoting *Entergy Ark., Inc.*, 151 FERC ¶ 63,008 at P 89 (2015)).

²⁷⁰ Staff Reply Brief at 52.

We í reject EMCOS's argument that, even if the capital market conditions reflected in the record are anomalous, adjusting the NETOs' ROE based on an economic anomaly ignores the *Hope* and *Bluefield* requirement that a utility's ROE must reflect current market conditions. EMCOS specifically argue that whether capital market conditions in the record are anomalous from a historical perspective is irrelevant to the determination of a just and reasonable ROE, because the ROE must reflect the capital market conditions under which the NETOs operate, even if those conditions are historically anomalous. We disagree. The EMCOS's argument assumes that DCF analyses are immune to ever being skewed by economic anomalies. This assumption is unrealistic, as all methods of estimating the cost of equity are susceptible to error when the assumptions underlying them are anomalousí . We further reject EMCOS's argument that this analysis should be affected by the fact that the NETOs can subsequently request a rate increase under FPA section 205. The NETOs' ability to subsequently request a rate increase if economic conditions change does not excuse the Commission from establishing a ROE under FPA section 206 that meets the requirements of *Hope* and *Bluefield*.²⁷¹

EMCOS argued that a Base ROE based on a DCF Midpoint that reflected current market-capital conditions met the requirements of *Hope* and *Bluefield*. Here the participants make the substantially similar argument that such a Base ROE accurately reflects the MISO TOsøCOE. Also, Staffø's argument that the MISO TOs can address subsequent changes in market-capital conditions by seeking a rate increase echoes an identical argument made by the EMCOS with respect to the NETOs. The Commissionø's rejection of the foregoing EMCOS arguments dictates rejection of their counterparts here.

206. The record in this proceeding supports such a conclusion independent of what the Commission decided in Opinion No. 531-B. However, the record in this proceeding provides a basis for such a conclusion.

207. As discussed, *Hope* and *Bluefield* require that a utilityø's Base ROE: (1) provide returns commensurate with those provided by companies with business operations that pose risks similar to the operations of the utility; and (2) assure the utilityø's financial integrity so as to attract capital and maintain credit-worthiness.²⁷² By referring to a Base ROE that assures financial integrity sufficient to attract capital and maintain credit-

²⁷¹ Opinion No. 531-B at P 50.

²⁷² 320 U.S. at 603; 262 U.S. at 693.

worthiness, the second requirement of *Hope* assumes that to attract capital, a Base ROE would also have to assure financial integrity and credit-worthiness. When both decisions refer to the attraction of capital, they are implicitly referring to capital contributed by long-term investors; short-term investors will be much less interested in the utility's financial integrity and credit-worthiness. Thus, the second requirement of *Hope* can be restated as follows: To be just and reasonable, a Base ROE must be sufficient to attract long-term investors that demand that the utility maintain financial integrity and credit-worthiness.

208. In *Boston Edison*, Judge Breyer did not cite *Hope* or *Bluefield* in his discussion of the Commission's DCF methodology. However, he indicated that the DCF methodology seeks to find a Base ROE that meets the first requirement of those two cases—one that provides a return commensurate with those provided by companies with business operations that pose similar risks. He then assumed that such an ROE would satisfy the second requirement—that it would enable the utility to attract long-term investors that demand that the utility maintain the financial integrity and credit-worthiness.²⁷³

209. This linkage is only plausible if one assumes, as the DCF model assumes, that the prices of the proxy-group utility shares are supported by such long-term investors. The DCF model assumes that these investors seek a gradually increasing flow of dividends and demand that the utility maintain the financial integrity and credit-worthiness necessary to support that flow. The fact that such investors are purchasing and holding a proxy-group company's shares demonstrates that the utility's Total Return meets their demands and thus satisfies the requirements of *Hope* and *Bluefield*. Thus, a Base ROE that allows a utility to collect a return comparable to the proxy-group utilities will also meet those requirements.

210. However, this record contains evidence that challenges the foregoing assumptions. This evidence shows that anomalous market-capital conditions have led many investors to purchase utility shares solely to obtain yield, pending normalization of long-term and short-term interest rates.²⁷⁴ The fact that these investors are supporting the proxy-group utilities' stock prices provides no assurances that these utilities' Total Returns are sufficient to satisfy the requirements of the long-term investor.

²⁷³ 885 F.2d at 965.

²⁷⁴ Exh. MTO-16 at 22:6-12; Exh. S-3 at 12; Reuters Article quoted in Exh. MTO-39 at 18:6-18; Tr. 421:25-422:15, 423:24-424:2, 424:19-23, 425:3-21, 433:6-24, 438:7-13.

211. Thus, the proxy-group utilities' Total Returns may not reflect the utilities' COEs, and may not satisfy the requirements of *Hope* and *Bluefield*. It follows that a Base ROE no greater than the Midpoint of these suspect Total Returns also may not satisfy the requirements of *Hope* and *Bluefield*.

212. A number of the Non-Utility Participants make arguments that equate the COE with the cost of raising capital by issuing stock. Staff and Joint Customer Intervenors argue that a market-driven decline in interest rates has lowered the COEs of utilities. Both contend that when interest rates decrease, the COE decreases.²⁷⁵ Staff explains that within limits, established companies, including utilities, have a choice between debt and equity to meet their financing needs. If the cost of one method of financing becomes too steep, demand will move to its alternative, whether it occurs in a generally rising capital market, a falling market, or a stable market. Staff contends that underlying basic laws of supply and demand operate in tandem to strengthen the positive correlation between the cost of debt and the COE, whereas other factors, such as investor perceptions of relative risk, serve only to attenuate it.²⁷⁶ Given that the level of interest rates is currently low, says Staff, it logically follows that the COE is likewise low.²⁷⁷

213. Joint Customer Intervenors contend that the COE is based on "opportunity costs," which are low.²⁷⁸ Joint Customer Intervenors contends that even the MISO TOs acknowledge the lack of "viable short-term alternatives" for investors.²⁷⁹ OMS argues that during the test period, investors have been eager to purchase utility stocks for the low returns indicated by the IBES-based DCF, and indeed would be satisfied by a bond-like

²⁷⁵ Staff Reply Brief at 45-46; Joint Customer Intervenors Initial Brief at 29-30 (quoting Exh. JCI-4 at 30:28-29).

²⁷⁶ Staff Reply Brief at 46.

²⁷⁷ Staff Initial Brief at 51.

²⁷⁸ Joint Customer Intervenors Initial Brief at 29-30. Investopedia defines "opportunity cost" as "[t]he difference in return between a chosen investment and one that is necessarily passed up." See Investopedia, *Opportunity Cost*, www.investopedia.com/terms/o/opportunitycost.asp.

²⁷⁹ Joint Customer Intervenors Reply Brief at 30 (quoting MISO TOs Initial Brief at 70).

return.²⁸⁰ RPGI contends that the so-called "anomalous" market conditions described by Ms. Lapson actually have resulted in an influx of investment into electric-utility stocks.²⁸¹

214. Continuing this refrain, Staff asserts that high market prices for a utility's stock mean that the utility can float new equity and receive a larger amount of cash than it would receive if the stock price were higher.²⁸² Thus, high utility stock prices make it easier for a utility to fund its operations with new equity. Joint Complainants contend that the record contains evidence that a reduced Base ROE to reflect prevailing capital market conditions will provide the MISO TOs with ready access to reasonably priced capital.²⁸³

215. The record supports the contention of Staff and Joint Customer Intervenors that as interest rates fall, dividend yields fall. The record also supports the contentions that (as a result of these falling dividend yields) the cost to electric utilities of raising capital by issuing stock is also low.

216. However, this does not mean that the COE is low. The Commission defines the COE as the "rate of return required by investors to invest in a company"²⁸⁴ As discussed, there is evidence in this case that a large number of investors are investing in stocks solely for yield.²⁸⁵ Thus, the Total Returns of those companies are not necessarily equivalent to their COEs.

217. Joint Customer Intervenors contend that however one measures the MISO TOs' COE, the Federal Reserve's actions have not distorted its dividend-yield component. Rather, the dividend yields contained in the DCF analysis applicable to this case are

²⁸⁰ OMS Reply Brief at 24.

²⁸¹ RPGI Reply Brief at 26.

²⁸² Staff Initial Brief at 62.

²⁸³ Joint Complainants Initial Brief at 45 (citing Exh. JC-9 at 33).

²⁸⁴ Opinion No. 531 at P 14.

²⁸⁵ Exh. MTO-16 at 22:6-12; Exh. S-3 at 12; Reuters Article quoted in Exh. MTO-39 at 18:6-18; Tr. 421:25-422:15, 423:24-424:2, 424:19-23, 425:3-21, 433:6-24, 438:7-13.

direct market evidence of investors' requirements.²⁸⁶ Because dividend yields reflect investors' requirements, the fact that investors choose to invest their money based on their expectations is taken into account through the DCF equation.²⁸⁷ As the DCF method is based on the expectations of investors, its results reflect the reality of the capital markets and the actual market cost of equity capital.

218. As discussed, this record contains evidence investor expectations, *i.e.*, expectations of dividend growth, may not be guiding the investment decisions of many investors. Rather, such investors may be purchasing utility stocks solely for their current yield.²⁸⁸ Thus, the proxy-group stock prices that underlay the dividend yields of those stocks may not reflect long-term investors' satisfaction with the stocks' Total Returns, and may be distorting the dividend-yield component of the DCF formula.

c. Determination

219. The MISO TOs have established that anomalous market-capital conditions existed during the study period and that these conditions make it more difficult to determine whether the Midpoint will produce a Base ROE that appropriately reflects the MISO TOs' risks.

220. The Oxford Dictionary defines "anomalous" as "deviating from what is standard, normal or expected."²⁸⁹ Market-conditions that are (1) unprecedented and (2) unsustainable meet this definition. Current market-capital conditions meet this standard.

221. The following is undisputed. Since 2008, the Federal Reserve has increased its portfolio of long-term debt securities by roughly 600 percent to \$4.25 trillion. The portfolio consists primarily of long-term debt. The Federal Reserve has maintained a federal-funds target rate ranging from 0.0 percent to 0.25 percent, which has served to keep short-term interest rates in the same range. During the study period, the Federal

²⁸⁶ Joint Customer Intervenors Initial Brief at 30 (quoting Exhibit JCI-1 at 29:18-19) (internal quotations omitted).

²⁸⁷ *Id.* at 30 (citation omitted).

²⁸⁸ Exh. MTO-16 at 22:6-12; Exh. S-3 at 12; Reuters Article quoted in Exh. MTO-39 at 18:6-18; Tr. 421:25-422:15, 423:24-424:2, 424:19-23, 425:3-21, 433:6-24, 438:7-13.

²⁸⁹ Oxford American English Dictionary, Anomalous, *available at* www.oxforddictionaries.com/us/definition/american_english/anomalous.

Reserve has maintained its portfolio by reinvesting the proceeds of matured debt securities and by maintaining the low federal-funds rate.²⁹⁰ Taken together, the foregoing Federal Reserve actions are unprecedented.

222. The MISO TOs have established the following facts. The Federal Reserve's unprecedented actions have raised the prices and lowered the yields of long-term bonds and dividend-paying stocks, including electric-utility stocks, significantly.²⁹¹ During a period encompassing the study period, many investors have expected that the Federal Reserve will normalize current market-capital conditions, and that interest rates will rise significantly over the next few years.²⁹²

223. The foregoing evidence establishes that anomalous market-capital conditions existed during the study period. First, the depressed yields are unprecedented, because they are primarily the result, not of market forces, but of the Federal Reserve's unprecedented purchases of long-term debt and suppression of short-term rates. It is the artificiality of the current levels of interest rates and dividend yields that make them unique. Second, the evidence establishes a strong likelihood that market-capital conditions are temporary, because they are unsustainable. Investors expect the Federal Reserve to normalize and for interest rates to rise. Either these events will occur, or investors will cease to believe that they will.

224. Additional credible evidence supports the conclusion not only that market-capital conditions during the study period were anomalous but also that they make it more difficult to determine whether the Midpoint reflects the MISO TOs' risks. This evidence deals with the impact of the Federal Reserve's actions on investor behavior.

225. By essentially stating in Opinion No. 531 that a utility's Base ROE should reflect the company's risks,²⁹³ the Commission implicitly assumed that under normal conditions,

²⁹⁰ Exh. MTO-1 at 22:9-23:4; Exh. MTO-16 at 22:6-23:13; Exh. MTO-39 at 20:10-21:11.

²⁹¹ Exh. JCA-1 at 26:16-18; Exh. MTO-29 at 3; Exh. S-1 at 107:18-108:10; Exh. S-3 at 12; Exh. S-5 at 1, 2, 8; Exh. S-8 at 3; Reuters Article quoted in Exh. MTO-39 at 18:6-18; Tr. 421:25-422:15, 423:23-424:11, 424:19-23.

²⁹² Exh. MTO-1 at 23, Figure 2; Exh. MTO-16 at 24:9-28; Exh. MTO-23 at 104, Table 1; Exh. S-12 at 9. Reuters Article quoted in Exh. MTO-39 at 18:23-25; Tr. 434:2-9.

²⁹³ Opinion No. 531 at P 144 (citation omitted).

a rational investor will base the purchase of a security on a balancing of the risk of the investment against the potential reward. Thus, prior to purchasing a bond, the investor will consider whether the bond's yield justifies the twin risks that the lender may default on its obligation or that inflation may erode the value of the bond's yield. As discussed, the DCF model assumes that prior to purchasing a utility stock the investor will determine whether the present value of the anticipated flow of future dividends, discounted for risk, justifies the stock price.²⁹⁴ The MISO TOs have provided credible evidence supporting the conclusion that the Federal Reserve's actions have forced investors, including purchasers of Baa Bonds and of electric-utility stocks, to disregard these calculations.

226. Specifically, the evidence shows that the Federal Reserve's actions have depressed the yields of high-quality, long-term debt securities and of short-term debt securities to levels that investors that previously purchased those securities find unacceptable. Thus, investors that seek yield must obtain it by buying riskier securities— including Baa Bonds and electric-utility stocks— that they might not otherwise buy at prices they might otherwise reject.²⁹⁵ Such investors are not basing their purchases of electric-utility stocks on the present value of future dividend yields, discounted for risk, but solely on the current yields of those stocks.²⁹⁶

227. The evidence further shows that to obtain yield, investors are purchasing and holding securities in spite of these investors' expectations that market-capital conditions will change in a way that will inevitably lower the prices of bonds and of dividend-paying stocks,²⁹⁷ and in spite of a published statement by Dr. Yellen that the impact of this change could be sudden and pronounced.²⁹⁸ The evidence further indicates that an appreciable amount of such securities are being held by investors that stand poised to sell these securities once they sense that changes have commenced.²⁹⁹

²⁹⁴ *See id.* P 17.

²⁹⁵ Tr. 421:25-422:15, 423:24, 424:2, 424:19-23. *See* Exh. S-3 at 12,

²⁹⁶ *See* Reuters Article quoted in Exh. MTO-39 at 18:6-18; Tr. 438:7-13.

²⁹⁷ Tr. 314:22-315:3, 433:6-24. *See* Exhs. MTO-1 at 23 (Figure 2), MTO-16 at 24:9-28, MTO-23 at 104, Table 1, S-12 at 9; Reuters Article quoted in Exh. MTO-39 at 18:23-25; Tr. 434:2-9.

²⁹⁸ Reuters Article quoted in Exh. MTO-39 at 18:23-25.

²⁹⁹ Tr. 425:3-21, 437:10-23.

228. The foregoing evidence calls into question the reliability of the DCF analysis in this proceeding. The evidence indicates that the prices of electric-utility stocks and Baa Bonds do not reflect the risks that investment in these securities entails. The evidence also raises doubts as to whether the proxy-group stock prices that underlay the dividend yields of those stocks reflect long-term investors' satisfaction with the stocks' Total Returns. The evidence further raises questions as to whether the Baa Bond yield that marks the starting point for the 100 basis-point screen properly is a yield that would attract long-term investors, given the risks of investing in such bonds. The evidence thus raises the ultimate question of whether the Midpoint properly reflects the risks of investing in the proxy-group companies.

229. The record shows that anomalous market-capital conditions existed during the study period and that these conditions make it harder to determine whether a Base ROE equivalent to the Midpoint accurately reflects the MISO TOs' risks. Accordingly, prior to determining the appropriate Base ROE for the MISO TOs, it will be necessary to examine alternative pricing studies and ROEs recently authorized by state commissions.

3. Data Provided by Alternative Benchmarks

a. Alternative Pricing Models

230. In Opinion No. 531, the Commission considered three alternative pricing methodologies to provide guidance as to a just and reasonable Base ROE for the NETOs: a risk premium analysis, a Capital Asset Pricing Model (CAPM), and an expected earnings analysis. In considering those alternative methodologies, the Commission did not depart from its use of the DCF methodology. Instead, it used those studies to inform the just and reasonable placement of the Base ROE within the zone of reasonableness established by the DCF methodology.

231. The MISO TOs offer these alternative pricing models, plus a number of others that were either rejected by the Commission or not before the Commission in Opinion No. 531.

(1) Risk Premium Analysis

232. In Opinion No. 531, the Commission explained that the risk premium analysis is based on the simple idea that since investors in stocks take greater risk than investors in bonds, the former expect to earn a return on a stock investment that reflects a premium over and above the return they expect to earn on a bond investment.³⁰⁰ The Commission

³⁰⁰ Opinion No. 531 at P 147 (citing Roger A. Morin, *New Regulatory Finance* 108, 110 (Public Utilities Reports, Inc. 2006) (*New Regulatory Finance*)).

found that investorsørequired risk premiums expand as interest rates fall and shrink as interest rates rise. The Commission reasoned that the link between interest rates and risk premiums provides a helpful indicator of how investorsørequired returns on equity have been impacted by the interest-rate environment.³⁰¹

(a) Dr. Avera's Model

233. The methodology that Dr. Avera uses to the fashion the risk-premium analysis in this case breaks down into three steps. First, he computes the average risk premium for each year over the period 2006-2014. He calculates these average annual risk premiums by subtracting the average bond yield for the year³⁰² from the average of the Base ROEs authorized by the Commission during the year. He then calculates an average risk premium of 4.77 percent for the entire period by adding all of the average annual risk premiums and dividing that number by the number of years.³⁰³

234. Second, he adjusts that risk premium to reflect the alleged tendency of risk premiums to rise as interest rates fall. Dr. Avera subtracts the average Baa Bond yield during his 6-month DCF study period, 4.55 percent, from the average bond yield over the risk-premium study period, 5.90 percent, which produces a difference of 1.35 percent.³⁰⁴ This difference reflects the extent to which current bond yields have fallen below the 2006-2014 average. Dr. Avera testified that he used a standard regression model, which is used in Microsoft Excel to determine the extent to which risk premiums rise for every 1.0 percent decline in bond yields, and which has a number of internal checks.³⁰⁵ The program indicates that risk premiums rise by 0.7707 percent for every 1.0 percent drop in bond yields.³⁰⁶ Accordingly, Dr. Avera multiplies the 1.35 percent drop in bond yields by 0.7707 percent to produce a risk premium adjustment of 1.04 percent. Dr. Avera then

³⁰¹ *Id.*

³⁰² Dr. Avera uses the average yield of bonds rated BBB by Standard and Poorø. Exh. MTO-29 at 3. He treats those yields as equivalent to yields of Baa Bonds. *See id.* at 1.

³⁰³ Exh. MTO-29 at 3.

³⁰⁴ *Id.*

³⁰⁵ Tr. 642:12-13.

³⁰⁶ Exh. MTO-29 at 6.

adds that percentage to the previously calculated average risk premium for the nine-year study period of 4.77 percent to produce an adjusted risk premium of 5.81 percent.³⁰⁷

235. Third, Dr. Avera adds the adjusted risk premium of 5.81 percent to the average bond yield during his study period, 4.55 percent, to produce a Base ROE of 10.36 percent.³⁰⁸ This is substantially higher than the 9.29 percent Midpoint produced by this Initial Decision's DCF analysis, and slightly higher than the 10.32 percent Upper Midpoint produced by that analysis.

(b) The Non-Utility Participants' Critiques and Alternative Models

236. Mr. Gorman, testifying on behalf of the Joint Complainants, argues that Dr. Avera's risk premium of 10.36 percent should be rejected, because the majority of the Base ROEs listed by Dr. Avera as authorized in 2013 and 2014 were lower than that risk premium. He points out that three of the five Base ROEs authorized for 2014 range from 9.55 percent to 9.72 percent, and that five out of eight of the authorized for 2013 were 9.80 percent or lower.³⁰⁹

237. Mr. Gorman offers no basis for excluding the higher Base ROEs from his risk-premium analysis, and absent explanation, the calculation proves nothing. A calculation that arbitrarily excludes the higher Base ROEs will result in a lower risk premium, just as a calculation that arbitrarily excludes the lower Base ROEs will result in a higher risk premium. The Commission did not exclude the higher Base ROEs from Dr. Avera's risk-premium calculation in Opinion No. 531, and Mr. Gorman provides no reason for the Commission to do so here.

238. Mr. Gorman also provides his own alternative risk-premium analysis in his rebuttal testimony. Mr. Gorman calculates two sets of risk premiums based on the period 1986-2015. One set is based on the spread between FERC-authorized Base ROEs for electric utilities and Treasury bonds; the other set, on the spread between those Base ROEs and "A" rated electric utility bonds.³¹⁰ Mr. Gorman states his risk-premium

³⁰⁷ *Id.* at 1.

³⁰⁸ *Id.*

³⁰⁹ Exh. JC-9 at 28:21-29:14.

³¹⁰ *Id.* at 47:12-48:9.

analyses dictate a Base ROE within the range of 7.53 percent to 10.57 percent.³¹¹ The midpoint of that range is 9.05 percent.

239. Mr. Gorman provides no reason to depart from Dr. Averø's methodology. Although Mr. Gorman uses a methodology appreciably different from the methodology approved by the Commission in Opinion No. 531, he does not explain what makes his methodology superior to the Commission-approved approach. He also makes no adjustment to account for the inverse relationship between risk premiums and interest rates.

240. Mr. Hill also disagrees with Dr. Averø's risk-premium analysis. Initially, Mr. Hill, questions the validity of any risk-premium analysis. He contends that such analyses are premised on the proposition that the average results and trends that investors have experienced in the past determine their expectations for the future, and quotes a 1985 magazine article questioning this premise. He also quotes a 1993 treatise that lists the many difficult questions that must be answered prior to implementing a risk premium study.³¹²

241. The Commission accepted the use of a risk premium study as a means of checking the results of the DCF analysis, and Mr. Hill's arguments provide no reason to depart from using the risk-premium study in this limited manner. Arguments against the reliability of the risk-premium approach might support precluding its use in lieu of the DCF, but do not demonstrate that it should not be used as a check on the DCF.

242. Mr. Hill argues that the Base ROEs that constitute a part of the risk-premium study are too high, and, therefore, compromise the study's reliability. Mr. Hill contends that electric utility stocks' market prices currently exceed the stocks' book values. He concludes that the principal cause of investors paying more for these stocks than their book values must be the generous Base ROEs permitted by the Commission. However, he concludes, a Base ROE that causes investors to pay more than a stock's book value must be too high.³¹³

243. This argument has been generally rejected and is particularly inappropriate in this case. Dr. Roger Morin, quoted by most of the participants as a pre-eminent authority rejects it as a general proposition, stating:

³¹¹ Exh. JC-22 at 17:17-19.

³¹² See Exh. JCA-11 at 36:16-37:35.

³¹³ *Id.* at 39:4-8.

The stock price is set by the market, not by regulators. The M/B [market price/book value] ratio is the end result of regulation, and not its starting point. The view that regulation should set an allowed rate of return so as to produce an M/B of 1.0, presumes that investors are irrational. They commit capital to a utility with an M/B in excess of 1.0, knowing full well that they will be inflicted a capital loss by regulators. This is certainly not a realistic or accurate view of regulation.³¹⁴

In addition, Ms. Lapson has testified convincingly that investors are buying utility stocks as a short-term vehicle, and not because they view the stocks' earned Base ROEs to be attractive.³¹⁵

244. Mr. Hill also challenges the proposition that risk premiums rise as interest rates fall. Mr. Hill contends that this inverse correlation is simply a function of returns allowed by regulators moving more slowly than bond yields, due to regulatory caution.³¹⁶ He also cites a 1999 poll of corporate officials conducted by two professors at Duke, regarding the officials' expectations as to risk premiums, noting that the officials projected lower risk premiums than Dr. Avera has calculated. In addition, these professors concluded that risk premiums varied directly, rather than inversely, with interest rates.³¹⁷

245. As discussed, in Opinion No. 531, the Commission endorsed the concept of an inverse correlation between risk premiums and bond yields.³¹⁸ The numerous studies that Dr. Avera cites supporting inverse correlation, published during the period 1985-2005,³¹⁹ are entitled to more weight than Mr. Hill's opinion and the 1999 survey that he cites. Indeed, the disparity between the risk premiums forecast by corporate officials and those

³¹⁴ Roger A. Morin, *New Regulatory Finance* at 376, quoted in Exh. MTO-1 at 65:24-66:6.

³¹⁵ Tr. 438:7-8; *see* Exh. MTO-16 at 22:6-12; Exh. S-3 at 12; Reuters Article quoted in Exh. MTO-39 at 18:6-18; Tr. 421:25-422:15, 423:24-424:2, 424:19-23, 425:3-21, 433:6-24, 438:9-13.

³¹⁶ Exh. JCA-11 at 40:11-22.

³¹⁷ *Id.* at 41:5-42:3.

³¹⁸ Opinion No. 531 at P 147.

³¹⁹ Exh. MTO-1 at 25:1-9 & n.29.

calculated by Dr. Avera is irrelevant because Dr. Avera's study begins six years after Mr. Hill's survey.

246. Mr. Hill argues that Dr. Avera compares Commission-authorized Base ROEs and average bond yields that reflect data from different periods. Mr. Hill contends that the gap in time between the existence of the data upon which the Commission relied in approving the Base ROEs and the bond yields in effect when the Base ROEs were authorized compromises the validity of a methodology that would subtract the bond yields from the Base ROEs.³²⁰

247. Mr. Solomon makes the related argument that the bond averages in Dr. Avera's risk-premium study should be contemporaneous with the six-month study periods that provided the factual basis for the Commission-authorized Base ROEs. Mr. Solomon asserts that it is impossible to determine that these time periods match.³²¹ He also contends that the fact that many of these Base ROEs resulted from settlements further undermines their reliability.³²²

248. The Commission rejected these arguments in Opinion No. 531-B at Paragraph 98. The Commission described the arguments as follows:

Petitioners allege that the NETOs' risk premium analysis is flawed because it ignored the fact that some of the decisions involved rates agreed to by settlement [and] ignored regulatory lag.³²³

249. The Commission first rejected petitioners' regulatory-lag argument, stating:

Given the varying duration of regulatory proceedings, it is difficult, if not impossible, to ensure precise contemporaneity between long-term bond yields and the cost of equity allowed by a regulator.³²⁴

³²⁰ Exh. JCA-11 at 38:22-39:3.

³²¹ Exh. JCI-4 at 40:1-5 & n.17.

³²² *Id.* at 40:5-13.

³²³ Opinion No. 531-B at P 98.

³²⁴ *Id.*

250. The Commission then rejected the argument that certain of the Base ROEs were invalid, because they resulted from settlements. Here, the Commission explained:

Similarly, whether the regulatory decision involved a settlement agreement or the application of a cost of equity that was calculated in the past *í* does not affect the reliability of a risk premium analysis. Risk premiums allowed by regulators *õ*are presumably based on the results of market-based methodologies presented to regulators in rate hearings and on the actions of objective unbiased investors in a competitive marketplace.ö This is no less true in the case of settlement agreements, as settling parties rely upon the same market-based methodologies in determining the rates they are willing to accept.³²⁵

251. Finally, the Commission emphasized that the imperfections of the NETOs' risk-premium analysis did not undermine its reliability, given the limited purpose for which it was offered:

In short, while the approach the NETOs used in their risk premium analysis, like any methodology for estimating the cost of equity, is not without inherent weaknesses, it is nonetheless an approach that investors routinely rely upon. We similarly find the NETOs' risk premium analysis sufficiently reliable *ô* not to set the ROE itself *ô* but rather to corroborate our decision to place the NETOs' ROE above the midpoint of the zone of reasonableness produced by the DCF analysis.³²⁶

252. Mr. Solomon argues that Dr. Avera used only 75 Commission-approved Base ROEs, half of which were authorized during 2008-2009 period that encompassed the great recession. Mr. Solomon indicates this sampling of Base ROEs is too small to be reliable. However, the risk-premium study presented by Dr. Avera in Docket No. EL11-66 and relied upon by the Commission Opinion No. 531, contained only 66 Base ROEs.³²⁷

³²⁵ *Id.* (quoting Roger A. Morin, *New Regulatory Finance* at 125).

³²⁶ *Id.*

³²⁷ *See* Opinion No. 531-B at P 97 n.203 (citing Exh. NET-704); Exh. NET-704, admitted May 1, 2013, Docket No. EL11-66-001.

253. Mr. Solomon also contends that the Commission has rejected versions of the risk-premium study similar to that used here by Dr. Avera.³²⁸ However, here Dr. Avera is offering his analysis only as a check to determine whether to use the Midpoint to determine the MISO TOsøBase ROE. As discussed, the Commission accepted a substantially similar risk-premium analysis for that purpose in Opinion No. 531.³²⁹

254. Mr. Solomon also challenges the coefficient that Dr. Avera uses to measure degree of inverse correlation between risk premiums and interest rates. Mr. Solomon contends that Dr. Avera's computer-based assumption that the risk premium increases by 0.7707 percent for every 1.0 percent drop in interest rates is demonstrably false. Mr. Solomon first offers his opinion that the converse of that assumption—that the cost of equity only declines by 0.2293 percent for every 1.0 percent decline in interest rates—is invalid on its face. He also applies the 0.7707 percent coefficient to the difference between Dr. Avera's average bond yield for 2014, 4.80 percent, and his average bond yield for his study period, 5.90 percent, to produce risk premium of 5.62 percent, which is 27 basis points higher than the actual 2014 risk premium of 5.35 percent. Mr. Solomon contends that this calculation proves that Dr. Avera's coefficient produces a result calculated to overstate the risk premium.³³⁰

255. The Commission accepted Dr. Avera's regression methodology in Opinion No. 531,³³¹ and Mr. Solomon provides no reason to do otherwise in this case. He does not attempt to explain or provide supporting citations for his assertion that application of Dr. Avera's coefficient to the bond yield differential for 2014 would result in a risk premium 27 basis points higher than the actual risk premium for that year. In any event, a calculation based on a single year seems inherently unreliable.

256. Another methodology, albeit a crude one, appears to provide a better check on the coefficient's validity. Dr. Avera's most recent risk premium study shows that from the peak year of 2008 to 2014, the average bond yield dropped from 7.25 percent to 4.80 percent, a decrease of 2.45 percent. During that same period, the average risk premium rose from 3.58 percent to 5.35 percent, an increase of 1.77 percent.³³² To determine what

³²⁸ Exh. JCI-4 at 41:12-14.

³²⁹ Opinion No. 531-B at PP 97, 98.

³³⁰ Exh. JCI-4 at 42:1-15.

³³¹ See Opinion No. 531-B at P 97, n.203, P 99. Compare Exh. NET-704 at 5, admitted May 1, 2013, Docket No. EL11-66-001, with MTO-29 at 6.

³³² See Exh. MTO-29 at 3.

percentage the risk premium rose for every 1.0 percent drop in bond yields during this period, one would divide the 1.77 percent increase in the risk premium by the 2.45 percent decrease in bond yields. The calculation shows the risk premium rose 0.7229 percent for every 1.0 percent drop in bond yields. That number varies from Dr. Avera's 0.7707 percent coefficient by only 0.0478 percent.

257. Dr. Avera also produces a risk premium analysis using bond yields projected for 2016-20.³³³ This Initial Decision rejects those studies. Projected yields are speculative, and, therefore, a less reliable basis for a study than historical yields.

(c) Determination

258. Dr. Avera's historical risk premium analysis is valid and supports awarding the MISO TOs a Base ROE above the Midpoint. In Opinion No. 531, the Commission accepted the methodology that Dr. Avera uses to fashion his risk-premium analysis in this case, including Dr. Avera's upward adjustment of that premium to reflect falling interest rates.³³⁴ In addition, Dr. Avera cites numerous authorities who support his contention that risk premiums demanded by investors rise as interest rates fall.³³⁵ The Non-Utility Participants' alternative models are rejected.

(2) Capital Asset Pricing Model

259. The MISO TOs also provide a CAPM to provide an implied cost of equity for each member of the proxy group. Mr. Gorman explains the rationale for and the formulation of the CAPM as follows:

The CAPM method of analysis is based upon the theory that the market-required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. The relationship between risk and return can be expressed mathematically as follows:

$$R_i = R_f + B_i \times (R_m - R_f) \text{ where:}$$

³³³ *Id.* at 2.

³³⁴ Exh. MTO-1 at 101:12-15; Opinion No. 531 at P 147; Opinion No. 531-B at P 97 n.203 (citing Exh. NET-704), P 98; *compare* Exh. NET-704, admitted May 1, 2013, Docket No. EL11-66-001, *with* Exh. MTO-29.

³³⁵ Exh. MTO-1 at 24:23-25:9.

R_i = Required return for stock i
 R_f = Risk-free rate
 R_m = Expected return for the market portfolio
 B_i = Beta ó Measure of the risk for the stock ³³⁶

(a) Dr. Avera's Model

260. Using this formula, Dr. Avera first calculates a uniform initial COE for all dividend-paying companies on the Standard and Poor's 500 index (S&P 500). He adds their weighted average dividend, 2.4 percent, to the average of the weighted average growth rates projected for the companies by IBES and Value Line, 8.9 percent. This results in a uniform COE for the stocks of 11.3 percent.

261. Dr. Avera then calculates a uniform risk premium for these stocks. He designates the return on 30-year Treasury bonds, 2.7 percent, as his "risk-free rate." He then subtracts that rate from his initial COE to produce a risk premium of 8.6 percent.

262. Dr. Avera next calculates his "unadjusted" Base ROE for each of the proxy-group companies. First, he multiplies the S&P 500 risk premium by the beta³³⁷ listed for each of the proxy-group companies by Value Line. He then adds the risk-free rate to that product. These calculations produce a range of unadjusted Base ROEs that range from 7.86 percent to 10.87 percent.³³⁸

263. Finally, Dr. Avera creates an implied COE for each proxy-group company by adjusting for each company's size. Dr. Avera explains that the size adjustment recognizes that investors consider the size of a company in determining the return required for investment:

According to the CAPM, the expected return on a security should consist of the riskless rate, plus a premium to compensate for the systematic risk of the particular security, which is represented by the beta coefficient. The size adjustment reflects the fact that differences in investors' required rates

³³⁶ Exh. JC-9 at 41:2-10.

³³⁷ According to Mr. Gorman, "Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio." Exh. JC-9 at 41:11-13. The proxy-group companies all have betas below 1.0. Exh. JC-9 at 20:5-7; *see* Exh. MTO-30 at 1.

³³⁸ *See* Exh. MTO-30 at 1.

of return that are related to firm size are not fully captured by beta. Accordingly, [Morningstar, Inc.] developed size premiums that are appropriately added to the theoretical CAPM cost of equity estimates to account for the level of a firm's market capitalization in determining the cost of equity.³³⁹

264. Dr. Avera applies the data contained in a table published in Morningstar, Inc.'s (Morningstar's) 2015 Ibbotson SBBI Market Report to each proxy-group company's market capitalization. The table adjusts each proxy-group utility's COE based on its size, reducing the unadjusted COEs of larger companies while increasing those of smaller companies.³⁴⁰ This adjustment creates a range of proxy-group COEs from 7.50 percent to 12.61 percent, with a mid-point of 10.06 percent.³⁴¹

(b) The Non-Utility Participants' Critiques and Alternative Models

265. The Non-Utility Participants make a number of arguments against Dr. Avera's CAPM, and two intervenors fashion CAPMs of their own. None of the intervenors' arguments or proposals detract from the credibility or usefulness of Dr. Avera's model.

266. Mr. Gorman makes two arguments against Dr. Avera's CAPM. First, he argues that the 9.7 percent S&P 500 growth rate that Dr. Avera uses to calculate his initial COE is unsustainable. Mr. Gorman contends that one-third of the CAPM growth rate should consist of a long-term growth rate based on GDP, just as the Commission uses in its DCF analysis.³⁴²

267. In Opinion No. 531-B, the Commission rejected this approach, stating:

The rationale for incorporating a long-term growth rate estimate in conducting a two-step DCF analysis of a specific group of utilities does not necessarily apply when conducting a DCF study of the companies in the S&P 500. That is because the S&P 500 is regularly updated to include only companies with high market capitalization. While an individual company

³³⁹ Exh. MTO-1 at 98:17-98:24.

³⁴⁰ *Id.* at 98:21-24.

³⁴¹ Exh. MTO-30 at 1.

³⁴² Exh. JC-9 at 18:13-19:6.

cannot be expected to sustain high short-term growth rates in perpetuity, the same cannot be said for a stock index like the S&P 500 that is regularly updated to contain only companies with high market capitalization, and the record in this proceeding does not indicate that the growth rate of the S&P 500 stock index is unsustainable.³⁴³

268. Mr. Gorman also argues that Morningstar, the authority for Dr. Avera's size adjustment, does not actually support that adjustment. First, Mr. Gorman contends that in the Ibbotson SBBI 2014 Classic Yearbook at 109, Table 7-6, Morningstar makes a size adjustment only for companies with betas greater than 1.0. Therefore, applying the adjustment to the proxy-group companies, all of which have betas below 1.0, would produce excessive COEs for that group.³⁴⁴

269. The table cited by Mr. Gorman does not indicate that Morningstar has a policy of only applying its size adjustment to companies with betas greater than 1.0; the table simply happens to not include companies with betas of 1.0 or less. In addition, Dr. Avera's figures are based on a table in a more recent Morningstar publication, the 2015 Ibbotson SBBI Market Report.³⁴⁵ Morningstar's restrictive use of its size adjustment in the 2014 publication does not bear on the data upon which Dr. Avera relies.

270. Mr. Gorman further contends that, based on the utility industry's low beta, Morningstar also makes a downward adjustment for utilities that offsets any upward adjustment for size. He contends that Morningstar's Ibbotson SBBI 2013 Valuation Yearbook recommends an industry premium as well as a size premium.³⁴⁶ He asserts that Morningstar estimates the utility industry beta at 0.5, and estimates a negative CAPM adjustment for the electric-utility industry of between 3.4 percent and 4.09 percent.³⁴⁷

³⁴³ Opinion No. 531-B at P 113.

³⁴⁴ See Exh. JC-9 at 19:16-20:7 & n.20.

³⁴⁵ Exh. MTO-1 at 98:21-24 n.182.

³⁴⁶ Exh. JC-9 at 21:1-6 (citing Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook at 27-30).

³⁴⁷ *Id.* at 21:11-17 (citing Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook at 37, 131).

For these reasons, he contends that the Commission should reject Dr. Avera's proposed size adjustment.³⁴⁸

271. However, on cross-examination, Mr. Gorman admitted that the Morningstar industry premium to which he referred was used for its "buildup method," which is not used to develop a CAPM.³⁴⁹ Accordingly, he fails to demonstrate that Morningstar's use of its industry premiums has any relevance to a CAPM calculation.

272. Mr. Gorman proposes his own CAPM. He uses the same formula that Dr. Avera uses to calculate his unadjusted Base ROE for each proxy-group company. Like Dr. Avera, Mr. Gorman uses betas for each company drawn from the most recent Value Line issues available to him.³⁵⁰

273. Otherwise, Mr. Gorman's inputs into his CAPM differ from those of Dr. Avera. Mr. Gorman uses Blue Chip Financial Forecasts' projected yield on 30-year Treasury bonds, 4.0 percent as of July 1, 2015,³⁵¹ as his risk-free rate.³⁵² Mr. Gorman argues that his use of projected yields provides a better measure of the risk-free rate than Dr. Avera's use of actual yields. He contends that the actual return on 30-year Treasury bonds is not risk-free, because it does not account for the risk of inflation.³⁵³ He calculates two risk premiums, which he describes as forward-looking and historical.

274. In calculating his forward-looking risk premium, Mr. Gorman uses Morningstar's historical average real market return of the S&P 500 for 1926-2014, 8.9 percent, and adds an inflation factor, based on the Consumer Price Index of 2.4 percent, to produce an expected market return of 11.51 percent. He then subtracts his risk-free rate from his expected market return to produce a forward-looking risk premium of 7.50 percent.³⁵⁴

³⁴⁸ *Id.* at 23:6-7.

³⁴⁹ Tr. 79:5-81:1; *see* Exh. MTO-59.

³⁵⁰ Exh. JC-29 at n.1.

³⁵¹ *Id.* n.3.

³⁵² Exh. JC-9 at 42:10-11.

³⁵³ *Id.* at 42:11-43:8.

³⁵⁴ *Id.* at 43:14-44:5; Exh. JC-29.

275. In calculating his historical risk premium, Mr. Gorman uses Morningstar's arithmetic average of the achieved total return on the S&P 500, 12.1 percent for his market return. He uses Morningstar's total return on long-term U.S. Treasury bonds, 6.1 percent, as his risk-free rate. He then calculates a historical risk premium of 6.0 percent by subtracting Treasury-bond yield from the market return.³⁵⁵

276. Mr. Gorman multiplies each market risk premium—the historical premium of 6.0 percent and the forward-looking premium of 7.50 percent by each proxy-group company's beta. He then adds each of those products to the risk-free rate of 4.0 percent to calculate a historical and forward-looking COE for each company.³⁵⁶ The historical CAPM creates COEs ranging from 7.60 percent to 9.70 percent, with a mid-point of 8.65 percent. The forward-looking CAPM creates COEs ranging from 8.50 percent to 11.13 percent, with a mid-point of 9.81 percent.³⁵⁷ Mr. Gorman weights the historical COE at 25 percent and the forward-looking COE at 75 percent.³⁵⁸ This weighting supports a COE of 9.52 percent.³⁵⁹

277. At the outset, it should be noted that Mr. Gorman's CAPM supports a Base ROE, 9.52 percent, which is higher than the Midpoint of 9.29 percent. Thus, his CAPM supports placing the MISO TO's Base ROE above the Midpoint.

278. In any event, Mr. Gorman's CAPM methodology runs counter to Opinion No. 531 in a number of respects. In Opinion No. 531-B, the Commission rejected the argument, which Mr. Gorman makes here, that the current yields of 30-year Treasury bonds should not be used as a risk-free rate due to the risks of investing in such securities. The Commission explained:

We also reject EMCOS's argument that the NETOs' CAPM analysis was flawed because it relied on a risky 30-year bond interest rate to calculate the risk-free rate. As noted above, 30-year U.S. Treasury bond yields are a generally accepted proxy for the risk-free rate in a CAPM analysis, and are also considered superior to short- and intermediate-term bonds for this

³⁵⁵ *Id.* at 44:6-10.

³⁵⁶ *See id.* at 46:10-13, JC-29.

³⁵⁷ Exh. JC-29, Columns 5 & 6.

³⁵⁸ Exh. JC-9 at 46:15-18.

³⁵⁹ The formula is: $(0.75 \times 9.81) + (0.25 \times 8.65) = 9.52$.

purpose. Therefore, absent record evidence to the contrary, we find 30-year Treasury bond yields to be an appropriate basis for the risk-free rate in the NETOs' CAPM analysis.³⁶⁰

279. Moreover, neither of Mr. Gorman's CAPMs is actually "forward-looking," as the Commission defines that phrase. In Opinion No. 531-B, the Commission distinguished forward-looking risk premiums from backward-looking risk premiums:

A CAPM analysis is backward-looking if its market risk premium component is determined based on historical, realized returns. A CAPM analysis is forward-looking if its market risk premium component is based on a DCF study of a large segment of the market.³⁶¹

Neither of Mr. Gorman's risk premiums is based on a DCF study. Both calculate market returns based on historical data from Morningstar. Accordingly, neither can be properly characterized as forward-looking.

280. This distinction is important. In Opinion No. 531, the Commission implicitly rejected CAPMs utilizing risk premiums that were not forward-looking. The Commission distinguished the CAPM before it from CAPMs it had previously rejected. The Commission observed that the model before it was forward-looking whereas those the Commission previously had rejected were not, stating:

While the Commission has in the past rejected the use of CAPM analyses, those cases are distinguishable from the instant proceeding because they involved CAPM analyses that were based on historic market risk premiums — whereas the NETOs' CAPM analysis is based on forward looking investor expectations for the market risk premium.³⁶²

281. Finally, Mr. Gorman's CAPM does not make an adjustment for the company's size. In Opinion No. 531-B, the Commission endorsed a similar size-adjustment mechanism, stating:

This type of size adjustment is a generally accepted approach to CAPM analyses, and we are not persuaded that it was inappropriate to use a size

³⁶⁰ Opinion No. 531-B at P 114.

³⁶¹ *Id.* P 108.

³⁶² Opinion No. 531 at P 107 n.292 (citations omitted).

adjustment in this case. The purpose of the NETOsø size adjustment is to render the CAPM analysis useful in estimating the cost of equity for companies that are smaller than the companies that were used to determine the market risk premium in the CAPM analysis.³⁶³

As Dr. Avera pointed out, Morningstar uses this analysis to adjust its CAPMs.³⁶⁴ Mr. Gorman failed to demonstrate that such an analysis is inappropriate for utilities.

282. Mr. Hill challenges two aspects of Dr. Avera's CAPM, the risk premium and the size adjustment. He challenges Dr. Avera's risk premium on two grounds.

283. First, Mr. Hill states that Dr. Avera should have used historical data rather than earnings projections to calculate his risk premium, because the latter are overly optimistic.³⁶⁵ However, as discussed, in Opinion No. 531, the Commission implicitly rejected the backward-looking CAPM (based on historical data) in favor of the forward-looking CAPM (based on projected earnings).³⁶⁶

284. Second, Mr. Hill states that if Dr. Avera was going to develop a forward-looking CAPM, he should have used a two-step DCF study, with a long-term growth component. However, as discussed in connection with Mr. Gorman's testimony, the Commission not only has stated that such a component is unnecessary in a CAPM, but also has questioned the appropriateness of such a component.³⁶⁷

285. Mr. Hill also takes issue with Dr. Avera's size adjustment. He first contends that the "size effect" logic is based on the historical return difference between large and small companies, but that this logic suffers from "survivor bias." He claims that the studies that show a consistently higher return for small companies are based on broad market indices such as the New York Stock Exchange (NYSE) Index. However, for a small company to even be listed on a national stock index like the NYSE, it has to be extraordinarily successful. Many small firms never obtain a NYSE listing and many

³⁶³ Opinion No. 531-B at P 117 (citing Roger A. Morin, *New Regulatory Finance* at 187).

³⁶⁴ Exh. MTO-1 at 98:17-99:1.

³⁶⁵ Exh. JCA-11 at 28:11-29:11.

³⁶⁶ Opinion No. 531 at P 107 n.292 (citations omitted).

³⁶⁷ Opinion No. 531-B at P 113.

more fail altogether. Mr. Hill concludes that simply measuring the returns of the successful small companies does not accurately portray investor expectations with regard to all small companies.³⁶⁸

286. Second, Mr. Hill further argues that the "size effect" is also called the "January effect" because virtually all (95 percent) of the small-stock price rises occur in the month of January. Mr. Hill contends that these gains are likely due to brokers selling "losers" before the end of the year for tax purposes and re-balancing their portfolios at the beginning of the next tax year. They are not related to firm size.³⁶⁹

287. Third, Mr. Hill notes that the "size effect" has been extremely variable over the past 85 years, occurring in one period and not occurring in the next. More importantly, contends Mr. Hill, a recent textbook and financial literature confirm that over the past 20 years, "large-cap" stocks have earned greater total returns for investors than "small-cap" stocks.³⁷⁰ Accordingly, he contends that Dr. Avera's addition of 71 basis points to his CAPM results due to "size risk" is unnecessary, and only serves to inappropriately inflate the estimated return on equity.

288. Mr. Hill's arguments fail to grasp, much less address, the rationale underlying the size adjustment. He appears to believe that the purpose of implementing the adjustment is to reflect the proposition that the stock prices of smaller companies appreciate faster than those of large companies.³⁷¹ However, as Dr. Avera explains, the purpose of implementing the adjustment is to reflect the proposition that investors require a higher rate of return from smaller companies due to the greater risks they present.³⁷² Thus, Mr.

³⁶⁸ Exh. JCA-11 at 30:10-25.

³⁶⁹ *Id.* at 30:26-31:12.

³⁷⁰ *Id.* at 31:13-32:8.

³⁷¹ In contending that financial literature confirms that over the past 20 years, large-cap stocks have earned greater total returns for investors than small-cap stocks, Mr. Hill does not define "total return." *See* Exh. JCA-11 at 31:13-32:8. The Commission defines the total return necessary to attract capital as a combination of adjusted dividend yield and growth. *See supra* III.A.2.a. It is not clear whether Mr. Hill defines the phrase that way or as a combination of dividend yield and price appreciation. *See* Exh. JCA-11 at 31:13-32:8.

³⁷² Exh. MTO-1 at 64:17-21.

Hill's arguments against use of the size adjustment in calculating a CAPM are unpersuasive.³⁷³

289. Mr. Hill conducts his own CAPM analysis to evaluate his two-step DCF results. He uses long-term Treasury bond yields as the risk-free rate, though not in the way Dr. Avera does. He finds that average thirty-year Treasury bond yields over the past six months have ranged from 2.83 percent to 3.33 percent, which indicates a mid-point of 3.08 percent and an average of 3.12 percent. He further notes current predictions for Treasury bond yields to rise over the next year. Based on this data, Mr. Hill uses 3.25 percent as the long-term risk-free rate for his CAPM.³⁷⁴

290. Mr. Hill then uses a blend of several methodologies to calculate a market risk premium. These consist of:

- (1) Morningstar's average market risk premium between stocks and Treasury bills over the period 1926-2014, which yields a risk premium of 6.2 percent;³⁷⁵
- (2) Morningstar's risk premium determined by calculating the difference between the historical earned returns of stocks and the contemporaneous bond yield, which yields a risk premium of 7.0 percent;³⁷⁶
- (3) A forward-looking market risk premium calculated by (a) adding the expected price appreciation of the 1,700 stocks listed in Value Line's Summary Index to the average adjusted dividend yield of those stocks and (b) subtracting the risk-free rate, which yields [1] a risk premium of 5.61 percent, if one assumes a 30 percent price appreciation over a period of four years, or [2] a risk premium of 7.95 percent, if one assumes the 30 percent price appreciation will take place over a period of three years;³⁷⁷

³⁷³ Mr. Hill also cites research that he claims shows that what he calls "the size effect" does not apply to regulated utility operations. Exh. JCA-11 at 32:29-32 & n.18. However, Mr. Hill does not describe what the authors say, much less how they come to their alleged conclusion.

³⁷⁴ Exh. JCA-1 at 21:10-20.

³⁷⁵ *Id.* at 21:21-22:5.

³⁷⁶ *Id.* at 22:6-14. Mr. Hill does not define "earned return."

³⁷⁷ *Id.* at 22:15-23:12.

- (4) A two-step DCF analysis of the S&P 500 for the period July through December 2014, using the Commission's two-thirds/one-third weighting of short and long-term growth rates, which yields a risk premium of 6.46 percent;³⁷⁸ and
- (5) A single-stage DCF that considers analysts' projected five-year earnings growth for the S&P 500, which yields a risk premium of 8.0 percent.³⁷⁹

Mr. Hill averaged the foregoing risk premiums to calculate a risk premium of 6.87 percent.³⁸⁰ He subsequently updated that amount to 7.70 percent.³⁸¹ His revised CAPM results range from 7.87 percent to 10.57 percent with a mid-point of 9.22 percent.³⁸²

291. The flaws in Mr. Hill's CAPM mirror the flaws in his arguments against Dr. Avera's CAPM. The first two components Mr. Hill's risk-premium calculation are backward-looking in that they rely on historical data accumulated by Morningstar. As discussed above, in Opinion No. 531, the Commission approved a CAPM substantially similar to the one presented by Dr. Avera in part because it was forward-looking rather than backward-looking.³⁸³

292. The "forward-looking" components of Mr. Hill's risk-premium calculation are flawed in two respects. First, he bases his DCF study on 1,700 companies listed in Value Line's Summary Index, many of which do not pay dividends. The lack of dividend-paying stocks serves to understate the average dividend yield, and thus, the risk premium. The Commission alluded to this consideration in Opinion No. 531-B, stating:

³⁷⁸ *Id.* at 23:13-21.

³⁷⁹ *Id.* at 23:22-24:2.

³⁸⁰ *Id.* at 24:3-7.

³⁸¹ Exh. JCA-20 at 8:16-22.

³⁸² Exh. JCA-23.

³⁸³ Opinion No. 531 at P 147 n.292 (citations omitted).

A CAPM analysis is forward-looking if its market risk premium component is based on a DCF study of a large segment of the market.³⁸⁴

[A] DCF analysis can only be conducted for companies that pay dividends. Basing a CAPM study only on dividend-paying companies is therefore appropriate where the Commission is looking to the CAPM study to corroborate the results of a DCF analysis, because doing so produces a growth rate input that is more representative of the DCF proxy group than a CAPM study based on non-dividend-paying companies would be.³⁸⁵

293. Second, Mr. Hill measures stock-price appreciation rather than earnings growth.³⁸⁶ Risk premiums measure the differentials between stock earnings and bond yields.³⁸⁷ Mr. Hill fails to explain how stock-price appreciation has any bearing on these differentials.

294. Mr. Hill's risk-premium analysis based on a two-step DCF analysis of the S&P 500 is also flawed in two respects. First, similar to his risk premium based on 1,700 Value Line stocks, his DCF analysis includes S&P 500 stocks that do not pay dividends. Second, he includes a long-term growth rate in calculating his risk-premium. As discussed, the Commission has questioned the appropriateness of including such a component in a CAPM.³⁸⁸

295. Finally, like Mr. Gorman's CAPM, Mr. Hill's does not include a size adjustment.

296. Joint Customer Intervenor's arguments regarding Dr. Averá's CAPM analysis, which rely on the testimony of Mr. Solomon, are similarly unpersuasive. Mr. Solomon first argues that Dr. Averá's CAPM analysis should be rejected, because the Commission has declined to rely on the CAPM methodology in the past. He contends that the Commission has so acted, because the CAPM relies solely on a company's beta to measure the

³⁸⁴ Opinion No. 531-B at P 108 (citing Roger A. Morin, *New Regulatory Finance* at 187).

³⁸⁵ *Id.* P 111 (citation omitted).

³⁸⁶ Exh. JCA-1 at 22:22-26.

³⁸⁷ *See, e.g.*, Exh. MTO-29 at 2.

³⁸⁸ Opinion No. 531-B at P 113.

company's risk, and betas do not fully reflect the differences in relative risk among companies.³⁸⁹

297. This argument fails for several reasons. First, in Order No. 531-B, the Commission upheld the CAPM proffered by Dr. Avera in that case, using it as guidance in setting the NETOsøBase ROE at the Upper Midpoint in that case.³⁹⁰ The Commission upheld that CAPM's use of betas, pointing out that earlier cases that had questioned the reliability of betas had involved only one utility:

In both *ITC Holdings* and *Consumers Energy Co.*, the parties submitted CAPM studies that analyzed only the utility whose rates were at issue. As the Commission explained in *Consumers Energy Co.*, "CAPM is more appropriately used for determining the composition of a portfolio of stocks." In the instant proceeding, the NETOsøCAPM study analyzed, as a portfolio, a proxy group of electric utilities. Thus, the NETOsøCAPM study and associated use of betas do not raise the same concerns as did the studies in *ITC Holdings* and *Consumers Energy Co.*³⁹¹

Second, Dr. Avera's CAPM size adjustment is designed to correct any failure of the beta to account for differences in required rates of return related to firm size.³⁹²

298. Mr. Solomon also contends that Dr. Avera's calculation of his risk premium is flawed. Mr. Solomon asserts that Dr. Avera erred by using S&P 500 companies to calculate his market risk premium rather than a group of electric utilities with risk characteristics comparable to those of the MISO TOs. He contends that Dr. Avera has not demonstrated that the S&P 500 companies have risk characteristics comparable to the

³⁸⁹ Exh. JCI-4 at 43:11-16 (citing *Xcel Energy Services, Inc.*, 122 FERC ¶ 61,098, at P 73 (2008) (*Xcel*)), & *Consumers Energy Co.*, 85 FERC ¶ 61,100, at 61,361-62 (1998) (*Consumers*)).

³⁹⁰ See generally Opinion No. 531-B at PP 108-119.

³⁹¹ *Id.* P 115 (footnotes omitted). Opinion No. 531-B does not mention *Xcel*, which Mr. Solomon cites. However *Xcel* also involved only one utility. See 122 FERC ¶ 61,098, at PP 35-36, 73.

³⁹² Exh. MTO-1 at 98:19-21.

MISO TOs, and that his results, therefore have no demonstrable relationship to the MISO TOs.³⁹³

299. In Opinion No. 531-B, the Commission found that use of dividend-paying companies listed in the S&P 500 to calculate the risk-premium component of the CAPM was acceptable, because such companies were representative of the NETOs:

Under the CAPM model.í The required return on the overall market is determined by conducting a DCF study of a representative market index, such as the S&P 500 Indexí . [T]he NETOs developed the market risk premium in their CAPM analysis in exactly this way, by conducting a DCF analysis of the dividend-paying companies in the S&P 500 to determine the required return on the overall market.³⁹⁴

Mr. Solomon neither addresses that ruling nor tries to distinguish the MISO TOs from the NETOs.

300. Mr. Solomon further argues that if the historical methodology Dr. Avera uses in calculating his risk-premium study is reliable, he should also use it calculate the risk premium for his CAPM. For this reason, the risk premium of 6.2 percent that Morningstar calculated based on data for the period 1926-2014 is more appropriate than the 9.0 percent risk premium calculated by Dr. Avera.³⁹⁵

301. In Opinion No. 531, the Commission accepted a risk-premium study and a CAPM analysis substantially similar to those presented in this case by the MISO TOs.³⁹⁶ The Commission expressed no concern that the risk-premium analysis in the former was based on recent historical data and that the risk-premium component of the latter was forward-looking. A risk-premium study uses a methodology different from a forward-

³⁹³ See Exh. JCI-4 at 43:17-44:5.

³⁹⁴ Opinion No. 531-B at P 113.

³⁹⁵ Exh. JCI-4 at 45:11-13.

³⁹⁶ Exh. MTO-1 at 101:12-15; Opinion No. 531-B at P 97 n.203 (citing Exh. NET-704), P 98; *compare* Exh. NET-704, admitted May 1, 2013, Docket No. EL11-66-001, *with* Exh. MTO-29; Opinion No. 531 at P 147 n.293 (citing Exh. NET-708); *compare* Exh. NET-708 at 1, admitted May 1, 2013, Docket No. EL11-66-001, *with* Exh. MTO-30 at 1.

looking CAPM study. The differences between the two studies make them more valuable as independent checks on the DCF results.

302. Mr. Keyton also questions the validity of Dr. Avera's CAPM analysis. First, Mr. Keyton contends that 23 of the 407 companies that Dr. Avera utilized to develop an average growth rate have unsustainable growth rates, resulting in an overstated composite growth rate.³⁹⁷

303. Second, Mr. Keyton points out that 25 of the companies so utilized by Dr. Avera are also included in the proxy group used in the two-step DCF analysis in this case. Whereas under Dr. Avera's CAPM, these utilities are presumed to grow at a five-year rate, under the two-step DCF analysis, the same companies are presumed to grow at a rate blending the five-year rate with a long-term rate. Mr. Keyton argues that this inconsistency robs Dr. Avera's CAPM of all credibility.³⁹⁸

304. In Opinion No. 531-B, the Commission effectively rejected Mr. Keyton's contentions regarding sustainability. The Commission reasoned:

While an individual company cannot be expected to sustain high short-term growth rates in perpetuity, the same cannot be said for a stock index like the S&P 500 that is regularly updated to contain only companies with high market capitalization³⁹⁹

305. Mr. Keyton's second argument, that Dr. Avera's CAPM and two-step DCF analysis attribute different growth rates to common companies, fails to consider the beta component of the CAPM risk-premium calculation. That component serves to mitigate any differences between the growth-rate component of that calculation and the composite growth rate calculated in the two-step DCF. That beta component serves the same purpose of the long-term growth-rate component of the two-step DCF composite growth-rate calculation: Each serves to lower the top of the zone of reasonableness. Each proxy-group beta is lower than 1.0; accordingly, multiplying the CAPM risk premium by the beta will lower the former. Similarly, the long-term growth rate of 4.39 percent is appreciably lower than the 7.68 percent short-term growth rate of TECO, which has the

³⁹⁷ Exh. S-1 at 103:1-14.

³⁹⁸ *Id.* at 103:15-104:10.

³⁹⁹ Opinion No. 531-B at P 113.

highest of the proxy-group COEs. It follows that incorporation of the long-term rate, will lower TECO's composite growth rate and, therefore, the utility's COE.⁴⁰⁰

306. Mr. Keyton overlooks that the CAPM serves as a valid check on the results of the two-step DCF analysis precisely because each analysis employs a different methodology. Were the methodologies identical in all material respects, the CAPM would simply duplicate the results of the two-step DCF.

307. Mr. Keyton further contends that Dr. Avera should have used five-year, rather than 30-year, Treasury bond yields to calculate his risk-free rate, because use of short-term growth rates and long-term yields create a mismatch. According to Mr. Keyton, this alleged flaw, like the others he has identified, serve to overstate the implied Base ROEs.

308. In Opinion No. 531-B, the Commission explicitly endorsed the use of short-term IBES growth rates and 30-year Treasury bond yields as appropriate components of a CAPM.⁴⁰¹ The Commission also said that "30-year U.S. Treasury bond yields are í considered superior to short-and intermediate-term bonds" as a "proxy for the risk-free rate in a CAPM analysis."⁴⁰² Mr. Keyton does not explain why using both the IBES rate and the 30-year Treasury bond rate in a CAPM undermines model's reliability, and the basis of this assertion is not self-evident.

309. Dr. Avera also produces a CAPM using 30-year Treasury-bond yields projected for 2016-20 as a risk-free rate.⁴⁰³ This Initial Decision rejects those studies. Projected yields are speculative, and, therefore, a less reliable basis for a CAPM than current Treasury-bond yields.

(c) Determination

310. In Opinion No. 531, the Commission found a CAPM using a format substantially similar to that used by Dr. Avera in this case to be a useful guide in determining the

⁴⁰⁰ See Tr. 646:19-648:23.

⁴⁰¹ Opinion No. 531-B at PP 112, 114.

⁴⁰² *Id.* P 114, n.239 (quoting Dr. Roger A. Morin, *New Regulatory Finance* at 151-152) ("the yield on very long-term government bonds, namely, the yield on 30-year Treasury bonds, is the best measure of the risk-free rate for use in the CAPM and Risk Premium methods.ö).

⁴⁰³ Exh. MTO-30 at 2.

placement of the Base ROE.⁴⁰⁴ The Commission explained that like the risk-premium analysis, the CAPM offered in that case used interest rates as the input for the risk-free rate, which [made] it useful in determining how the interest rate environment has impacted investors' required returns on equity.⁴⁰⁵ The Commission further observed that the CAPM is utilized by investors as a measure of the cost of equity relative to its risk.⁴⁰⁶ The Commission also noted that the type of size adjustment used was a generally accepted approach to CAPM analyses⁴⁰⁷

311. Dr. Averá's CAPM is credible and supports allowing the MISO TOs to collect a Base ROE above the Midpoint. The Non-Utility Participants' alternative CAPMs are rejected.

(3) Expected Earnings Analysis

312. In Opinion No. 531-B, the Commission described the comparable earnings analysis as a method of calculating the earnings an investor expects to receive on the book value of a particular stock. Such an analysis could be based either on the stock's historical earnings on book value, as reflected on the company's accounting statements, or on forward-looking estimates of earnings on book value, as reflected in analysts' earnings forecasts for the company.⁴⁰⁸

313. The Commission explained that the forward-looking version of the comparable earnings analysis is often referred to as an expected earnings analysis⁴⁰⁹ In Opinion No. 531, the Commission determined that the NETOs' expected earnings analysis could be useful in validating the Commission's Base ROE determination. In so ruling, the Commission relied upon the expected earnings analysis' close

⁴⁰⁴ See Opinion No. 531 P 147 n.293 (citing Exh. NET-708, admitted May 1, 2013, Docket No. EL11-66-001); compare Exh. NET-708 at 1, admitted May 1, 2013, Docket No. EL11-66-001, with Exh. MTO-30 at 1.

⁴⁰⁵ Opinion No. 531 at P 147.

⁴⁰⁶ *Id.*

⁴⁰⁷ Opinion No. 531-B at P 117 (citing Roger A. Morin, *New Regulatory Finance* at 187).

⁴⁰⁸ *Id.* P 125.

⁴⁰⁹ *Id.*

relationship to the comparable earnings standard that originated in *Hope* and the fact that it is used by investors to estimate the ROE that a utility will earn in the future . . .⁴¹⁰

(a) Dr. Avera's Analysis

314. The expected earnings analysis that Dr. Avera has prepared for the MISO TOs is identical in all material respects to the Commission-approved analysis he prepared for the NETOs.⁴¹¹ He uses the return on book equity that Value Line forecasts for each utility in his proxy group for the period 2017-19. He then multiplies each of those forecasted returns by an adjustment factor to determine each utility's average return, rather than its year-end return. He explains that using the year-end return would understate actual returns because of growth in common equity over the year.⁴¹² After eliminating one outlier (Dominion Resources with an adjusted return on common equity of 18.38 percent), Dr. Avera produces an adjusted zone of reasonableness from 7.61 percent to 16.37 percent, with a midpoint of 11.99 percent.⁴¹³

(b) Staff's Critique

315. Mr. Keyton asserts that Dr. Avera's expected earnings analysis is invalid because he applies it to regulated entities. Mr. Keyton points out that Dr. Avera relies upon Dr. Roger A. Morin as the principal authority supporting his conclusions. Specifically, Dr. Avera refers to Dr. Morin on pages 18, 25, 66, 75, 95, 98, 114, and 125 of his direct testimony (Exhibit MTO-1), and notes that the Commission has recognized Dr. Morin's publication, *New Regulatory Finance*, as an authoritative source.⁴¹⁴

316. Mr. Keyton further points out that in that publication, Dr. Morin unequivocally states that in applying the comparable earnings approach in evaluating allowed Base

⁴¹⁰ Opinion No. 531 at P 147 (citing Dr. Roger A. Morin, *New Regulatory Finance* at 308).

⁴¹¹ See *id.* P 147 & n.295 (identifying Exh. NET-709 as the NETOs' expected earnings analysis). Compare Exh. NET-709, admitted May 1, 2013, Docket No. EL11-66-001, with Exh. MTO-31.

⁴¹² See Exh. MTO-1 at 95:9-18.

⁴¹³ Exh. MTO-31.

⁴¹⁴ Exh. S-1 at 97:13-98:1.

ROEs for utilities, comparable earnings analyses should be applied only to a comparable risk group of unregulated companies.⁴¹⁵ Mr. Keyton quotes the following statement by Dr. Morin at page 382 of *New Regulatory Finance*:

“To implement the Comparable Earnings standard, three steps are required. First, a sample of unregulated companies of reasonably comparable risk is developed. Second, an appropriate time period over which book rates of return on equity are measured is chosen. Third, the result is adjusted for any risk differential between the sample of unregulated companies and the utility, to the extent that such a differential exists.”⁴¹⁶

317. According to Mr. Keyton, the rationale underlying Dr. Morin’s requirement to use a sample of unregulated companies is that the earnings of such companies are set not by regulators but by competition in the marketplace.⁴¹⁷ Mr. Keyton quotes Dr. Morin as stating:

“In other words, the free entry and exit of competitors should ensure that the profits earned by non-regulated firms are normal in the economic sense of the term. . . Thus by averaging the book profitability of a large number of unregulated companies over time, an appropriate measure of the fair return on equity for a public utility is obtained.”⁴¹⁸

318. Mr. Keyton reasons that by applying his expected earnings analysis to his proxy group, Dr. Avera fails to follow the prescriptions of the source upon whom he principally relies in developing his alternative pricing models.⁴¹⁹

⁴¹⁵ *Id.* at 98:1-4.

⁴¹⁶ *Id.* at 99:3 (quoting Dr. Roger A. Morin, *New Regulatory Finance* at 382).

⁴¹⁷ *Id.* at 99:11-13.

⁴¹⁸ *Id.* at 99:15-20 (quoting Dr. Roger A. Morin, *New Regulatory Finance* at 381-82).

⁴¹⁹ *Id.* at 99:21-23.

(c) Dr. Avera's Response

319. In his cross-answering testimony, Dr. Avera attempts to respond to Dr. Morin's rejection of the methodology Dr. Avera used to select the proxy group for his expected earnings analysis. His response is not persuasive.

320. First, he simply states that the use of a proxy group made up of utilities as part of an expected earnings analysis is permissible and routine:

[W]hile returns for non-regulated companies are a legitimate benchmark to gauge investors' requirements, this certainly does not preclude consideration of expectations for electric utilities. In my experience as a regulatory economist, the comparable earnings standard is routinely implemented through an examination of earned and expected rates of return for other utilities of comparable risk.⁴²⁰

Dr. Morin's authority has been recognized by both Dr. Avera and the Commission. To effectively refute his conclusions more is required than a conclusory statement made without supporting authority. Indeed, Dr. Avera does not attempt to address, much less refute, the rationale underlying Dr. Morin's conclusions.

321. Second, Dr. Avera asserts that the obligations and practices of the Virginia State Corporation Commission (VSCC) support his proxy-group selection. He states that the VSCC has a statutory obligation to consider the earned returns on book value of electric utilities in its region, and has established allowed Base ROEs based on earned returns on book value for peer groups of other electric utilities.⁴²¹ However, Dr. Avera does not attempt to explain the VSCC's rationale for its practices, and simply describing those practices provides no reason to depart from Dr. Morin's prescriptions.

322. Finally, Dr. Avera argues in effect that he is offering his expected earnings analysis not to establish the Base ROE, but merely as a guide to determine placement of the Base ROE within the zone of reasonableness.⁴²² However, an alternative pricing model that is being implemented incorrectly does not serve any valid purpose.

⁴²⁰ Exh. MTO-23 at 86:18-87:3.

⁴²¹ *Id.* at 87:4-18.

⁴²² *Id.* at 87:20-88:6.

(d) Determination

323. In Opinion No. 531, the Commission was not aware of Dr. Morin's statement that proxy groups should be made up of unregulated companies, much less the rationale underlying that statement. The Commission repeatedly cited Dr. Morin in Opinion Nos. 531 and 531-B, and particularly relied upon him in accepting the NETOs' expected earnings analysis.⁴²³ Dr. Morin's rejection of Dr. Avera's methodology and Dr. Avera's inability to address that rejection precludes reliance upon that analysis here.

(4) Pricing Models Rejected by the Commission in Opinion No. 531

324. Dr. Avera utilizes two alternative pricing studies that the Commission expressly declined to consider in Opinion No. 531. The first such study is a risk-premium study using Commission-approved gas-pipeline Base ROEs. This study follows roughly the same format as his risk-premium study using Commission-approved electric-utility Base ROEs. He calculates a risk-premium COE of 12.65 percent for gas pipelines. He then subtracts the average differential between gas-pipeline Base ROEs and electric-utility Base ROEs to produce an implied electric-utility Base ROE of 10.48 percent.⁴²⁴

325. The second such study is a one-step DCF study of selected, low-risk non-utility stocks. Dr. Avera uses a combination of IBES and Value Line short-term growth data but does not include a long-term growth component. This study produces costs of equity ranging from 7.07 percent to 12.74 percent, with a midpoint of 9.90 percent.⁴²⁵

326. In Opinion No. 531, the Commission gave both studies short shrift. In a one-sentence footnote, the Commission rejected substantially similar studies on the ground that they did not involve electric utilities.⁴²⁶ Dr. Avera argues that the Commission should reconsider its decision, because gas pipelines and low-risk non-utilities compete with electric utilities for capital.

327. Dr. Avera presents no viable reason to consider these studies in this proceeding. His gas-pipeline risk-premium study indicates that investors demand higher returns from

⁴²³ Opinion No. 531 at P 147 n.294; Opinion No. 531-B at P 126 n.274.

⁴²⁴ See Exh. MTO-35 at 1.

⁴²⁵ See Exh. MTO-36.

⁴²⁶ Opinion No. 531 at P 146 n.288.

gas pipelines than electric utilities, which highlights the differences between these two types of entities. Thus, Dr. Averø's risk-premium study of electric utilities provides an appreciably more reliable guide as to the MISO TO's proper Base ROE than his risk-premium study of gas pipelines. Including a second, less reliable risk-premium study here adds nothing.

328. Dr. Averø's DCF study of non-utility stocks is even more problematic. His decision to include only dividend yields and short-term growth components inevitably skews his zone of reasonableness upward. Accordingly, this Initial Decision will not consider either of the foregoing two studies in placing a zone of reasonableness.

**(5) Pricing Models Not Before the Commission in
Opinion No. 531**

329. Dr. Avera offers an Empirical Capital Asset Pricing Model (ECAPM) that is a variant of his CAPM. He states that "empirical tests of the CAPM have shown that low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn somewhat less than predicted."⁴²⁷ The ECAPM seeks to create a pricing model that will offset this alleged distortion. Accordingly, the ECAPM adjusts the implied COEs of low-beta companies upward and those of high-beta companies downward. Dr. Avera quotes a statement in *New Regulatory Finance* that "several financial scholars" have developed ECAPMs that "typically produce a risk-return relationship" that is more "in keeping with the actual observed risk-return relationship."⁴²⁸ Dr. Averø's ECAPM produces a "size-adjusted" zone of reasonableness from 8.36 percent to 12.72 percent, with a midpoint of 10.54 percent.⁴²⁹

330. This Initial Decision will not consider the ECAPM in determining the proper Base ROEs for the MISO TOs. The quote from *New Regulatory Finance* suggests that at this time the ECAPM is relied upon by no more than a few "financial scholars." In addition, all of the proxy-group companies have betas below 1.0. Accordingly, they will inevitably have higher COEs under an ECAPM than under a CAPM. Dr. Averø's CAPM already supports providing the MISO TOs a Base ROE above the Midpoint. There is no need to include an obscure, and arguably more controversial, variant of that pricing model.

⁴²⁷ Exh. MTO-1 at 113:17-20.

⁴²⁸ *Id.* at 114:3-9 (quoting Roger A. Morin, *New Regulatory Finance* at 189) (internal quotations omitted).

⁴²⁹ Exh. MTO-34 at 1.

331. Dr. Avera also develops a risk premium model using state-approved Base ROEs (State Risk Premium). However, he departs from the Commission-approved methodology he uses to calculate his risk-premium using Commission-approved Base ROEs (FERC Risk Premium). He uses a 9-year study period (2006-2014) to calculate his FERC Risk Premium, but uses a 40-year study period to calculate his State Risk Premium.⁴³⁰ He uses the Baa Bond yield of 4.55 percent in both its first step (to be subtracted from the average study-period bond yield) and the last step (to be added to the risk premium) of his FERC Risk Premium calculation.⁴³¹ However, he uses the average utility-bond yield of 4.03 percent in the first step of his State Risk Premium calculation, while using the Baa Bond yield of 4.55 percent in the last step of that calculation.⁴³²

332. Dr. Avera does not explain these departures and they appear to produce an implied COE that is higher than his FERC Risk Premium method would have produced. If he had used the utility-bond yield in his last step of his State Risk Premium that he uses in his first step (4.03 percent), his implied COE would have been 52 basis points lower. Accordingly, this Initial Decision rejects Dr. Avera's State Risk Premium analysis.

b. Base ROEs Authorized by State Commissions

333. In Opinion No. 531, the Commission found that record evidence of Base ROEs for electric utilities approved by state commissions (State-Authorized ROEs) supported adjusting the NETOs's Base ROE to the Upper Midpoint. The Commission acknowledged that it had repeatedly declined to establish electric utilities's Base ROEs based on State-Authorized ROEs. However, the record showed that during the study period, 85 to 91 percent of State-Authorized ROEs ranged from 9.8 percent to 10.74 percent.⁴³³ Even the low end of this range was appreciably higher than the Midpoint in that proceeding, which was 9.39 percent.⁴³⁴

334. The Commission found that this evidence argued against using the Midpoint to select the NETOs's Base ROE, because transmission entails unique risks that other electric infrastructure does not. The Commission explained that those who invest in

⁴³⁰ Compare Exh. MTO-29 at 3, with Exh. MTO-33 at 3.

⁴³¹ Exh. MTO-29 at 1.

⁴³² Exh. MTO-34 at 1.

⁴³³ Opinion No. 531 at P 148 (citing Exhs. NET-400, NET-402 & NET-403).

⁴³⁴ *Id.*

companies that focus on electric transmission infrastructure face financial and business risks that exceed those faced by investors who allocate their capital to other electric infrastructure, particularly state-regulated electric distribution.⁴³⁵ Citing testimony provided by Ms. Lapson in the proceeding, the Commission found those risks to include long delays in transmission siting, greater project complexity, environmental impact proceedings, requiring regulatory approval from multiple jurisdictions overseeing permits and rights of way, liquidity risk from financing projects that are large relative to the size of a balance sheet, and shorter investment history.⁴³⁶

335. However, the comparative risk of investment in electric transmission and investment in state-regulated enterprises was not the only consideration in determining whether to place the NETOsøBase ROE at the Midpoint or Upper Midpoint. There was also the issue of competition for capital. The Commission explained:

[A] 9.39 percent ROE would be generally below the ROEs set by state commissions for electric utilities within their jurisdiction. Reducing the NETOsøROE to that level would put interstate transmission [investments] at a competitive disadvantage in the capital market in contrast with more conventional electric utility activities. In addition, such a reduction in ROE could lead investors to view investments in interstate transmission as more unstable, diminishing investorsøconfidence in FERC jurisdictional investment in transmission.⁴³⁷

(1) Evidence Presented by the MISO TOs

336. Ms. Lapson states that Regulatory Research Associates (RRA) provides data showing all State-Authorized ROEs for integrated electric utilities and distribution-only utilities.⁴³⁸ Integrated electric utilities provide generation, transmission, and distribution services.⁴³⁹ Based on RRA data, she has prepared graphs showing virtually all State-

⁴³⁵ *Id.* P 149.

⁴³⁶ *Id.* (citing Exh. NET-400 at 10-15 & n.12).

⁴³⁷ *Id.* P 150 (quoting Exh. NET-400 at 24, 43) (brackets within internally quoted material in original).

⁴³⁸ Exh. MTO-16 at 52:6-9.

⁴³⁹ *Id.* at 54:5-8.

Authorized ROEs during the period April 1, 2013 through March 31, 2015.⁴⁴⁰ One graph shows only State-Authorized ROEs for integrated electric utilities. A second graph shows State-Authorized ROEs for both integrated electric utilities and distribution-only electric utilities, which she refers to as “all electric utilities.”⁴⁴¹

337. Her graphs show that all State-Authorized ROEs for integrated electric utilities and 87.34 percent of State-Authorized ROEs for all electric utilities ranged from 9.5 percent to 10.4 percent.⁴⁴² This range is appreciably higher than the 9.29 percent Midpoint in this proceeding. The graphs Ms. Lapson has prepared are substantially similar to the data upon which the Commission relied in Opinion No. 531 regarding State-Authorized ROEs.⁴⁴³

338. Ms. Lapson also elaborates on the issue of risk. She states that the MISO TOs face risks similar to the risks in transmission investment enumerated by the Commission in Opinion No. 531.⁴⁴⁴ She also testifies that the Commission’s risk assessment is consistent with what she has observed “as an investment analyst specializing in the electric and gas sectors”⁴⁴⁵ She explains:

Developing electric transmission is arduous, subject to controversy and public opposition, and projects can experience contentious need, siting, and environmental issues, public protests, suits by landowners, and long delays. It may be difficult to overcome public concerns and resistance regarding

⁴⁴⁰ Ms. Lapson combined Base ROEs authorized by what she refers to as the “Virginia Corporation Commission” to certain generator projects where all the generators were owned by the same company and received the same Base ROE. Exh. MTO-16 at 55:18-56:18. Dr. Avera refers to the agency as the “Virginia State Corporation Commission.” Exh. MTO-23 at 87:5-8. The agency shall henceforth be referred to as the “VCC.”

⁴⁴¹ Exh. MTO-16 at 53:22-54:2.

⁴⁴² Exh. MTO-42 at 1-2. *See* Exh. MTO-16 at 52:4-56:18. Ms. Lapson eliminated a Base ROE of 10.95 percent as an outlier.

⁴⁴³ *Compare* Exh. MTO-42 at 1 *with* Exh. NET-402 & NET-403, admitted May 1, 2013, Docket No. EL11-66-001.

⁴⁴⁴ Exh. MTO-39 at 39:3-40:9 (citing Opinion No. 531 at P 149).

⁴⁴⁵ *Id.* at 40:12-13.

high-voltage transmission. Transmission development is subject to multiple jurisdictions that act on permits and rights of way, increasing the complexity of such projects; there is no body with central siting authority. Transmission developers may be forced to make economic concessions to multiple parties and jurisdictions to gain approvals to carry out needed projects. Once a project receives regulatory approvals, the utility faces execution risks in completing the project, and the risk that parties may seek to disallow rate recovery of any cost overruns.

For utilities of medium or small size, such as quite a few of the MISO [TOs], high voltage transmission projects also can be large relative to the size of the utility balance sheet, thereby requiring external funding. Commitments to fund projects over future years involve uncertainty about the capital market conditions and access to the debt and equity markets at the time funding is needed.⁴⁴⁶

339. Ms. Lapson then addresses the risks posed by the MISO TOs' capital expenditure (capex) commitments. As discussed in greater detail, *infra*, Dennis Kramer, Senior Director of Transmission Policy, Planning and Stakeholder Relations at Ameren Services Company, testifies that the 2014 MISO Transmission Expansion Plan (2014 MTEP) documents a total of more than \$20 billion of approved and pending transmission investment.⁴⁴⁷

340. Ms. Lapson testifies that the MISO TOs have capex commitments higher than most electric utilities. In support, she compares the average capex of representative MISO TOs with representative members of the proxy group as a percentage of their operations.⁴⁴⁸ She determines that the average capex of the selected MISO TOs is 128 percent of cash flow; the average capex of the proxy group is 104 percent of cash flow. The average capex of the selected MISO TOs is 13.1 percent of total utility property,

⁴⁴⁶ *Id.* at 40:13-41:6.

⁴⁴⁷ Exh. MTO-21 at 15:13-16 (citing MISO Transmission Expansion Plan 2014, Midcontinent Independent System Operator, Inc., 6 (2014), <https://www.misoenergy.org/Library/Repository/Study/MTEP/MTEP14/MTEP14%20Full%20Report.pdf>).

⁴⁴⁸ Seven proxy-group companies are corporate parents of MISO TOs and derive at least 45 percent of their utility business from such owners. Ms. Lapson removed these parent companies from the proxy group and their subsidiaries from the list of MISO TOs. Exh. MTO-16 at 34:3-9.

plant, and equipment (PP&E); the average capex of the proxy group is 11.1 percent of PP&E.⁴⁴⁹

341. Ms. Lapson contends that utilities with high capex, such as the MISO TOs, are exposed to risks of several types. First, “there are execution or implementation risks associated with any large capital investment project.”⁴⁵⁰ These are the risks relating to electric transmission as compared with state-regulated distribution that the Commission enumerated in Opinion No. 531.⁴⁵¹

342. Next, explains Ms. Lapson, there are risks that stem from the fact that nearly all of the MISO TOs are investing in capex in excess of their internal cash from operations. These transmission owners will require external financing. The need for external financing for committed capex is a source of potential risk to any corporation including utilities: Capital is not always easily accessible, and there are higher costs of capital associated with maintaining back-up credit and alternate sources of liquidity.⁴⁵²

343. Ms. Lapson asserts that investors view capex program as a source of several risks. One of those is execution risk. She quotes the following passage from Moody’s that explains the relevance of a utility’s capex program to its bond rating:

Moody’s makes an assessment of a regulated network’s capital expenditure [program] by considering (i) the size — relative to the issuer’s asset base (expressed in percentage of its Regulatory Asset Value or total fixed assets), and (ii) the complexity — *i.e.* the type of assets to be built and associated technical issues (*e.g.* offshore transmission) as well as the relative concentration of challenging projects within the issuer’s total capex [program] — .

Issuers will score “Aaa” through “B”, depending on the size of their capital [program] measured in terms of annual total capital expenditure — as a percentage of total net fixed assets or regulated asset base. A network with

⁴⁴⁹ Exh. MTO-16 at 35, Table 3.

⁴⁵⁰ *Id.* at 40:4-5.

⁴⁵¹ *Id.* at 40:5-12 (citing Opinion No. 531 at P 149).

⁴⁵² *Id.* at 40:13-19.

one large and complex project accounting for the majority of its capital [program] will also score “B” regardless of the relative scale thereof.⁴⁵³

344. Ms. Lapson quotes a discussion in the same report of the liquidity risks resulting from capex commitments that exceed cash flow:

[T]he ratio of Retained Cash Flow after Dividends divided by capex shows whether a network is able to fund capital expenditure internally. [W]e view positively the financial flexibility enjoyed by a network owner that faces only limited capex requirements easily funded by internally generated cash flows. Such a company would not need to access the markets to raise additional finance and may have a wider range of options to react to changing regulatory assumptions (e.g. reduction in the cost of capital allowed).⁴⁵⁴

345. Ms. Lapson also quotes an analysis by Fitch, which also discusses the liquidity risks posed by capex commitments that exceed internal cash flow and, therefore, require external funding:

The [utilities, power, and gas] sector is characterized by large capital investments in long-dated property, plant, and equipment. Utilities with extensive capex programs tend to experience long periods of negative FCF [free cash flow] during investment peaks due to the time lag between investments and the cash flow from related assets. Given the expected negative FCF of many utilities, Fitch assesses internal and external liquidity available to cover the short- and medium-term funding needs of a utility. . . . The analysis also includes a review of committed capex in the event a utility’s access to additional bank debt and/or the capital markets is denied or reduced.⁴⁵⁵

⁴⁵³ *Id.* at 41:10-25 (quoting Regulated Electric and Gas Networks, Moody’s Investors Service, 13 (Aug. 2009) (website omitted) (Moody’s 2009 Report)) (internal quotation omitted).

⁴⁵⁴ *Id.* at 42:1-12 (quoting Moody’s 2009 Report at 19) (internal quotation omitted).

⁴⁵⁵ *Id.* at 42:15-25 (citing Rating U.S. Utilities, Power and Gas Companies, Sector Credit Factors Special Rep. (Fitch Ratings, Inc.), Mar. 11, 2014, at 8) (internal quotation omitted) (brackets in original).

346. Ms. Lapson contends that the foregoing passages demonstrate the financial community's awareness of the risks of large capex commitments.⁴⁵⁶

347. Ms. Lapson next addresses the Commission's concern that allowing a Base ROE generally below State-Authorized ROEs will make investment in interstate electric transmission less attractive than investment in conventional electric utility activities.⁴⁵⁷ She testifies that respective Base ROEs play a major role in an investor's determination of whether to invest in federally regulated electric transmission assets or state-regulated utility assets:

When this Commission determines a base ROE for the MISO [TOs], that ROE will be applied to each transmission owner's net original cost rate base to formulate the revenue requirement. Similarly, when state commissions determine a ROE, in all or nearly all cases, they apply that ROE to the net original cost retail rate base to formulate revenue requirements. Therefore, when investors narrow their choice to making an investment either in wholesale electric transmission assets subject to federal jurisdiction or in retail electric assets subject to a state's jurisdiction, they will consider the ROEs that will be applied to the original cost rate base in each jurisdiction í .⁴⁵⁸

348. She cites two investment reports, one recent, expressing concern that Commission Base ROE rulings could divert investment assets toward state-regulated utility assets:

[A] very recent investment research report published on May 22, 2015, by UBS Investment Research reported a perception that the Commission's commitment to encouraging investment in electric transmission was eroding, and that investors were already beginning to react to the potential for lower base ROEs by shifting their investment capital to electric and gas retail distribution investments and away from wholesale electric transmission. Regarding pending electric transmission ROE complaints, the report states:

As for the ROE issue . . . the wider policy question remains if the FERC will allow for transmission ROEs to slip below that

⁴⁵⁶ *Id.* at 42:26-27.

⁴⁵⁷ *See* Opinion No. 531 at P 150.

⁴⁵⁸ Exh. MTO-39 at 56:5-14.

authorized by states (it appears to some, certain recent decisions have actually crossed this threshold). Overall, we suspect there is a shift ongoing in the industry back towards distribution capex í .⁴⁵⁹

The comments in the May 22, 2015 UBS report make a point that was prominent in an earlier UBS sector comment published on May 3, 2012, at the time when the Commission set for hearing the first section 206 complaint brought against the NETOs. In that commentary, a UBS analyst noted:

We believe companies will re-deploy capital elsewhere if transmission returns are materially reduced. In our view, the cost of capital could actually increase, because as returns are set lower, valuation multiples will also be reset much lower than current levels.⁴⁶⁰

349. Ms. Lapson believes that reducing the MISO TOsøBase ROE well below most State-Authorized ROEs will deter investors from investing not only in the MISO TOsø transmission but also in any Commission-regulated transmission. Ms. Lapson believes that the resulting drop in ROE earnings and cash would òsurprise and dismayö conventional investors in utility equity.⁴⁶¹

350. She believes that this drop would deter investors from investing in any Commission-regulated transmission:

Such a drop also would lead investors to conclude that there is regulatory risk associated with committing equity capital to Commission-jurisdictional facilities and utilities. The investment communityø expectations are predicated upon investorsøbelief that Commission-approved ROEs are not lower than state commission-approved ROEs, and certainly not more than 100 basis points below even the midpoint values of recent state ROEs.⁴⁶²

⁴⁵⁹ *Id.* at 58:19-59:11 (the quoted UBS report is Exh. MTO-44).

⁴⁶⁰ *Id.* at 59:12-20 (the quoted UBS report is Exh. MTO-45).

⁴⁶¹ Exh. MTO-16 at 62:20-22. Ms. Lapson was discussing the consequences of adopting the Base ROEs proposed by the Non-Utility Participants at that time, the highest of which was 9.54 percent. *See id.* at 61:1-64:14.

⁴⁶² Exh. MTO-39 at 62:4-10.

In her view, investors would be reluctant to invest in any utility that allocated capital to such transmission operations:

Investors would be reluctant to allocate capital to utilities or utility holding companies that, in turn, allocate their capital to Commission-jurisdictional electric transmission, if such investments will earn a return that is below investors' expectations and inferior to the returns available from investments in more favorable jurisdictions.⁴⁶³

351. The foregoing evidence makes a *prima facie* case that: (1) the Midpoint is below the vast majority of State-Authorized ROEs that became effective during the period April 1, 2014-March 31, 2015; (2) investment in Commission-regulated electric transmission involves significant risks that investment in other utilities does not; (3) the MISO TOs' unusually high capex materially increase the risk of investing in their transmission facilities; and (4) awarding the MISO TOs a Base ROE equivalent to the Midpoint will create a material risk that investors who would otherwise invest in their transmission will instead invest in state-regulated facilities. The next inquiry is whether the Non-Utility Participants have produced sufficient evidence to rebut such findings.

(2) Challenges to the MISO TOs' Evidence

352. A number of Non-Utility Participants assert that the State-Authorized ROEs in Ms. Lapson's study should not be considered in determining the placement of the MISO TOs' Base ROE. The Non-Utility Participants challenge (1) the validity of Ms. Lapson's study and (2) the proposition that investment in the MISO TOs' electric transmission facilities is riskier than, or as risky as, investment in state-regulated electric-utility facilities.

(a) Objections to the Relevance and/or Validity of Ms. Lapson's Study

353. OMS argues that the concern expressed by the Commission in Opinion No. 531 regarding competition for capital between Commission-regulated transmission and state-regulated distribution is not relevant in this proceeding. In Opinion No. 531, contends OMS, the Commission addressed a possible situation in which equity investors divert capital from riskier companies whose focus is electric transmission infrastructure to companies with a focus on less risky electric infrastructure investments.⁴⁶⁴ However,

⁴⁶³ *Id.* at 62:13-17.

⁴⁶⁴ OMS Reply Brief at 33 (citing Opinion No. 531 at P 149).

says OMS, most of the MISO TOs are vertically integrated utilities.⁴⁶⁵ Such utilities focus on various types of electric infrastructure, not necessarily wholly or predominantly transmission. In the MISO region, the main competition for capital between transmission and distribution investments takes place *within* the integrated utilities themselves, not against one another in the capital markets.

354. There are several problems with this argument. First, OMS's only support for its contention that the MISO TOs are vertically integrated companies is an undocumented statement to that effect in the Hearing Order. A factual statement in a Commission Order is not, by itself, evidence. In fact, the record shows that five of the MISO TOs have at least 88 percent of their assets concentrated in electric transmission.⁴⁶⁶

355. Second, Ms. Lapson plausibly testifies that an excessive reduction of Commission-regulated Base ROEs could result in a reluctance of investors to allocate capital to utilities that, in turn, allocate their capital to Commission-jurisdictional electric transmission⁴⁶⁷ OMS has not established that the integrated electric utilities in Ms. Lapson's study own Commission-regulated transmission facilities. Thus, if the MISO TOs' Base ROE is lowered excessively, their ownership of Commission-regulated transmission facilities could make it more difficult to compete for capital with those integrated electric utilities.

356. Finally, as OMS implicitly acknowledges, an excessive reduction in the MISO TOs' Base ROE could result in the MISO TOs and other owners of Commission-regulated transmission diverting their capital to state-regulated operations. The May 22, 2015 UBS Report quoted by Ms. Lapson has expressed the concern that "companies [*i.e.*, utilities] will re-deploy capital elsewhere if transmission returns are materially reduced."⁴⁶⁸

357. Mr. Gorman points out that State-Authorized ROEs (excluding those set by the VCC) declined from an average of 10.54 percent in 2005 to an average 9.58 percent during the first six months of 2015.⁴⁶⁹ The data produced by Mr. Gorman provides part

⁴⁶⁵ *Id.* (citing Hearing Order, 148 FERC ¶ 61,049, at P 196).

⁴⁶⁶ Exh. MTO-16 at 37, Table 4.

⁴⁶⁷ Exh. MTO-39 at 62:13-15.

⁴⁶⁸ Exh. MTO-45 at 1 (quoted in Exh. MTO-39 at 59:16-17).

⁴⁶⁹ Exh. JC-1 at 5:13-14; Exh. JC-22 at 10:16-19; Exh. JC-26.

of the factual basis, albeit unacknowledged, for Mr. Solomon's contention that Ms. Lapson's study suffers from an "upward bias." Mr. Solomon attributes this bias to the combination of (1) the "significant" time lag in state commission proceedings between the submission of Base ROE data and subsequent Base ROE determinations (Regulatory Lag) and (2) the continued decline of Base ROE allowances during the 24-month period she uses.⁴⁷⁰

358. In Opinion No. 531-B, the Commission addressed a similar argument. That argument, like Mr. Solomon's in the instant case, warrants a detailed examination.

359. Certain parties argued that the State-Authorized ROEs in Ms. Lapson's study were tainted by Regulatory Lag. Thus, the parties contended, the Commission's reliance on her study was inconsistent with the Commission's preference for the most recent data available.⁴⁷¹

360. The parties indicated that the Regulatory Lag that afflicted Ms. Lapson's study was particularly problematic, because the average of State-Authorized ROEs dropped appreciably after the period covered by her study ended. Ms. Lapson's study covered the period from October 2010 through September 30, 2012.⁴⁷² The average of adjusted State-Authorized ROEs that were approved during calendar year 2012 approximated 10 percent, whereas those approved in the first quarter of 2013 approximated only 9.75 percent. Moreover, the parties contended, during that quarter state commissions approved Base ROEs of 9.3 percent and 9.38 percent.⁴⁷³

361. Though the parties focused on Ms. Lapson's alleged failure to provide the most recent data available, the argument they made was very similar to Mr. Solomon's. Like Mr. Solomon, they argued that the combination of Regulatory Lag and the drop in the average of State-Authorized ROE approved in the most recent quarter made Ms. Lapson's study unreliable.

362. Therefore, the Commission's rejection of the parties' argument in Opinion No. 531-B is highly relevant. First, the Commission rejected the parties' argument that the

⁴⁷⁰ Exh. JC1-4 at 33:5610.

⁴⁷¹ Opinion No. 531-B at P 82.

⁴⁷² See Exhs. NET-402 & NET-403, admitted May 1, 2013, Docket No. EL11-66-001.

⁴⁷³ Opinion No. 531-B at P 82.

gap in time between submission of Base ROE data to state commissions and their approval of Base ROEs invalidated Ms. Lapson's study:

We reject Petitioners' and EMCOS's arguments that the Commission's reliance on the state ROE figures despite their time-lag is inconsistent with the Commission's preference for the most recent data in the record. The evidence of state commission-authorized ROEs that the Commission relied upon is, in fact, the most recent complete study in the record. While the record does contain some more recent evidence of state commission-authorized ROEs, that evidence does not represent a data set comparable to the NETOs' 24-month study, but is rather data for only one quarter in 2013 from Regulatory Research Associates concerning the recent trend in average authorized ROEs.⁴⁷⁴

The Commission relied upon Ms. Lapson's study notwithstanding the impact of Regulatory Lag and her failure to include more recent data, because it was "the most recent complete study in the record."⁴⁷⁵

363. The Commission then addressed the parties' contention that the fall in the average State-Authorized ROE for the first quarter of 2013 exacerbated the effects of Regulatory Lag:

According to Petitioners, the report from Regulatory Research Associates indicates that the average state commission-authorized ROE in the first quarter approximated 9.75 percent, 25 basis points below the analogous adjusted ROE for calendar 2012 (which approximated 10 percent). This evidence does not undermine, but supports, the Commission's conclusion that the 9.39 percent midpoint, determined by using the DCF methodology, is below most of the state ROEs.⁴⁷⁶

Thus, the Commission found the fact that the average Base ROE for the most recent period exceeded the Midpoint to be more significant than the alleged downward movement of State-Authorized ROEs.

⁴⁷⁴ *Id.* P 86 (citations omitted).

⁴⁷⁵ *Id.*

⁴⁷⁶ *Id.* (internal quotations and brackets omitted) (citation omitted).

364. The quoted passages dictate rejection of Mr. Solomon's argument in the instant case. In Opinion No. 531-B, the Commission relied upon Ms. Lapson's study notwithstanding the impact of Regulatory Lag, her failure to include more recent data, and the downward trend of State-Authorized ROEs contained in that data. The Commission did so because Ms. Lapson's study was "the most recent complete study in the record" and the Midpoint was below the average of State-Authorized ROEs.

365. The same reasoning is warranted here. Ms. Lapson's study is the most recent complete study in the record. To be sure, Mr. Gorman provides a study of average annual Base ROEs awarded by states from 1986 to the first six months of 2015.⁴⁷⁷ However, Ms. Lapson's study is the only one that shows the distribution of the Base ROEs awarded, which is the kind of information upon which the Commission relied in Opinion No. 531. Similarly, the average State-Authorized ROEs for the first six months of 2015 presented by Mr. Gorman averaged 9.58 percent. That average is 29 basis points higher than the Midpoint.

366. To be sure, petitioners in Docket No. EL11-66 did not claim, as Mr. Solomon claims, that the combination of Regulatory Lag and the downward trend of State-Authorized ROEs gave Ms. Lapson's study an upward bias. However, given that the petitioners in that docket also emphasized both the Regulatory Lag and the downward trend of the most recent data, the contention of upward bias was arguably implicit. Moreover, the reasoning underlying the Commission's acceptance of Ms. Lapson's study appears to have been that although the study was not perfect: (1) its imperfections did not prevent it from having value; and (2) it was the only complete study of State-Authorized ROEs in the record. Those elements are present in the instant case as well.

367. Joint Consumer Advocates argue that the Commission rejected petitioners' claims that more recent data should be considered, in part because there was no showing of a downward trend in Base ROEs in more recent data.⁴⁷⁸ However, contend Joint Consumer Advocates, the record in the instant case does show a downward trend in Base ROEs in the period subsequent to Ms. Lapson's 24-month analysis.⁴⁷⁹ This downward trend, according to the Joint Consumer Advocates, shows that the data used in her 24-month study is not representative of current market-capital conditions.

⁴⁷⁷ See Exh. JC-26.

⁴⁷⁸ Joint Consumer Advocates Reply Brief at 17 (citing Opinion 531-B at P 86 n.176).

⁴⁷⁹ *Id.* (citing Exhs. S-6 at 1-4 & JC-9 at 29:18-30:19).

368. In footnote 176 to Opinion No. 531-B, which Joint Consumer Advocates cite, the Commission said:

The 9.75 percent figure [for the first quarter of 2013] to which petitioners refer was calculated by excluding í [Base ROE decisions] from one particular state commission and í would be 10.24 percent without that exclusion. Further, we note that the record evidence also shows that the average state commission-allowed ROE for the fourth quarter of 2012 í was 10.10 percent. Thus, the data concerning state commission-allowed ROEs for the fourth quarter of 2012 (10.10 percent) and the first quarter of 2013 (10.24 percent) í do not indicate a downturn in state ROEs as Petitioners allege.⁴⁸⁰

369. The foregoing footnote to Paragraph 86 is an aside, not a statement central to the Commission's ruling. In Paragraph 86, the Commission reiterates the petitioners' assertion that their data shows State-Authorized ROEs allowed in the first quarter of 2013 averaged 25 basis points below those allowed in the last quarter. However, the Commission goes on to say that the first-quarter data reinforces its decision to use the Upper Midpoint because the average, which is 9.75 percent, exceeds the Midpoint, which is 9.39 percent. If the Commission's finding in the footnote, that the average of Base ROEs awarded in the first quarter had not declined, was critical to its decision, the Commission would have placed that finding in the text.

370. In any event, the relevant data in this proceeding does not differ in any material respect from that presented by the petitioners in Opinion No. 531-B. In footnote 176, the Commission explained that petitioners' average of State-Authorized ROEs approved in the first quarter of 2013 (9.75 percent) was lower than the average of State-Authorized ROEs approved during 2012 (10 percent) only because the petitioners' omitted the Base ROEs approved by one state.⁴⁸¹ Inclusion of the Base ROEs approved by that state raised the first-quarter average to 10.24 percent, 24 basis-points higher than the 2012 average. Similarly, Mr. Gorman's data, which shows the average of State-Authorized ROEs approved during the first half of 2015 (9.58 percent) to be lower than the average of State-Authorized ROEs approved during 2014 (9.76 percent) omits Base ROEs authorized by the VCC.⁴⁸² Inclusion of the VCC-authorized Base ROEs would have raised the average of State-Authorized ROEs approved in 2014 to 9.91 percent, but

⁴⁸⁰ Opinion No. 531-B at P 86 n.176.

⁴⁸¹ *Id.*

⁴⁸² Exh. JC-26 at n.1.

would have raised the average of State-Authorized ROEs approved in the first half of 2015 to 10.09 percent. So calculated, the 2014 average would have trailed the January-June 2015 average by 18 basis points.⁴⁸³

371. Mr. Solomon challenges Ms. Lapson's study on the ground that state commissions have different ratemaking practices than the Commission and that the Commission has long held that its wholesale ROE determinations should not be influenced by state decisions. He further contends that unlike the Commission, some state commissions add allowances to their utility Base ROEs to compensate the utilities for delays in the effective dates of their rates.⁴⁸⁴

372. These contentions, even if true, would not invalidate the use of State-Authorized ROEs as a guide to the placement of the MISO TO's Base ROE within the zone of reasonableness. Accordingly, neither argument supports rejecting Ms. Lapson's study.

373. In Opinion No. 531-B, the Commission explained how it had used evidence regarding State-Authorized ROEs in Opinion No. 531:

The Commission did not use the evidence of state commission-authorized ROEs to determine the level at which the NETO's base ROE should be set. [T]he Commission merely relied on the state commission-authorized ROEs in conjunction with evidence that interstate transmission is riskier than state-level distribution as evidence that the 9.39 percent midpoint of the DCF-produced zone of reasonableness was insufficient to satisfy the requirements of *Hope* and *Bluefield* and, therefore, that an adjustment above 9.39 percent was warranted.⁴⁸⁵

Thus, the Commission emphasized that it was comparing State-Authorized ROEs to the Midpoint solely as a guide to determine whether a Base ROE equivalent to the Midpoint met the requirements of *Hope* and *Bluefield*. That is also the purpose of Ms. Lapson's evidence.⁴⁸⁶

⁴⁸³ See Exh. S-6 at 1-4; see also Exh. JC-9 at 29:19-30:15.

⁴⁸⁴ Exh. JCI-4 at 32:17-33:4.

⁴⁸⁵ Opinion No. 531-B at P 84.

⁴⁸⁶ The same reasoning applies to Mr. Keyton's assertion that comparing the Midpoint with a valid expected-earnings analysis would provide more insight than comparing that Midpoint with a range of State-Authorized ROEs. Exh. S-1 at 116:216

374. Mr. Solomon's contention that some state commissions add allowances to their utility Base ROEs to compensate the utilities for delays in the effective dates of their rates is subject to challenge and may be irrelevant. He does not document his statement, and Ms. Lapson represented that she removed all incentive adders from the State-Authorized ROEs contained in her study.⁴⁸⁷

375. Mr. Solomon and Mr. Hill also argue that Ms. Lapson's analysis improperly ignores the 50 basis-point adder that was recently approved by the Commission for MISO TOs in Docket No. ER15-358.⁴⁸⁸

376. On January 5, 2015, the Commission granted the MISO TOs' request for a 50 basis-point adder for participating in MISO, subject to the establishment of a just and reasonable Base ROE in this docket.⁴⁸⁹ The Commission stated that it was acting consistent with FPA section 219,⁴⁹⁰ which directs the Commission to establish, by rule, incentive-based rate treatments for electric transmission designed to ensure reliability, reduce transmission costs and otherwise benefit consumers.⁴⁹¹

377. The Commission found that the requested adder served these purposes:

[T]he basis for the incentive adder is a recognition of the benefits that flow from membership in an RTO Therefore, consistent with the policy í

118:9. Even if this were true, it would not invalidate the use of State-Authorized ROEs as a guide to determining whether a Base ROE equivalent to the Midpoint meets the requirements of *Hope* and *Bluefield*.

⁴⁸⁷ Exh. MTO-16 at 52:12-15.

⁴⁸⁸ Exh. JCA-11 at 69:12613; *accord* Exh. JCI-4 at 35:10619.

⁴⁸⁹ *Midcontinent Indep. Sys. Operator, Inc.*, 150 FERC ¶ 61,004 at P 39 (2015).

⁴⁹⁰ 16 U.S.C. § 824s (2012).

⁴⁹¹ 150 FERC ¶ 61,004 at P 40. In section 219(a) of the FPA, Congress directed the Commission to establish incentive-based rate treatments to foster investment in transmission facilities. The Commission implemented FPA section 219 by issuing Order No. 679. *Promoting Transmission Investment through Pricing Reform*, Order No. 679, FERC Stats & Regs. ¶ 31,222 (2006), *order on reh'g*, Order No. 679-A, FERC Stats. & Regs. ¶ 31,236, *order on reh'g*, 119 FERC ¶ 61,062 (2007).

to encourage continued involvement in MISO, we find that the requested 50-basis point adder is appropriate⁴⁹²

378. In Opinion No. 531, the Commission explained that incentives granted under FPA section 219 were irrelevant to the determination of Base ROEs. The Commission explained:

The purpose of the Commission's Base ROE analysis is to determine a level of return sufficient to satisfy *Hope* and *Bluefield*. Under that precedent, we are tasked with ensuring that the base ROE, among other things, enables the utility to attract investment. In contrast, ROE incentive adders are intended to encourage transmission investment above the level produced by a base ROE due to the circumstances of a certain project or projects. Although section 219 of the FPA gives us authority to provide incentives above the base ROE, nothing in section 219 relieves us from first setting the base ROE at a place that meets *Hope* and *Bluefield*.⁴⁹³

The foregoing language makes clear that it would be inappropriate to consider incentives granted under FPA section 219 when determining whether to select the MISO TO's Base ROE at the Midpoint or Upper Midpoint.

379. Joint Consumer Advocates argue that the above-quoted language constituted a finding that it was inappropriate to consider project-specific incentive adders available to [the] NETOs.⁴⁹⁴ Joint Consumer Advocates contend that the Commission's rationale suggests that the Commission would reasonably reach a different conclusion on RTO and Independent Transco adders that are applicable to all of MISO TO's existing transmission and not tied to specific transmission projects.⁴⁹⁵

380. The rationale the Commission provided for not considering incentive adders in Opinion No. 531 applies to the 50 basis-point adder at issue in this proceeding. The Commission provides ROE incentive adders to encourage behavior that will ultimately benefit transmission customers. That is true whether the Commission is encouraging participation in an ISO such as MISO or investment in a specific project. To lower a

⁴⁹² 150 FERC ¶ 61,004, at P 42.

⁴⁹³ Opinion No. 531 at P 153.

⁴⁹⁴ Joint Consumer Advocates Reply Brief at 18.

⁴⁹⁵ *Id.*

utility's Base ROE based on an incentive adder embedded in the utility's formula rates would significantly negate the adder's value.

381. Joint Consumer Advocates and Joint Customer Intervenors both assert that the Commission's refusal to consider FPA section 219 incentives in determining transmission owners' Base ROEs does not preclude considering such incentives when comparing such ROEs with those authorized by state commissions.⁴⁹⁶ However, such comparisons may directly impact the level of the Base ROEs awarded to the MISO TOs. Accordingly, it would be inappropriate to consider incentives offered under FPA section 219 when making these comparisons.

(b) Objections Based on Comparative Risks of Investment in the MISO TOs' Electric Transmission and Investment in State-Regulated Utility Operations

382. Mr. Hill, Mr. Solomon, and Mr. Kumar contend that transmission operations generally are less risky than state-regulated retail distribution or integrated utility operations.⁴⁹⁷ Mr. Hill argues that "the investment community considers transmission operations to have less operating (business) risk than fully-integrated electric utility operations."⁴⁹⁸ In support, he quotes from major credit-rating services.

383. Initially, he quotes a December 5, 2011 Standard and Poor's ratings report on ITC Holdings. That report states, "We view Holdings' regulated, electric transmission business as a relatively lower technological and operational risk compared with other electric utility businesses that often include the higher-risk generation component."⁴⁹⁹

384. This quotation is entitled to only limited weight. First, the quoted report is over four years old. Mr. Kramer testified that the capex needs of the MISO TOs have evolved dramatically since 2011 and continue to do so.⁵⁰⁰ Ms. Lapson has documented that the investment community views a utility's capex situation as a major factor in assessing

⁴⁹⁶ *Id.*; Joint Customer Intervenors Reply Brief at 51.

⁴⁹⁷ *See, e.g.*, Exhs. JCA-1 at 35:17622 & SWC-8 at 13:18620.

⁴⁹⁸ Exh. JCA-1 at 36:39-40.

⁴⁹⁹ *Id.* at 35:23-27.

⁵⁰⁰ *See generally* Exh. MTO-21 at 18:5-29:12, discussed *infra*.

risk.⁵⁰¹ Accordingly, the report may not represent the Standard and Poor's current view of the risks of investing in ITC Holdings's transmission operations.⁵⁰²

385. Mr. Hill quotes a statement made in passing in another, 23-page Standard and Poor's report.⁵⁰³ This report (which is available online) places "network" business with very low operating risk "at the low end of the utility risk spectrum"⁵⁰⁴

386. However, the Standard and Poor's statement is limited to those network businesses "with very low operating risk[s]" The credit service does not say that all, or even most, network businesses operate in this low-risk environment. The record contains evidence that investment in the MISO TO's transmission entails a number of material risks, and that the owners' high capex requirements exacerbate those risks.⁵⁰⁵ Thus, the quoted statement by Standard and Poor's does not apply to investment in the MISO TO's transmission.

387. Finally, Mr. Hill quotes a 2013 report by Moody's describing its methodology for rating certain regulated electric and gas utilities.⁵⁰⁶ A slightly revised version of that quotation is set out here. First, Moody's explains that it has developed two categories for such utilities based on their business risks:

There are two sets of thresholds "based on the level of the issuer's business risk" the Standard Grid and the lower business risk (LBR) Grid.

⁵⁰¹ Exh. MTO-16 at 41:10-42:27.

⁵⁰² In addition, the December 5, 2011 report is not included as an Exhibit and is apparently not available without a subscription to Standard and Poor's. This unavailability makes it impossible to ascertain the context of the report. On the other hand, the MISO TOs had ample opportunity during the proceeding to obtain and introduce the report if they determined it was to their advantage to do so.

⁵⁰³ Exh. JCA-1 at 36:3-11.

⁵⁰⁴ Standard and Poor's, *Utilities: Key Credit Factors for the Regulated Utilities Industry* at 11 (published November 19, 2013). Mr. Hill represents that the report was re-published on June 17, 2014. Exh. JCA-1 at 36 n.14.

⁵⁰⁵ Exh. MTO-16 at 35, Table 3, 40:5-19, 41:10-42:27; Exh. MTO-39 at 40:12-41:6.

⁵⁰⁶ Exh. JCA-1 at 36:13-37.

In our view, the different types utility entities covered under this methodology have different levels of business risk.⁵⁰⁷

388. Moody's applies the Standard Grid to integrated utilities because their generation component results in their generally having a higher level of business risk:

[V]ertically integrated utilities generally have a higher level of business risk, because they are engaged in power generation, so we apply the Standard Grid. We view power generation as the highest-risk component of the electric utility business, as generation units are typically the most expensive part of a utility's infrastructure (representing asset concentration risk) and are subject to the greatest risks in both construction and operation, including the risk that incurred costs will either not be recovered in rates or recovered with material delays.⁵⁰⁸

389. Moody's applies the LBR Grid to utilities that provide only transmission and distribution (T&Ds), because they may have lower business risk if certain factors are present:

Other types of utilities may have lower business risk [and] are most appropriately assessed using the LBR Grid due to factors that could include a greater transfer of risk to customers, strong insulation from commodity price movements, protection from volumetric risks, limited capex needs and low exposure to storms, accidents and natural disasters. For instance, we tend to view certain US electric transmission and distribution companies (T&Ds, which lack generation but generally retain some procurement responsibilities for customers), as typically having a lower business risk profile than their vertically integrated peers.⁵⁰⁹

390. Moody's states that if it does not view a T&D's business risk to be materially lower than that of an integrated electric utility, it will apply the Standard Grid. Moody's explains, "[t]his could result from a regulatory framework that exposes them to energy supply risk, large capital expenditures for required maintenance or upgrades, a

⁵⁰⁷ Moody's Rating Methodology, Regulated Electric and Gas Utilities, December 23, 2013 at 23 (Moody's Report).

⁵⁰⁸ *Id.*

⁵⁰⁹ *Id.* at 24.

heightened degree of exposure to catastrophic storm damage, or increased regulatory scrutiny due to poor reliability, or other considerations.⁵¹⁰

391. The report is not dispositive. As relevant here, the report applies only to rate-regulated electric . . . utilities that are not Networks.⁵¹¹ Regulated Electric Networks include companies whose predominant business is purely the transmission of electricity and which are rate-regulated under a national framework.⁵¹² Thus, the report does not discuss Moody's methodology for rating Commission-regulated electric transmission. Rather, the report describes the methodology for rating, as relevant here, electric utilities whose predominant business is the sale of electricity or related services under a rate-regulated framework, in most cases to retail customers.⁵¹³

392. Essentially, the portion of the Moody's Report quoted by Mr. Hill compares the business risks of two types of utilities that make bundled retail sales: integrated electric utilities, which generate, transport and distribute electric power; and transmission and distribution utilities, T&Ds, which only transport and distribute such power. Moody's finds integrated utility operations to be generally more risky than T&D operations, due to the former's generation component.

393. Moody's statement that it views power generation as the highest-risk component of the electric utility business must be considered in that context. Moody's clearly believes generation to be the riskiest component of retail sales operations. However, the report does not say that generation is riskier than Commission-regulated transmission. The report does not compare the risks of investing in integrated electric utilities with the risks of investing in transmission. It does not address how the risks unique to electric generation compare with those unique to electric transmission. Moreover, by rating T&Ds as low business risk it implies that integrated electric utilities' transmission and distribution functions entail low risks that to some degree offset those posed by generation.

394. In addition, the report emphasizes the risks posed by a utility's capex needs. The report says a T&D's limited capex needs would support putting it in the LBR Grid.⁵¹⁴

⁵¹⁰ *Id.*

⁵¹¹ *Id.* at 4.

⁵¹² *Id.* at 4 n.4.

⁵¹³ *Id.* at 4.

⁵¹⁴ *Id.* at 24.

Conversely, a T&D's large capital expenditures for required maintenance or upgrades would support putting it in the Standard Grid.⁵¹⁵ As discussed, the evidence shows that the MISO TOs' capex needs are high.⁵¹⁶

395. Mr. Hill's quotations from Standard and Poor's and Moody's may support a finding that investment in integrated electric utilities poses risks comparable to investment in electric transmission. Investment in integrated electric utilities poses risks associated with generation that investment in electric transmission does not. However, investment in electric transmission poses a number of unique risks that investment in integrated electric utilities does not. Moreover, investment in the MISO TOs' transmission entails additional risks due to the owners' high capex requirements,⁵¹⁷ a factor to which Moody's pays close attention.⁵¹⁸

396. As discussed, in Opinion No. 531, the Commission expressed concern that awarding the NETOs a Base ROE below most Base ROEs authorized by state commission might divert investment from Commission-regulated electric transmission facilities to state-regulated utilities.⁵¹⁹ That concern is also relevant here.

397. The integrated electric utilities in Ms. Lapson's study, after elimination of a high-end outlier, have State-Authorized ROEs ranging from 9.50 percent to 10.40 percent. Those ROEs exceed the Midpoint, 9.29 percent, by 21 to 111 basis points. This is a substantial gap.

398. Authorizing the MISO TOs to collect a Base ROE no higher than the Midpoint would disadvantage them in their competition with integrated electric utilities for capital. The record shows that the risks of investment in the MISO TOs' transmission are at least as great as the risks of investment in integrated electric utilities. Investors would have little reason to accept a Base ROE of 9.29 percent from the MISO TOs when they could get Base ROEs ranging from 9.50 percent to 10.40 percent from integrated electric utilities.

⁵¹⁵ *Id.* at 4.

⁵¹⁶ Exh. MTO-16 at 35, Table 3.

⁵¹⁷ *Id.* at 35, Table 3, 40:4-19, 41:10-25.

⁵¹⁸ *See id.* at 41:10-42:12, Moody's Report at 24.

⁵¹⁹ Opinion No. 531 at P 150.

399. Mr. Hillø's evidence does not address the evidence in the record supporting the conclusion that investment in Commission-regulated transmission poses a greater risk than investment in distribution.⁵²⁰ A comparison of pages 1 and 2 of Exhibit MTO-42 allows one to determine the Base ROE distribution of the distribution-only utilities.⁵²¹

400. The distribution of State-Authorized ROEs to distribution-only utilities is as follows:

8.72	9.25	9.55	9.75	10.10
8.72	9.25	9.55	9.75	
9.15	9.36	9.62	9.75	
9.16	9.40	9.70	9.75	
9.20	9.45	9.70	9.75	

The mean, the median and the midpoint of these State-Authorized ROEs are, respectively, 9.45 percent, 9.55 percent and 9.41 percent. Thus, the mean, the median and the midpoint of these ROEs are all above the Midpoint of 9.29 percent. The Midpoint is below 14 of the 21, or 67 percent, of these ROEs.

401. The Upper Midpoint, 10.32 percent, is higher than 56 of the 59 State-Authorized ROEs for integrated electric utilities contained in Ms. Lapson's study. The Upper Midpoint is higher than the midpoint (9.95 percent) and the mean (9.50 percent) of those State-Authorized ROEs. The Upper Midpoint is higher than all of the State-Authorized ROEs for distribution-only utilities contained in the study.

402. In Opinion No. 531-B, the Commission determined that the relationship between the State-Authorized ROEs submitted by Ms. Lapson and the Upper Midpoint in that proceeding was not relevant to determining the NETOs' Base ROE. The Commission reasoned that the fact that the mean, median and midpoint of the State-Authorized ROEs were below the Upper Midpoint in that proceeding did not undermine the Commission's conclusion that an upward adjustment was warranted.⁵²² Given record evidence

⁵²⁰ See Exhs. MTO-16 at 35, 40:4-19, 41:10-42:25, MTO-39 at 39:3-41:6.

⁵²¹ The distribution-only Base ROEs are the Base ROE values that are included in the graphs on page 2 of the Exh. MTO-42, but are not included in the graphs listed on page 1.

⁵²² Opinion No. 531-B at P 85.

showing that interstate transmission was riskier than state-level distribution, the fact that the mean, median and midpoint of the State-Authorized ROEs were all above the Midpoint supported adjusting the NETOs' Base ROE above that level. Similarly, the fact that 89 percent of the State-Authorized ROEs in the NETOs' study were below the Upper Midpoint was irrelevant to how the Midpoint compared to those ROEs. What was relevant was that almost 93 percent of the ROEs were above the Midpoint.⁵²³

403. The same reasoning applies here. Opinion No. 531-B focused solely on the State-Authorized ROEs' relationship to the Midpoint, and disregarded their relationship to the Upper Midpoint.⁵²⁴ Accordingly, it does not matter that nearly all of the State-Authorized ROEs contained in Ms. Lapsone's study are below the Upper Midpoint. All that is relevant is the relationship of those ROEs to the Midpoint.

404. Some Non-Utility Participants attempt to establish that investment in electric distribution is no less risky than investment in electric transmission. They do not deny that investment in the MISO TOs' electric transmission involves the general risks unique to such investment or unique to investment in electric-transmission utilities with high capex requirements. Nor do they claim that investment in electric distribution involves similar risk. Rather, they argue that the MISO TOs have lower regulatory risks than state-regulated electric utility operations.

405. Mr. Hill, Mr. Solomon and Mr. Kumar argue that investment in the electric-transmission operations of the MISO TOs present a lower business risk than state-regulated electric utilities, because the former recover their revenue requirements through formula rates, whereas the latter generally recover their revenue requirements through stated rates.

406. Mr. Hill asserts that Commission-authorized formula rates allow electric utilities to earn their Base ROEs, without variation, every month. In contrast, state-regulated companies are not able to do this and their returns are more volatile.⁵²⁵

407. Mr. Hill acknowledges that state-regulated utilities are allowed in many cases to use trackers and adjustment clauses that serve purposes similar to those served by formula rates.⁵²⁶ However, he asserts these utilities' regulatory structures are grounded in

⁵²³ *Id.*

⁵²⁴ *Id.*

⁵²⁵ Exh. JCA-1 at 40:19-22.

⁵²⁶ *Id.* at 40:23-25.

traditional ratemaking. As a result, the return they actually receive is whatever funds are left over after expenses are met. Therefore, those returns vary as the expenses vary.⁵²⁷

408. Mr. Hill's sole support for his description of transmission formula rates derives from his description of the cross-examination of a Director of Rates for the predecessor of FirstEnergy in a proceeding before the West Virginia Public Service Commission in 2008.⁵²⁸ The colloquy is entitled to little weight.

409. The issue here is whether the MISO TOs' transmission formula rates serve to reduce the risk of investment in their transmission relative to investment in state-regulated electric utilities. While the operation of the MISO TOs' formula rates is relevant to that discussion, how the formula rates of an electric utility that is not a MISO TO operated seven years ago is not. At any rate, the ambiguous testimony⁵²⁹ elicited in a narrow segment of a state public-service proceeding throws little light on the latter subject.

410. Mr. Solomon describes the operation of transmission formula rates differently from Mr. Hill. Mr. Solomon describes formula rates as providing "for timely recovery of prudently incurred costs of providing such service through full cost-of-service rates that provide for annual changes based on the utility's choice of either recent historical costs or estimated costs with a true-up to assure recovery of actual costs, including the allowed ROE."⁵³⁰ Mr. Solomon contends that unlike stated rates, formula rates "mitigate[] the risk that unknown events could occur during the year that might cause an increase in costs or a loss in revenue that the [MISO TOs] would not be able to later recover from their customers."⁵³¹

⁵²⁷ *Id.* at 40:23-41:1.

⁵²⁸ *See id.* at 41:2-42:23.

⁵²⁹ At one point, the witness appears to admit that the utility will receive its full Base ROE each year, regardless of fluctuations in expenses. Exh. JCA-1 at 41:31-34. At another point, the witness says what the utility will receive is its "revenue requirement." *Id.* at 41:31-41, 42:10-14. At still another point, the witness states the utility will receive its "12-month projection, subject to" "at which point the cross-examiner cuts the witness off." *Id.* at 42:1-5.

⁵³⁰ Exh. JCI-4 at 12:1-5.

⁵³¹ *Id.* at 12:5-8.

411. Mr. Kumar, who filed only rebuttal testimony, says "most of the MISO TOs have formula rates that allow them to recover all transmission-related costs on an annual basis. Mr. Kumar explains that all of the formulas have a "true-up process that allows them to recover the difference between the computed revenue requirement and the revenues received." He contends that most of the MISO TOs use a "projected test year," which permits them to recover this difference without any lapse of time. Other MISO TOs use a "historical test year," which permits them to recover this difference, with interest, after a period of time.⁵³²

412. Dr. Avera responds that "[e]quity investors recognize that formula rates are a two-edged sword." Although they obviate the need for electric utilities to file a rate increase when costs are increasing, such rates do not protect the utility from retroactive downward rate adjustments to reflect lower costs. Viewed from another perspective, formula rates, unlike stated rates do not allow a utility to collect more than the allowed Base ROE during a period of declining costs. Therefore, investors "see very limited strategic opportunity for a utility under formula rates to earn higher returns to balance the risks associated with potential disallowances by regulators."⁵³³

413. Dr. Avera further testifies that more states are permitting rate schemes that closely resemble formula rates. As noted, Mr. Hill acknowledged that state-regulated utilities are allowed in "many" cases to use "trackers" and "adjustment clauses" that serve purposes similar to those served by formula rates.⁵³⁴ Dr. Avera testifies that the term "tracker" essentially encompasses the phrase "adjustment clause." The formula rates in the MISO Tariff essentially play the role of a tracker, albeit a more comprehensive tracker, than is usually found in retail rate tariffs. Dr. Avera emphasizes the word "usually" because some retail tariffs are "quite robust," *i.e.*, comparable to a formula-rate tariff. Moreover, the gap in comprehensiveness between FERC formula rates is "certainly narrowing as

⁵³² Exh. SWC-8 at 8:16-9:2.

⁵³³ Exh. MTO-1 at 57:3-13. Joint Consumer Advocates respond that the MISO TOs' choice of formula rates demonstrates that the owners view this rate structure as less risky. Joint Consumer Advocates Reply Brief at 23. However, the record contains no evidence as to how or why MISO established formula rates and under what circumstances the MISO TOs adopted them. Joint Consumer Advocates' assumption in that regard is speculative.

⁵³⁴ Exh. JCA-1 at 40:23-25.

retail jurisdictions are moving into that area, and some have actually gone to formula rates for distribution.⁵³⁵

414. These competing descriptions are little more than a medley of unsupported, or inadequately supported, opinions. One would expect a discussion comparing the risks presented by the MISO TOs formula-rate scheme and by the rate schemes used by the states authorizing the Base ROEs described in Ms. Lapson's study to begin with a documented description of how each scheme works. This would include a description of the formula-rate scheme contained in Attachment O to the MISO Tariff, and of the rate schemes described in the relevant state statutes.

415. Instead what we have is unsupported and sometimes conflicting opinions even among the Non-Utility Participants as to how these various rate schemes operate. Attachment O is not an exhibit in this proceeding. Mr. Hill appears to believe that the MISO TOs are able to recover their actual expense for each month, plus their return.⁵³⁶ Mr. Solomon and Mr. Kumar appear to describe a formula-rate scheme that uses a stated rate, which is adjusted each year to ensure collection of costs that were not recovered through the previous stated rate.⁵³⁷

416. The discussion of the retail-rate schemes is similarly vague and unsupported. Mr. Solomon indicates that state rate schemes inevitably prevent subject utilities from recovering unanticipated expenses in a timely manner and, therefore, from recovering their full Base ROE.⁵³⁸ Mr. Hill, however, admits that many state jurisdictions allow "adjustment clauses" and "trackers."⁵³⁹ Dr. Avera testifies that these two devices are equivalent to a less comprehensive and in some cases, equally comprehensive version of formula rates. He further states that more states are moving towards a formula-rate approach.⁵⁴⁰

⁵³⁵ Tr. 486:9-487:3.

⁵³⁶ Exh. JCA-1 at 40:19-20, 41:20-25.

⁵³⁷ Exh. JCI-4 at 12:1-5; Exh. SWC-8 at 8:15-9:2.

⁵³⁸ *Id.* at 12:5-11.

⁵³⁹ Exh. JCA-1 at 40:23-25.

⁵⁴⁰ Tr. 486:9-487:3.

417. As to the comparative risk, the parties appear to grudgingly agree that formula rates reduce the risk of under-recovery, but deny the utility the benefits of over-recoveries, which in some instances may serve as a buffer against future unanticipated adversities. The narrative portion of the testimony provides little guidance as to which of these factors is to be given greater weight.

418. The narrative portions of the foregoing testimony fail to establish that the MISO TOsø formula rates materially reduce the risk of investment in their transmission relative to electric distribution. However, Mr. Hill and Mr. Solomon attempt to corroborate their opinions with additional evidence.

419. Mr. Hill argues that the MISO TOsø formula-rate construct assures that their returns will be less volatile than those of state-regulated electric utilities.⁵⁴¹ Exhibit JCA-13 shows the high, low and average annual earned Base ROE for each of the 47 publicly-traded electric utilities followed by Value Line during the period 2004-2014. The average Base ROE was 10.18 percent, the average high Base ROE was 13.17 percent and the average low Base ROE was 6.81 percent. The range of variability in the Base ROEs as a percent of the average was 63.04 percent. Mr. Hill contends that this level of volatility dictates an investor expectation that the earned return of the nationwide sample group of electric utilities will fluctuate about 30 percent above or below the average expected return. In contrast, Mr. Hill contends, the MISO TOsø formula-rate construct assures that their earned return will not vary.⁵⁴²

420. Mr. Hill's contention that the MISO TOsø formula-rate construct assures them an effective earned-return volatility of zero rests on his assumption that owners will recover their allowed Base ROE each year. That assumption is not only unsupported by any evidence in the record but also contradicted by testimony, provided by Mr. Solomon and Mr. Kumar, that a formula-rate scheme involves charging a stated rate that is adjusted annually to permit, among other things, recovery of past costs not recovered by the previous stated rate.⁵⁴³

421. If Mr. Solomon and Mr. Kumar are correct, the formula rate may fail to recover the allowed Base ROE during a given year. Moreover, during a period of rising, unanticipated costs, the formula rate might fail to recover the allowed Base ROE over several years. In that case, the stated rate would recover unrecovered costs from the

⁵⁴¹ Exh. JCA-1 at 40:19-41:1; Exh. JCA-11 at 49:10-50:7.

⁵⁴² Exh. JCA-11 at 49:12-16.

⁵⁴³ See Exhs. JCI-4 at 12:1-5, SWC-8 at 8:16-9:2.

previous year, but would fail to recover unanticipated costs incurred during the current year.⁵⁴⁴

422. For that reason, Mr. Hill's failure to prepare a chart of percentages of Base ROEs earned by the MISO TOs during the same period greatly diminishes the force and relevance of Exhibit JCA-13. There simply is no way to compare the earned-return volatility of the MISO TOs and Mr. Hill's sample group.

423. Even if Mr. Hill had compared such a chart, Exhibit JCA-13 would be of limited use in comparing the risks of investment in electric transmission with investment in electric distribution. It is not clear how many, if any, of the companies in that exhibit provide distribution-only services.

424. Mr. Solomon contends that the Regulatory Lag created by the ratemaking practices of some state commissions causes utilities to actually earn less than their State-Authorized ROE. In contrast, the MISO TOs' transmission formula rates allow the owners to collect all costs based on annual rate changes, and thereby actually earn the Base ROE included in the formula rates.⁵⁴⁵

425. In support, Mr. Solomon cites a May 28, 2015 "Data Dispatch" by SNL Financial, which compares the State-Authorized ROE approved by state commissions for each of 38 electric utilities in 2013 with the Base ROE each of those utilities actually earned in 2014. The dispatch shows that the average State-Authorized ROE approved in 2013 was 9.84 percent, whereas the average Base ROE earned by the utilities receiving those authorizations in 2014 was only 8.61 percent. Whereas 29 of the utilities earned less than their authorized Base ROE, only nine of the utilities earned more.⁵⁴⁶

426. Mr. Solomon argues that a comparison between Ms. Lapson's State-Authorized ROEs and the Midpoint is not appropriate here. He contends that a comparison between (1) the Base ROEs utilities receiving such state authorizations could be expected to earn,

⁵⁴⁴ Joint Consumer Advocates also assert that formula rates have contributed to there being no review of the MISO-wide Base ROE in more than a decade, and that this factor demonstrates the enormous risk-reducing benefits being realized by the MISO TOs. Joint Consumer Advocates Initial Brief at 29. However, as this proceeding demonstrates, the owners' Base ROE has always been subject to challenge under FPA section 206.

⁵⁴⁵ Exh. JCI-4 at 33:14-21.

⁵⁴⁶ *Id.* at 33:22-34:12 (discussing Exh. JCI-7 at 110-113).

and (2) the Base ROEs that Mr. Solomon and other witnesses recommend for the MISO TOs would be more appropriate.⁵⁴⁷

427. The SNL Data Dispatch, by itself, provides incomplete support for Mr. Solomon's position. Like Mr. Hill, Mr. Solomon has not provided a corresponding chart showing the Base ROEs actually earned by the MISO TOs during the same period. If the narrative descriptions of Commission-regulated formula rates provided by Mr. Solomon and Mr. Kumar⁵⁴⁸ are correct, the MISO TOs would have charged stated rates during 2014, and the owners' vulnerability to under-recoveries would have been the same as the utilities listed in the dispatch. To be sure, the MISO TOs' formula rates would have permitted them to recover that shortfall during the next rate period; however, according to Mr. Hill and Dr. Avera many state jurisdictions have "adjustment clauses" and "trackers" that permit state-regulated utilities to make similar recoveries.⁵⁴⁹ There is no way of knowing from this record whether the states awarding the Base ROEs surveyed by SNL have similar mechanisms.

428. Mr. Solomon quotes financial reports from Moody's, which he states support his contentions regarding formula rates. He quotes a one-page "Special Comment" issued in 2009, which rates "FERC-regulated transmission businesses as the lowest-risk subsector" in the "T&D industry group."⁵⁵⁰ The comment appears to be confined to the State of Texas and does not mention formula rates. A six-year old statement confined to one state that does not mention formula rates may be tangentially relevant, but is entitled to little weight.

429. He also cites an October 9, 2012 "Credit Opinion" by Moody's (Moody's Credit Opinion) on Southwestern Public Service Company (SPS), an electric utility regulated by the Commission and the States of Texas and New Mexico. He notes that the report assesses the utility's regulatory environments, rating the environments provided by Texas and New Mexico as "average" and "below-average," respectively, but rating the environment provided by the Commission as "above average." Mr. Solomon also includes the following quotation from the report:

⁵⁴⁷ *Id.* at 34:19-35:9.

⁵⁴⁸ *Id.* at 12:1-5; Exh. SWC-8 at 8:16-9:2.

⁵⁴⁹ Exh. JCA-1 at 40:23-25; Tr. 486:9-487:3.

⁵⁵⁰ *See* Exhs. JCI-4 at 12:12-16, JCI-7 at 6.

The company recovers its capital investments in Texas and New Mexico through general rate cases rather than via riders or other such mechanisms that could make recovery of investments more timely and certain. Rate filings have been based on a historical test year, which exacerbates regulatory lag when a utility is growing as SPS is.⁵⁵¹

Mr. Solomon contends that the formula rates utilized by the MISO TOs enable them to reduce their risks and enhance their credit standing by avoiding such regulatory lags.⁵⁵²

430. The Moody's Credit Opinion does not support Mr. Solomon's position. The statement regarding the comparative regulatory environments fostered by the Commission, Texas and New Mexico does not, by itself, support the proposition that SPS's retail operations are riskier than its Commission-regulated operations. The statement is irrelevant to the comparative risks posed by SPS's retail and transmission operations, because the report states that the Commission "oversees wholesale sales (30% 2011 revenue),"⁵⁵³ not transmission. The Credit Opinion does not mention formula transmission rates.

431. Moreover, by explicitly stating that SPS does not use riders or other mechanisms for recovery of its capital investments in Texas and New Mexico,⁵⁵⁴ the credit opinion implies that it is more typical of utilities to use such mechanisms than retail rate cases. Accordingly, the Credit Opinion at least implies that state jurisdictions offer utilities recovery mechanisms similar to those available in formula transmission rates.

432. A subsequent portion of the Credit Opinion is more explicit in this regard, stating:

Texas has recently implemented the Transmission Cost Recovery Factor (an annual filing in between to recover new investment in transmission and changes in wholesale costs) as well as a Distribution Cost Recovery Factor (also an annual true-up mechanism, which has been legislated but not yet put into practice).⁵⁵⁵

⁵⁵¹ Exh. JCI-4 at 13:11-16 (quoting Exh. JCI-7 at 77) (internal quotations omitted).

⁵⁵² *Id.* at 13:16-20.

⁵⁵³ Exh. JCI-7 at 77.

⁵⁵⁴ *See* Exhs. JCI-4 at 13:11-14, JCI-7 at 77.

⁵⁵⁵ Exh. JCI-7 at 77.

Thus, as of 2012, Texas had legislated state rate mechanisms that provide assurances of cost recovery similar to those provided by formula rates.

433. Moody's also reports positive regulatory developments in New Mexico. It may be recalled, that Mr. Solomon quotes Moody's statement that SPS's use of a "historical test year" exacerbates its Regulatory-Lag problems.⁵⁵⁶ However, Moody's reports that "New Mexico has passed a statute allowing future test year rate cases" and that the New Mexico Public Regulatory Commission is "codifying such rules."⁵⁵⁷

434. Aside from contradictory, undocumented, narrative testimony by the parties, the foregoing Credit Opinion is the only evidence cited by any party that describes what states are actually doing to assure that utilities recover capital costs. The evidence shows that as of 2012, Texas had passed a rate scheme that appeared to be substantially similar to a formula-rate scheme and that New Mexico had passed legislation calculated to reduce cost-recovery problems related to Regulatory Lag.

435. Finally, Joint Consumer Advocates assert that the "Commission has previously recognized the risk-reducing attributes of FERC formula rates and concluded that the rate of return for a utility should be adjusted accordingly."⁵⁵⁸ Joint Consumer Advocates cite *Consumer Advocate Div. v. Allegheny Generating Co. (Allegheny)*,⁵⁵⁹ *South Carolina Generating Co. (South Carolina)*,⁵⁶⁰ and *Indiana & Mich. Power Co. (I&M)*.⁵⁶¹ In each case, the Commission lowered, or affirmed the presiding judge's lowering of, the company's Base ROE based in part on a finding that the company's formula rates lowered its risk. However, the cases presented factual situations entirely different from that presented by the instant case. More significantly, Joint Consumer Advocates have not established that the formula rates in those three cases were comparable to those in the instant proceeding.

⁵⁵⁶ Exh. JCI-4 at 13:14-16.

⁵⁵⁷ Exh. JCI-7 at 77.

⁵⁵⁸ Joint Consumer Advocates Initial Brief at 29; Exh. JCA-1 at 42-43.

⁵⁵⁹ 40 FERC ¶ 61,117 (1987), *order on reh'g*, 42 FERC ¶ 61,248 (1988).

⁵⁶⁰ 40 FERC ¶ 61,116 (1987), *order on reh'g*, 43 FERC ¶ 61,217 (1988), *order on reh'g*, 44 FERC ¶ 61,008 (1988). The case abbreviation also applies to the initial decision.

⁵⁶¹ 4 FERC ¶ 61,316 (1978).

436. All three cases addressed the level of Base ROE a generator could collect for sales of electric power to its corporate affiliate or affiliates, all of which were utilities. In each case the affiliate or affiliates made a contractual commitment to purchase the generator's entire output.⁵⁶²

437. More significantly, in each case the generator billed the affiliate under what the adjudicators variously referred to as a "cost-of-service formula rate"⁵⁶³ or a "cost-of-service tariff with its parent."⁵⁶⁴ In *I&M*, the earliest proceeding, the presiding judge explained:

[The generator's] initial rate is designed to recover from [its affiliate], the purchaser of its entire production, whatever costs are incurred on a month to month basis . . . [I]t is described as a cost-of-service rate, under which [the generator's affiliate] agrees to pay to the [generator] í all of its operating expenses.⁵⁶⁵

438. Under each of these rate schemes, the generator billed its affiliate or affiliates for the generator's monthly expenses, plus a Base ROE. The generator collected the Base ROE each month regardless of whether it provided power.⁵⁶⁶

⁵⁶² *Allegheny*, 40 FERC ¶ 61,117, at 61,315 (generator's capacity is sold to its three corporate parents), 61,318 (generator has "a contractually guaranteed market to purchase its output"); *South Carolina*, 34 FERC ¶ 63,074, at 65,229 (referring to "the contractual obligation" of the generator's affiliate "to purchase the output" of the generator's "sole generating facility"); *I&M*, 4 FERC ¶ 63,012, at 65,103 (referencing advantageous relationship for generator with parent which was "sole purchaser of all its production").

⁵⁶³ *Allegheny*, 40 FERC ¶ 61,117, at 61,315.

⁵⁶⁴ *I&M*, 4 FERC ¶ 61,316, at 61,739.

⁵⁶⁵ *I&M*, 4 FERC ¶ 63,012, at 65,100.

⁵⁶⁶ *Allegheny*, 40 FERC ¶ 61,117, at 61,317 (observing that the generator "has a cost-of-service formula rate that guarantees recovery of full costs even if the project is not operating"); *South Carolina*, 34 FERC ¶ 63,074, at 65,220 (noting that generator bills affiliate for "all [of the generator's] operating expenses, including a return [] on common equity"); *id.* at 65,234 (generator "is virtually assured of recovering its authorized rate of return on common equity regardless of actual output"); *id.* n.11 (noting that "this is a cost-of-service tariff, which is calculated on a monthly basis"); *I&M*, 4 FERC ¶ 63,012, at

439. In *Allegheny*, the Commission lowered the generator's Base ROE, relying on the facts that the generator had a formula cost-of-service tariff and a contractually guaranteed market to purchase its output⁵⁶⁷

440. Both *Carolina* and *I&M* quoted the presiding judge's description, in the *I&M* initial decision, of the generator's advantageous tariff arrangement with its parent:

[I & M Power] has a cost-of-service tariff with its parent, [I & M Electric] which permits immediate recovery of any increase in costs, thus limiting its risk and minimizing not only the risk of regulatory lag, but also the risk of disapproval. It will automatically make its allowed rate of return on equity regardless of whether it delivers the power or not. The steady stream of revenues from such an arrangement provides the company with a very real advantage over those utilities not operating under similar cost-of-service tariffs.⁵⁶⁸

Carolina also pointed out that in *I&M* the generator's affiliate had contracted to purchase 100 percent of the generator's output, and that the same arrangement existed in the instant case.⁵⁶⁹

441. The elements that caused the Commission to lower, or affirm the lowering of, the generator's Base ROEs in the foregoing three cases are not present here. No affiliate has promised to purchase all of the MISO TO's services, and there is no evidence that the MISO TO's formula rates permit the utilities to recover their expenses, plus their base ROE, on a monthly basis.

442. Mr. Hill appears to believe that MISO TO's formula rates operate in the same way as the generator's formula rates, but has offered no support for this contention. Mr. Solomon and Mr. Kumar and Dr. Avera describe a different and less advantageous formula-rate scheme, which involves the annual update of a stated rate, with provision to

65,101 (indicating that rate permits recoupment [by generator] of actual costs, when and as they are incurred and provides a reasonable arrangement for computing a Base ROE).

⁵⁶⁷ *Allegheny*, 40 FERC ¶ 61,117 at 61,318.

⁵⁶⁸ *Carolina*, 40 FERC ¶ 61,116 at 61,311; *I&M*, 4 FERC ¶ 61,316 at 61,379 (both quoting *I&M*, 4 FERC ¶ 63,012, at 65,103).

⁵⁶⁹ *Carolina*, 40 FERC ¶ 61,116 at 61,311.

recover the prior year's under-recoveries or to refund the prior year's over-recoveries, whichever the case may be. This latter formula-rate scheme differs materially from the cost-of-service formula-rate scheme described in the foregoing cases.

443. Joint Consumer Advocates have failed to show that the cost-of-service formula-rate schemes addressed in the foregoing cases bear any meaningful relationship to the MISO TO's formula rates. Accordingly, the Commission's Base ROE reductions in those cases are not relevant to the selection of a Base ROE in the instant case.

444. The Non-Utility Participants have failed to demonstrate that the MISO TO's formula rates serve to reduce materially the risk of investment in their transmission operations. They have provided competing, undocumented descriptions of the MISO TO's formula rates and have failed to provide any description of the rate schemes administered by state regulatory agencies. These participants have also failed to provide any evidence of how investors view the MISO TO's formula rates.

445. In addition, it is questionable whether the Commission should consider making any finding that might result in reduction of a utility's Base ROE based on the type of formula rates described by Mr. Solomon, Mr. Kumar and Dr. Avera. The Commission has recently ignored without comment contentions that it should reduce a utility's Base ROE based on its utilization of allegedly less risky formula rates.⁵⁷⁰

446. The formula-rate scheme that Mr. Solomon, Mr. Kumar and Dr. Avera describe appears to allow a utility to recover, at some point, costs not recovered by its annual stated rate, and to require the utility to refund revenues over-recovered by that annual rate. A pure stated rate (if such a thing remains) may not always allow a utility to earn its authorized Base ROE, but may sometimes allow the utility to earn more than its authorized Base ROE. Thus, a utility with rising costs may benefit more from a formula rate, as described by Mr. Solomon, Mr. Kumar and Dr. Avera. A utility that is decreasing its costs may benefit more from a stated rate.

447. However, it is the formula rate that appears to best serve the public interest. The Commission does not wish to see a utility earn more or less than its authorized Base

⁵⁷⁰ The Commission ignored without comment a claim by various offices of consumer advocates in another proceeding that, "the nature of formula rates reduces risk to investors." See *Potomac-Appalachian Transmission Highline, L.L.C.*, 122 FERC ¶ 61,188, at PP 104, 113, 121 (2008) (granting a Base ROE of 14.3 percent), *order on reh'g*, 133 FERC ¶ 61,152 (2010); see also *PJM Interconnection, L.L.C.*, 137 FERC ¶ 61,253, at PP 54, 60, 62 (2011); *Green Power Express LP*, 127 FERC ¶ 61,031, at P 81 (2009); *Virginia Elec. & Power Co.*, 123 FERC ¶ 61,098, at PP 56-68 (2008).

ROE. A formula rate provides greater assurance than a stated rate that neither outcome will occur.

448. Accordingly, the Commission has reason to want to encourage utilities to use formula rates. Reducing a utility's Base ROE because its formula rates make its operations allegedly less risky will not serve this purpose.

449. Mr. Kumar makes several assertions. First, he asserts that a higher Base ROE will not reduce any of the risks of investment in electric transmission listed by the Commission, save one.⁵⁷¹ Mr. Kumar misses the point. The point of allowing higher Base ROEs for electric transmission operations is to persuade investors to invest capital in such operations despite the risks.

450. Mr. Kumar also asserts that investment in electric transmission is actually less risky than investment in electric distribution, because the Commission provides electric transmission operations regulatory advantages that state regulators do not provide electric distribution.⁵⁷² The advantages alleged consist of formula rates and incentives provided under Order No. 679, and have already been discussed.

451. Mr. Kumar further asserts that various Commission-authorized recovery mechanisms allow electric transmission utilities to regularly earn more than their authorized Base ROEs.⁵⁷³ This allegation is outside the scope of this opinion. Even if Mr. Kumar's contentions were relevant, they would be entitled to no weight. Mr. Kumar provides his own version of other alleged regulatory advantages conferred by the Commission, without citation of any federal or state regulation. As such, they are entirely inadequate to their purpose.⁵⁷⁴

⁵⁷¹ Exh. SWC-8 at 6:17-20. Mr. Kumar acknowledges that a higher Base ROE may serve to reduce liquidity risk.

⁵⁷² *Id.* at 13:21-14:19.

⁵⁷³ *Id.* at 10:1-12:13.

⁵⁷⁴ *See* Tr. 217:9-18, 218:3-8, 218:21-219:8, 219:15-19, 224:17-225:1, & 230:21-231:2 in which Mr. Kumar concedes that his filed testimony was not based on specific Commission orders, but only on his general experience; Tr. 223:10-224:16 in which Mr. Kumar indicates that although he discusses the transmission costs of one MISO TO, he has not analyzed the costs of the rest of that group.

(3) Determination

452. The State-Authorized ROEs contained in Ms. Lapson's study support allowing the MISO TOs to collect a Base ROE above the Midpoint.

453. The Midpoint is lower than all of the State-Authorized ROEs of integrated electric utilities in that study. Because investing in the MISO TOs' Commission-regulated electric transmission entails risks that are at least as great as the risks of investing in integrated electric utilities, limiting the MISO TOs to a Base ROE below the State-Authorized ROEs of all of those integrated electric utilities would be illogical.

454. The Midpoint is lower than two-thirds of all of the State-Authorized ROEs of distribution-only electric utilities in that study. Because investing in the MISO TOs' Commission-regulated electric transmission entails greater risks than investing in distribution-only electric utilities, limiting the MISO TOs to a Base ROE below two-thirds of the State-Authorized ROEs of those distribution-only electric utilities also would be illogical.

455. In addition, placing the MISO TOs' Base ROE at the Midpoint could impede their ability to compete for capital with the retail sales operations of integrated electric utilities and of distribution-only electric utilities.

C. Other Considerations

1. Impact of Base ROE on Planned Investment

456. In Opinion No. 531, the Commission stated:

Our obligation as a Commission is to ensure that we meet the requirements of *Hope* and *Bluefield* that ROE be set at a level sufficient to attract investment in interstate electric transmission. Such investment helps promote efficient and competitive electricity markets, reduce costly congestion, enhance reliability, and allow access to new energy resources, including renewables. While a mechanical application of the two-step constant growth DCF methodology produces a midpoint of 9.39 percent in the anomalous capital market conditions reflected in the record, there is also record evidence that a decrease in ROE of that magnitude (down from 11.14 percent) could undermine the ability of the NETOs to attract capital for new investment in electric transmission.⁵⁷⁵

⁵⁷⁵ Opinion No. 531 at P 150 (citing Exh. NET-400 at 19-23, 30-31).

a. The MISO TOs' Evidence

457. Such evidence is present here. Mr. Kramer testified that in the 2014 MTEP Report, MISO has identified nearly \$20 billion in transmission investment that is in various stages of development, under construction, or in-service.⁵⁷⁶

458. The foregoing includes approval of more than \$5 billion of new investment in multi-value project (MVP) transmission facilities,⁵⁷⁷ many of which are still under construction or have yet to be constructed. MISO has approved 17 MVPs, with in-service dates ranging from 2013 to 2020.⁵⁷⁸

459. Moreover, MISO's independent economic analyses have identified and quantified substantial consumer benefits derived from the portfolio of MVPs approved by MISO's independent board in 2011.⁵⁷⁹ These benefits include: adjusted production cost savings from \$17.4 billion to \$59.6 billion;⁵⁸⁰ reduced planning reserve cost savings of \$946 million to \$2.7;⁵⁸¹ present value savings from \$291 million to \$1.1 billion from reduced transmission line losses;⁵⁸² reductions in carbon output by generators in MISO of between nine million and 15 million tons annually;⁵⁸³ resolution of reliability violations

⁵⁷⁶ Exh. MTO-21 at 15:13-16.

⁵⁷⁷ *Id.* at 18:4611.

⁵⁷⁸ *Id.*.

⁵⁷⁹ *Id.* (citing MISO Transmission Expansion Plan 2011, Midwest Independent Transmission System Operator, Inc., 11, 17, 43, 59660, 64675 (2011), <https://misoenergy.org/Library/Repository/Study/MTEP/MTEP11/MTEP11%20Report.pdf> (2011 MTEP Report)).

⁵⁸⁰ *Id.* at 19:9.

⁵⁸¹ *Id.* at 19:10611 (citing MTEP14 MVP Triennial Review, Midcontinent Independent Transmission System Operator, Inc., 4 (Sept. 2014), <https://misoenergy.org/Library/Repository/Study/Candidate%20MVP%20Analysis/MTEP14%20MVP%20Triennial%20Review%20Report.pdf> (MTEP14 MVP Triennial Review)).

⁵⁸² *Id.* at 19:11612 (citing MTEP14 MVP Triennial Review at 4).

⁵⁸³ *Id.* at 20:1-3 (citing MTEP14 MVP Triennial Review at 49).

on approximately 650 transmission elements for more than 6,700 system conditions and mitigation of 31 system instability conditions;⁵⁸⁴ and enabling 43 million megawatts per hour of wind energy to meet state renewable energy mandates and goals.⁵⁸⁵ The MVPs will also allow more optimal siting of wind-generation resources, which will lower the required generating capacity needed to satisfy renewable energy standards, which will, in turn, result in benefits of between \$2.2 billion and \$2.5 billion.⁵⁸⁶

460. Additionally, MISO's 2014 Value Proposition Presentation documents and quantifies that MISO's improved grid reliability and increased efficiency in resource usage services have provided annual net benefits somewhere between \$2.2 to \$3.1 billion to stakeholders throughout the region.⁵⁸⁷

461. Mr. Kramer testified that more investment is needed to augment the existing transmission system, both within MISO and on an interregional basis.⁵⁸⁸ He quotes the MISO Market Monitor's 2013 State of the Market Report, issued in June 2014, which explains that transmission constraints are contributing to higher locational marginal prices (LMPs):

MISO manages flows over its network to avoid overloading transmission constraints by altering the dispatch of its resources to establish efficient, location-specific prices that represent the marginal costs of serving load at each location. Transmission congestion arises when the lowest-cost resources cannot be fully dispatched because transmission capability is limited. As a result, LMPs can vary substantially across the system, reflecting the fact that higher-cost units must be dispatched in place of lower-cost units to serve incremental load in order to avoid overloading any

⁵⁸⁴ *Id.* at 20:6-10 (citing 2011 MTEP Report at 42, 47, 60).

⁵⁸⁵ *Id.* at 19:19-20:1 (citing MTEP14 MVP Triennial Review at 22).

⁵⁸⁶ *Id.* at 19:12-15 (citing MTEP14 MVP Triennial Review at 4).

⁵⁸⁷ *Id.* at 21:7-17 (citing MISO Value Proposition, Midcontinent Independent Transmission System Operator, Inc., 3, 9, 17 (Feb. 2015), <https://misoenergy.org/Library/Repository/Communication%20Material/Value%20Proposition/2014VP/2014%20Value%20Proposition%20Presentation.pdf> (2014 Value Proposition Presentation)).

⁵⁸⁸ *Id.* at 23:16-26:6.

transmission facilities. This causes LMPs to be higher in unconstrained locations.⁵⁸⁹

He notes that MISO's 2014 MTEP Report identified additional transmission system enhancements that could relieve congestion and increase the ability to move energy more efficiently across the MISO region.⁵⁹⁰

462. Mr. Kramer points out that the MISO TOs are required to comply with mandatory Reliability Standards set by the North American Electric Reliability Corporation, and can incur large financial penalties for violating such standards.⁵⁹¹ Moreover, many of these owners also make retail sales of electricity, and, therefore, must comply with state-imposed obligations.⁵⁹² Mr. Kramer explains that an overly large reduction of the MISO TOs' Base ROE could compel them to redirect their limited capital from larger and more widely beneficial transmission projects to mandated local projects aimed at addressing discrete reliability violations or satisfying conventional service obligations.⁵⁹³

⁵⁸⁹ *Id.* at 23:8-18 (quoting 2013 State of the Market Report for the MISO Electricity Markets, Potomac Economics, 50 (June 2014), <https://www.misoenergy.org/Library/Repository/Report/IMM/2013%20State%20of%20the%20Market%20Report.pdf>).

⁵⁹⁰ *Id.* at 23:19-24 (citing 2014 MTEP). Mr. Kramer notes that all regional transmission operators and independent system operators will have to make substantial transmission investment in the future. Such investment will be necessary to implement the movement of power across interregional boundaries, and to address generation retirements and resource shifts required to comply with new environmental standards. *Id.* at 24:1-26:6.

⁵⁹¹ *Id.* at 27:1617.

⁵⁹² *Id.*

⁵⁹³ *See id.* at 28:1629:12. The MISO Tariff and Transmission Owners Agreement (Agreement), which governs the transmission owners' obligations and responsibilities regarding the construction of transmission facilities, permits project developers, including transmission owners, to cease funding and constructing a transmission project if they can demonstrate that their continuation of construction is financially impossible or would cause them demonstrable financial harm. *See* Tr. 292:166293:2, 296:246297:6. *See also* Exhs. MTO-93 (excerpt of Agreement) & MTO-94 (excerpt of MISO Tariff Attachment FF).

463. In her answering testimony, Ms. Lapson explains the importance of a utility's Base ROE to the cash flow the utility needs to fund its expenses. She states:

Utilities' operating cash flow primarily is derived from the revenue requirements that relate to the recovery of depreciation expense and ROE. The base ROE provides an important stream of cash flow to the utilities to fund ongoing investment needs and to provide coverage for the interest and fixed charges on debt, as well as to compensate equity investment.⁵⁹⁴

464. She goes on to describe the critical role cash flow plays in determining the MISO TO's credit ratings and in the owners' ability to maintain liquidity:

Operating cash flow ratios are the principal financial measure used by credit rating agencies and by fixed income investors to evaluate credit quality. Cash flow derived from ROE thus is significant to the MISO TO's financial health and liquidity as a source of funding available for investment in capital projects.⁵⁹⁵

465. She then turns to what she believes would be the likely consequence of the Commission accepting any of the Base ROEs proposed by witnesses sponsored by the Non-Utility Participants. At the time she filed her answering testimony, the highest of these was Mr. Gorman's proposed Base ROE of 9.54 percent.⁵⁹⁶

466. Ms. Lapson states that the reduction of cash flow that would result from the proposed reductions of the MISO TO's Base ROE would have a number of adverse consequences for the owners. First, the owners would have to fund a larger share of their capital spending with external funding sources.⁵⁹⁷

467. However, the reduction of cash flow would make it more difficult to obtain such funding. Ms. Lapson explains:

⁵⁹⁴ Exh. MTO-16 at 61:5-9.

⁵⁹⁵ *Id.* at 61:9-13. Ms. Lapson explains that "[o]perating cash flow ratios refer to such ratios as Operating Cash Flow to Debt; Operating Cash Flow plus Interest paid divided by Interest Expense; and ratio of Operating Cash Flow to Capital Expenditures." *Id.* n.49.

⁵⁹⁶ *Id.* at 63:6-13.

⁵⁹⁷ *Id.* at 61:14-16.

[A] reduced base ROE would lower the cash flow financial ratios used in credit rating and fixed income analyses, making it more difficult for the transmission owners to maintain favorable credit ratings from rating agencies and more difficult to maintain their credit-worthiness in the independent judgment of institutional fixed income investors.⁵⁹⁸

468. Ms. Lapson states that the proposed reductions would have a particularly negative effect on the credit rating of MISO TOs with high capex:

Credit rating agencies í base their credit rating decisions on cash flow measures, and the authorized ROE is an important factor in cash flow. For those MISO [TOs] with large capital expenditure budgets, weaker internal cash flow measures following a reduced ROE determination could be the trigger for a negative credit watch status or a downgrade. Those of the MISO [TOs] that derive all or most of their cash flows from transmission and also have relatively high capex would, of course, be affected to a greater degree.⁵⁹⁹

469. Ms. Lapson further contends that such a downgrade would discourage investment in transmission-owning utilities.

Investors invest in utility equities in order to employ capital for long periods at relatively stable returns. Based on my experience in utility finance and investment, I would expect [the] large, retrospective reduction in the base ROE í [recommended] here to í discourage future investment in transmission-owning utilities⁶⁰⁰

470. Ms. Lapson believes that such a reduction might divert investment from utilities owning Commission-regulated electric transmission to other utilities:

Such a radical reduction in the base ROE would put not only the MISO TOs, but also all electric transmission owners, at a competitive disadvantage in the capital market relative to other utilities that would not

⁵⁹⁸ *Id.* at 61:16-21.

⁵⁹⁹ *Id.* at 62:6-14.

⁶⁰⁰ *Id.* at 62:18-22.

be as heavily affected by a sub-standard ROE on FERC jurisdictional operations.⁶⁰¹

b. Evidence and Arguments Offered in Rebuttal

471. Joint Complainants argue that the record does not support a finding that a Base ROE reduction will have a negative impact on transmission projects currently underway. Joint Complainants contend, without citation to the record, that MISO TOs expect a Base ROE reduction. However, say Joint Complainants, there is no record evidence indicating that any such transmission owner has deferred, cancelled, or delayed any transmission project in anticipation of such a reduction.⁶⁰²

472. Assuming the MISO TOs do expect a reduction in their Base ROEs, the fact that they have not cancelled or deferred any project does not refute Ms. Lapson's testimony. She did not say that any reduction in Base ROE would likely curtail investment; she said that reduction of the Base ROE to levels recommended by the Non-Utility Participants would do so. Pending issuance of this decision, the MISO TOs have had no reason to believe it more likely than not that such a Base ROE would be adopted.

473. Joint Consumer Advocates and Joint Customer Intervenors both appear to claim that the impact of a reduced Base ROE on the MISO TOs' contemplated investment in transmission is irrelevant to the establishment of that Base ROE. Joint Consumer Advocates contend that the MISO TOs' investment in transmission is consistent with their public utility obligations, and does not warrant a Base ROE that exceeds the Midpoint.⁶⁰³ Joint Customer Intervenors assert that the Base ROE should be based solely on the DCF analysis.⁶⁰⁴

474. Joint Consumer Advocates and Joint Customer Intervenors also argue that the MISO TOs have not established sufficient correlation between the level of their Base ROE and the amount of capital they have or will invest in transmission.⁶⁰⁵

⁶⁰¹ *Id.* at 63:19-22.

⁶⁰² Joint Complainants Initial Brief at 87.

⁶⁰³ Joint Consumer Advocates Reply Brief at 25.

⁶⁰⁴ Joint Customer Intervenors Reply Brief at 10.

⁶⁰⁵ Joint Consumer Advocates Reply Brief at 24-25; Joint Customer Intervenors Reply Brief at 10-12.

475. In Opinion No. 531, the Commission stated that evidence in the record showing that a 175 basis-point reduction of the NETOs' Base ROE could undermine the ability of the NETOs to attract capital for new investment in electric transmission supported authorizing the NETOs a Base ROE above the Midpoint.⁶⁰⁶ Contrary to the contentions of Joint Complainants and Joint Customer Intervenors, the Commission believed that evidence of investment in new electric transmission that could be negatively impacted by a reduction in Base ROE to be relevant. The Commission also did not require that such evidence show the causal connection between a reduction of the Base ROE and a decrease of funds available for new investment that Joint Complainants and Joint Customer Intervenors appear to require. The Commission relied on evidence showing that a reduction in Base ROE *could* undermine the NETOs' ability to attract capital for such investment. The MISO TOs' witnesses have provided evidence that establishes that reducing their by 284 basis points, from their current Base ROE to the Base ROE of 9.54 percent then proposed by Mr. Gorman *could* have a similar effect. The Midpoint is 310 basis points below the MISO TOs' Base ROE. Accordingly, their testimony provides further support for authorizing the owners a Base ROE above the Midpoint.

476. OMS contends that a Base ROE that is designed to help the MISO TOs build MVPs and other larger, more costly transmission projects will serve to exploit the MISO TOs' ratepayers. According to OMS, the Commission can promote the development of MVPs by providing transmission rate incentives to developers selected to build those larger, riskier projects. The incentive application process also gives the Commission and stakeholders the ability to assure, on a case-by-case basis, the total Base ROE adequately compensates for the project-specific risks. The Base ROE, however, is paid by consumers for old and new transmission alike. Raising the rates associated with existing transmission facilities in order to induce new ones to be developed, rather than targeting any new projects with project-specific incentives, would go beyond the Commission's statutory authority.⁶⁰⁷

477. The only evidence in the record regarding MVPs and similar projects show that they provide regional and system-wide benefits.⁶⁰⁸ OMS cites no evidence to the contrary, or any evidence to support its contention that MVPs and similar projects are riskier than others. Whether costs associated with MVPs are unfairly allocated to some consumers is a question of rate design, an area well outside the scope of this proceeding.

⁶⁰⁶ Opinion No. 531 at P 150.

⁶⁰⁷ OMS Reply Brief at 38 (citation omitted).

⁶⁰⁸ See generally Exh. MTO-21 at 18:4-21:17.

c. Determination

478. Limiting the MISO TOs to a Base ROE no higher than the Midpoint could undermine their ability to attract capital for new investment in electric transmission that is currently planned.

2. Capital Structure

a. Proposals of Mr. Gorman and Mr. Hill

479. Mr. Gorman and Mr. Hill both propose that whatever Base ROEs are approved in this proceeding be reduced for all MISO TOs with equity ratios of 55 percent or higher. Mr. Gorman contends that the Base ROEs of these utilities should be lowered by 20 basis points.⁶⁰⁹ Mr. Hill recommends that the allowed Base ROEs of MISO TOs that have common equity ratios of 55 percent or above should be adjusted downward five basis points for every one percent difference between the ratemaking common equity ratio and 49 percent (the average common equity ratio of what he refers to as "the electric utility sample group"). Conversely, he recommends that the Base ROEs of firms with equity ratios at or below 45 percent should be adjusted upward five basis points for every one percent difference between the ratemaking common equity ratio and 49 percent.⁶¹⁰

480. Mr. Gorman and Mr. Hill use the same rationale to justify their recommendations. They contend that a utility with a higher equity ratio is less risky than comparable utilities with lower equity ratios, and that its Base ROE should be lowered to reflect that rate differential.⁶¹¹

b. Determination

481. The proposals of Mr. Gorman and Mr. Hill amount to collateral attacks on the Hearing Order. In that Order, the Commission denied the Joint Complainants' proposal to cap each MISO TO's equity ratio for ratemaking purposes. The Commission stated:

We deny the Complaint with respect to certain MISO TOs use in ratemaking of actual or Commission-approved hypothetical capital structures that include more than 50 percent common equity. Complainants

⁶⁰⁹ Exh. JC-1 at 36:13-17.

⁶¹⁰ Exh. JCA-1 at 43:27-44:9; Exh. JCA-11 at 63-64.

⁶¹¹ Exh. JC-1 at 20-21; Exh. JCA-11 at 45.

have not demonstrated that such capital structures are not just and reasonable, nor have they cited any precedent for capping, for ratemaking purposes, the level of common equity in such capital structures for individual utilities, much less groups of utilities. In fact, as noted by MISO TOs and other parties, the Commission has not dictated the level of common equity in utility capital structures used in ratemaking beyond very limited and specific circumstances, which Complainants have not demonstrated are present in this case.⁶¹²

The proposals of Mr. Gorman and Mr. Hill ask the Commission to do indirectly what the Commission said it would not do directly. Lowering the Base ROEs of utilities with capital structures of 55 percent or higher will inevitably deter utilities from allowing their equity ratios to exceed 54 percent. Thus, such a ruling would institute an indirect cap on such ratios.

482. Joint Complainants and Joint Consumer Advocates contend that the Hearing Order provides leeway in this area. Joint Complainants note that the Hearing Order states:

“To the extent that parties contend that some of [the] MISO TOs' capital structures cause unjust and unreasonable costs to ratepayers because they compound what they argue is an unjust and unreasonable base ROE for [the] MISO TOs, then such concerns are best addressed with respect to that ROE, which the Commission is setting for hearing.”⁶¹³

483. Joint Complainants contend that capital structures of 55 percent or higher will result in unjust and unreasonable costs to ratepayers stemming from an unjust and unreasonable Base ROE,⁶¹⁴ and that the Hearing Order left the door open for consideration of such issues. Joint Consumer Advocates contend that the Commission observed that the capital structure maintained by a company may affect the amount of risk it faces and may be considered in the determination of a just and reasonable Base ROE.⁶¹⁵

⁶¹² Hearing Order at P 190.

⁶¹³ Joint Complainants Reply Brief at 38 (quoting Hearing Order at P 199).

⁶¹⁴ *Id.* at 38-39.

⁶¹⁵ Joint Consumer Advocates Reply Brief at 24.

484. Joint Complainants and Joint Consumer Advocates misread the Hearing Order. The Commission said the parties could address whether the capital structures at issue exacerbated the effects of an unjust and unreasonable Base ROE.⁶¹⁶ The Commission did not invite the parties to discuss whether the capital structure should serve as a basis for reducing a Base ROE to make it just and reasonable.

485. Had the issue of capital structure not been addressed in the Hearing Order, other considerations would dictate rejection of the proposals of Mr. Gorman and Mr. Hill. Joint Complainants and Joint Consumer Advocates cite no instance of the Commission ever differentiating between the Base ROEs awarded to multiple transmission owners based on capital structure. Nor would such a differentiation be advisable.

486. As Dr. Avera points out, capital structure is only one facet of a company's overall risks.⁶¹⁷ The credit ratings assigned to utilities by rating agencies already encompass a comprehensive evaluation of the utility's overall business and financial risks[,]⁶¹⁸ including capital structure. Thus, a utility's credit rating already accounts for capital structure, and the Commission's use of credit ratings to select the proxy group used in DCF models obviates the need for a separate analysis of risks based on capital structure.⁶¹⁹ Indeed, if one were going to differentiate between the Base ROEs awarded to multiple transmission owners based on comparative risk, the better course of action would be to differentiate based on their bond ratings.

487. For the foregoing reasons, the proposals of Mr. Gorman and Mr. Hill to modify the Base ROEs of the MISO TOs based on their capital structure are rejected.

IV. ORDER

488. The omission from this Initial Decision of any argument raised by the participants at the hearing, the oral argument on the merits, or in their briefs does not mean that it has not been considered; rather, it has been evaluated and found to lack either merit or significance such that inclusion would only lengthen this Initial Decision without altering

⁶¹⁶ It is hard to see what such a discussion would accomplish. The appropriate remedy would be to modify the unjust and unreasonable Base ROE. Once that was achieved, the capital structure would no longer be an issue.

⁶¹⁷ Exh. MTO-1 at 40:3613.

⁶¹⁸ *Id.* at 40:14641:2.

⁶¹⁹ *See id.* at 41:3613.

its substance or effect. In other words, all arguments made by the participants that have not been specifically discussed in this decision have been considered and rejected.

489. The MISO TOs are authorized to collect a Base ROE of 10.32 percent. Within sixty days of the issuance of this Initial Decision, MISO shall refund, with interest, the difference between the revenues they collected during the period from November 12, 2013 through February 11, 2015, and what they would have collected had they implemented the Base ROE of 10.32 percent.

490. The refund described in the preceding Paragraph shall be calculated in accordance with 18 C.F.R. § 35.19a through the date of payment.

David H. Coffman
Presiding Administrative Law Judge

APPENDIX A

Line	Company	Ticker	Unadjusted Dividend Yield	Growth Rates		Composite	Adjusted Dividend Yield	DCF Results
				Short-Term	Long-Term			
				Yahoo! Finance	GDP			
1	Edison International	EIX	2.66%	0.37%	4.39%	1.70%	2.68%	4.38%
2	FirstEnergy Corp.	FE	3.97%	(0.64%)	4.39%	1.02%	3.99%	5.01%
3	Entergy Corp.	ETR	4.21%	(0.48%)	4.39%	1.13%	4.23%	5.36%
4	Unitil Corporation	UTL	4.02%	1.90%	4.39%	2.72%	4.07%	6.79%
5	MGE Energy	MGEE	2.67%	4.00%	4.39%	4.13%	2.73%	6.86%
6	Public Service Enterprise Group	PEG	3.74%	2.95%	4.39%	3.43%	3.80%	7.23%
7	Consolidated Edison, Inc.	ED	4.14%	2.38%	4.39%	3.04%	4.20%	7.24%
8	OGE Energy Corp.	OGE	3.09%	4.00%	4.39%	4.13%	3.15%	7.28%
9	IDACORP Inc.	IDA	3.04%	4.00%	4.39%	4.21%	3.10%	7.31%
10	PPL Corporation	PPL	4.39%	2.23%	4.39%	2.94%	4.45%	7.39%
11	CenterPoint Energy, Inc.	CNP	4.69%	1.91%	4.39%	2.73%	4.75%	7.48%
12	Westar Energy Inc.	WR	3.74%	3.40%	4.39%	3.73%	3.81%	7.54%
13	Portland General Electric Co.	POR	3.11%	4.70%	4.39%	4.60%	3.18%	7.78%
14	DTE Energy Co.	DTE	3.38%	4.51%	4.39%	4.47%	3.46%	7.93%
15	PG&E Corp.	PCG	3.39%	4.71%	4.39%	4.60%	3.47%	8.07%
16	SCANA Corp.	SCG	3.91%	4.30%	4.39%	4.33%	3.99%	8.32%
17	The Southern Co.	SO	4.62%	3.32%	4.39%	3.67%	4.70%	8.37%
18	Xcel Energy Inc.	XEL	3.68%	4.69%	4.39%	4.63%	3.77%	8.40%
19	NorthWestern Corp.	NWE	3.60%	5.00%	4.39%	4.80%	3.69%	8.49%
20	Duke Energy Corp.	DUK	4.05%	4.49%	4.39%	4.46%	4.14%	8.60%
21	American Electric Power Co. Inc.	AEP	3.68%	5.08%	4.39%	4.85%	3.77%	8.62%
22	NextEra Energy, Inc.	NEE	2.94%	6.27%	4.39%	5.65%	3.02%	8.67%
23	Vectren Corp.	VVC	3.46%	5.50%	4.39%	5.13%	3.55%	8.68%
24	Alliant Energy Corp.	LNT	3.50%	5.45%	4.39%	5.10%	3.59%	8.69%
25	Avista Corp.	AVA	3.93%	5.00%	4.39%	4.80%	4.02%	8.82%
26	Pinnacle West Capital Corp.	PNW	3.74%	5.30%	4.39%	5.00%	3.83%	8.83%
27	Empire District Electric Co.	EDE	4.12%	5.00%	4.39%	4.80%	4.22%	9.02%
28	Dominion Resources, Inc.	D	3.58%	5.89%	4.39%	5.40%	3.68%	9.08%
29	Eversource Energy (Northeast Utilities)	ES	3.27%	6.60%	4.39%	5.87%	3.37%	9.24%
30	El Paso Electric Co.	EE	3.01%	7.00%	4.39%	6.14%	3.10%	9.24%
31	Ameren Corp.	AEE	3.91%	5.85%	4.39%	5.37%	4.01%	9.38%
32	CMS Energy Corp.	CMS	3.35%	6.73%	4.39%	5.96%	3.45%	9.41%
33	ALLETE Inc.	ALE	3.85%	6.00%	4.39%	5.47%	3.96%	9.43%
34	Sempra Energy	SRE	2.59%	7.93%	4.39%	6.76%	2.68%	9.44%
35	Great Plains Energy, Inc.	GXP	3.65%	6.37%	4.39%	5.72%	3.75%	9.47%
36	Black Hills Corp.	BKH	3.28%	7.00%	4.39%	6.14%	3.38%	9.52%
37	Otter Tail Corp.	OTTR	4.06%	6.00%	4.39%	5.47%	4.17%	9.64%
38	Exelon	EXC	3.64%	6.81%	4.39%	6.01%	3.75%	9.76%
39	PNM Resources	PNM	2.85%	8.56%	4.39%	7.18%	2.95%	10.13%
40	UIL Holdings	UIL	3.59%	7.79%	4.39%	6.67%	3.71%	10.38%
41	ITC Holdings Corp.	ITC	1.76%	11.66%	4.39%	9.26%	1.84%	11.10%
42	TECO Energy	TE	4.61%	7.68%	4.39%	6.59%	4.76%	11.35%

	Moody's Public Utility Bond Yields	Baa					Low:	4.38%
	Six-month avg. ending June 30, 2015	4.65%					High:	11.35%
							Midpoint:	7.87%
							Middle Top Half of Zone:	9.61%

APPENDIX B

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				Yahoo! Finance	GDP			
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