UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Inquiry Regarding the Commission's Policy for Determining Return on Equity	Docket No. PL19-4-000

REPLY COMMENTS OF THE ALUMINUM ASSOCIATION, THE AMERICAN CHEMISTRY COUNCIL, THE AMERICAN FOREST & PAPER ASSOCIATION, THE AMERICAN PUBLIC POWER ASSOCIATION, THE ELECTRICITY CONSUMERS RESOURCE COUNCIL, THE INDUSTRIAL ENERGY CONSUMERS OF AMERICA, THE NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION, AND THE TRANSMISSION ACCESS POLICY STUDY GROUP

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I. INTRODUCTION AND SUMMARY

The American Chemistry Council, American Forest & Paper Association, American Public Power Association, Electricity Consumers Resource Council, Industrial Energy Consumers of America, National Rural Electric Cooperative Association, and Transmission Access Policy Study Group (collectively, "Associations") hereby provide their reply comments in response to the *Inquiry Regarding the Commission's Policy for Determining Return on Equity*, 166 FERC ¶ 61,207 (2019) (the "NOI").[1] The Associations appreciate the opportunity to provide their collective view[2] on these important return on equity ("ROE") issues.

In our opening comments, the Associations addressed the NOI questions in a detailed and comprehensive fashion, supported by expert statements from Dr. Bradford Cornell and Mr. Michael Gorman. Our reply comments focus primarily on points raised in the opening comments submitted by a number of transmission-owning public utilities, or groups of transmission-owning public utilities, as well as by the Edison Electric Institute ("EEI"). We generally refer to these entities collectively as the "transmission owner commenters" or the "transmission owners."[3]

There are areas of common ground between the Associations and the transmission owner commenters. In general, we agree that the Federal Energy Regulatory Commission's ("FERC" or "Commission") goal should be policies that allow for an accurate determination of the market

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[1] Abbreviations and defined terms are used as those terms are used in the Notice of Inquiry. We refer to particular stocks by their exchange tickers.

[2] These reply comments respond to comments filed in response to the NOI, and necessarily (like the NOI itself) reference other pending proceedings to which individual members of the various associations are parties. Nothing in these reply comments is intended to modify the position of individual parties in those proceedings.

[3] In addition to EEI, the transmission owner commenters include American Electric Power Company, Inc. ("AEP"), the MISO Transmission Owners ("MISO TOs"), the New England Transmission Owners ("NETOs"), the PJM Transmission Owners ("PJM TOs"), San Diego Gas and Electric Company ("SDG&E") and Southern California Edison Company ("SoCalEd"). To the extent that other commenters raise arguments similar to those addressed by the transmission owners, these reply comments are intended to respond to these other sets of comments, even where they are not specifically cited herein.

cost of equity for electric transmission companies, *i.e.*, the level of return required by an investor to invest in the common equity of a transmission utility, given its relative risk. There is also general agreement that the Discounted Cash Flow ("DCF") remains an appropriate model for the Commission to use in determining the cost of equity for electric transmission companies. And, while the Associations do not believe there are any deficiencies in the DCF model that *necessitate* consideration of additional models, we do not take issue with the general proposition that other, properly designed and applied ROE estimation models could be used to complement the DCF model in determining the market cost of equity. The Associations and transmission owners likewise concur that the Commission should not move to a "vintage" approach for determining return allowances, nor should it make policy changes to address any perceived "mismatch" between market-based ROE determinations and book-value rate base.

On many other issues raised in the NOI, however, the positions of the Associations and transmission owners diverge significantly. The Associations' opening comments emphasized a number of key points that are essential to protecting consumers from unjust and unreasonable ROEs. We explained, for example, that investors do not use the Expected Earnings methodology to estimate the cost of equity, and use of this model in determining the ROE allowance for an electric transmission company would produce unjust and unreasonable results. The Associations also established that it is improper to use a single-stage DCF to calculate the market risk premium when applying the Capital Asset Pricing Model ("CAPM"). Further, the Associations showed that use of the median (or other appropriate percentile) in determining a uniform Regional Transmission Organization ("RTO") ROE is superior to using the midpoint (or other range-based measures), not least because using the median promotes consistency, stability, and predictability in ROE determinations by reducing the emphasis on extreme values in the proxy

group range and de-escalating disputes over outlier tests that inevitability accompany use of the midpoint. On these and other important issues, the transmission owners promote positions at odds with those of the Associations that, if adopted as Commission policy, would produce unjust and unreasonable rates.

The transmission owners generally purport to endorse the Commission's proposed revised approach to assessing the justness and reasonableness of an existing ROE and establishing a replacement ROE first described in *Coakley v. Bangor Hydro-Electric Company*.[4] As an initial matter, the Commission should dismiss warnings by various transmission owner commenters that the Commission must not "abandon" the *Coakley* method.[5] The Commission cannot abandon a policy it has never adopted, and, at this juncture, the *Coakley* method remains only a proposal that the Commission has yet to address with the benefit of a full record. The Commission initiated this NOI proceeding to "provide all interested stakeholders with the opportunity to comment on the Commission's ROE policy,"[6] and it would be unreasonable bootstrapping to reject necessary changes to the proposed *Coakley* method based on arguments that investors and others have relied on the proposal.

The transmission owner commenters' support for the *Coakley* method, moreover, is highly selective. Their respective comments argue for significant changes to the Commission's proposed new approach, from adopting a single-stage constant growth DCF, to utilizing the midpoint as the measure of central tendency in single-utility proceedings, to eliminating high-end outlier screens, to using the Empirical CAPM ("ECAPM") methodology in lieu of, or in addition to, the standard CAPM methodology. Even if the Commission were to adopt the

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[4] 165 FERC ¶ 61,030 (2018) ("*Coakley*"); *see also Ass'n of Bus. Advocating Tariff Equity, et al., v. Midcontinent Indep. Sys. Operator, Inc.*, 165 FERC ¶ 61,118 (2018) ("MISO Briefing Order").

[5] *See, e.g.*, AEP Comments at 5; NETOs Comments at 6; *see also* WIRES Comments at 11.

[6] NOI at P 28.

Coakley method, the transmission owners apparently would want the ability to argue for adjustments in particular cases, as they urge the Commission not to apply the proposed new approach in a "mechanistic" fashion.[7] Adoption of these changes to the *Coakley* proposal would increase uncertainty and controversy regarding the Commission's transmission ROE determinations. The Commission should reject the transmission owners' attempts to seize on the *Coakley* method as a proper change in policy while simultaneously offering significant changes to that methodology.

The Associations respond at greater length below to some of the inappropriate changes to the *Coakley* method proposed by the transmission owners. We also address transmission owner commenters' arguments that purport to defend aspects of the *Coakley* method that must be revised to ensure just and reasonable transmission ROEs. Our reply comments on a number of these important issues are supported by supplemental expert statements from Dr. Cornell and Mr. Gorman. Among the key points discussed in these reply comments are as follows:

- Nothing in the opening comments supports a conclusion that the Commission should not rely on the DCF model to determine the cost of equity, either as the sole estimation approach, or in combination with other well-designed models.
- The Commission should not generically loosen the proxy group criteria in response to ill-defined "concerns" that the proxy group may be too small in individual cases.
- Particularly if the Commission insists on using the midpoint as the measure of central tendency to determine allowed ROE, it is important that the Commission preserve some form of outlier screen for both high- and low-end results. A 100-basis point premium over utility bond yields remains reasonable as a low-end outlier screen, and statistical screening for high-end outliers (*e.g.*, two standard deviations) is appropriate.

[7] *See* EEI Comments at 3-4, 6.

- The median is a better measure of central tendency for setting an RTO-wide ROE and for single utility ROE determinations, even if one assumes that that the Commission's screening criteria should produce a risk-appropriate proxy group.

- Certain transmission owner proposals would erect improper obstacles to the exercise of parties' rights under section 206 of the Federal Power Act ("FPA") to challenge the existing ROE of a public utility or group of public utilities during the pendency of a prior complaint.

- The Commission should reject transmission owner recommendations to broaden the range of the proxy group results by using, but not integrating, multiple growth projections.

- The market risk premium estimate used in the CAPM model should be consistent with unbiased, published, widely used, market risk premium estimates.

- It would be unreasonable to calculate the CAPM market risk premium using a single-stage DCF analysis on the dividend-paying companies in the Standard & Poor's 500 ("S&P 500"). Such an approach incorrectly presumes that investors believe dividends for companies in the S&P 500 will grow forever at a rate equal to short-term earnings growth estimates.

- The ECAPM method is theoretically unsound, unsupported by evidence that investors rely on it to calculate the cost of equity, reliant on unstated assumptions that have not been adequately analyzed, and duplicative of the adjustment that the Value Line Investment Survey ("Value Line") makes to its beta figures.

- The transmission owners provide no evidence that investors use the Expected Earnings model to calculate the cost of equity, and the Commission should not include this model in any revised approach to determining allowed equity returns.

- Accounting-based rates of return, such as that produced by the Expected Earnings model, are irrelevant—not complementary—to the market cost of equity.

- Risk premium studies should compare the cost of equity for historical study periods to the actual, contemporaneous bond yields for the study period, not to projected bond yields for future periods.

II. REPLY COMMENTS

The Associations have organized these reply comments according to the eight topics listed in the NOI, while adding several subheadings for organizational clarity. Given the variety of ways that parties organized their opening comments, however, the Associations have not attempted to reply to the opening comments on a question-by-question basis.

A. Role and Objective of the Commission's Base ROE Policy (Questions A1-A4)

The Associations and the transmission owner commenters agree, in broad terms, on the role and objective of the Commission's base ROE policy. There appears to be no dispute that the Commission should implement policies aimed at estimating the market cost of equity for electric transmission companies, as it changes from time to time,[8] while accounting for the relative risk of the utility(ies) at issue, through methodologies that improve predictability of results and promote regulatory certainty.

Where the Associations differ from the transmission owner commenters is in how to achieve these objectives. The transmission owners endorse aspects of the Commission's proposed new approach that, as the Associations explained in our opening comments, would produce ROE estimates that are inconsistent with the market cost of equity. And where the transmission owner commenters object to the proposed new approach, they propose significant changes that would produce cost of equity estimates even more unrepresentative of investor requirements, while diminishing predictability and certainty in establishing allowed ROEs.

[8] There is also agreement that the Commission should not adopt a "vintage approach" to setting the base ROE. *Compare, e.g.*, Associations Comments at 11-14 *with* EEI Comments at 23-25; NETOs Comments at 13-15; PJM TOs Comments at 41-42; AEP Comments at 7; SoCalEd Comments at 9-10.

The Associations advocate that a well-designed methodology "should achieve reasonably consistent and predictable results across cases and over time."[9] The transmission owners claim to agree on that principle, emphasizing the importance of predictable ROE determinations that would improve stability, reduce litigation expense, and ease administrative burden.[10] Yet the transmission owners support methodologies that would *reduce* predictability of ROE determinations.

Two transmission owner proposals, in particular, conflict with their stated goal of increased predictability. First, several transmission owners advocate for reverting to using the midpoint—rather than the median—of the proxy group distribution to set ROEs for individual utilities.[11] The Commission's recent cases involving transmission owners in the ISO New England and Midcontinent Independent System Operator ("MISO") footprints have demonstrated that midpoints (or any other measure based on the range of proxy results, such as the upper midpoint, the 5/8th point, or the top of the zone) can vary widely from case-to-case even when there is little or no change in the underlying capital markets.[12] Thus, it is much more difficult to predict the litigated outcome of an ROE proceeding that uses range-based measures instead of using the median (or other appropriate percentile), which leads to fewer settlements and more litigation. Moreover, the midpoint (and other range-based measures) can fluctuate

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[9] Associations Comments at 7.

[10] EEI Comments at 6 ("predictability and stability of transmission ROEs is vitally important."); NETOs Comments at 3 (seeking "greater predictability and certainty."); PJM TOs Comments at 13 (urging that the Commission's policy "should be to foster administrative efficiency and ensure predictability and stability for transmission owner ROEs."); MISO TOs Comments at 6-7 (stating that increased predictability of ROEs "should reduce litigation costs for utilities and potential complainants and intervenors alike, while also easing the administrative burden on the Commission.").

[11] AEP Comments at 14-18; EEI Comments at 22; SoCalEd Comments at 6-7; PPL Comments at 14; PJM TOs Comments at 41-44.

[12] *See* Associations Comments at 26-28 (comparing the results of Opinion No. 551 and the Initial Decision in Docket No. EL14-86, which had virtually identical proxy groups and study periods, yet had very different midpoint results).

significantly depending on how outlier tests are implemented,[13] which leads to more protracted litigation about whether one company or another is appropriately included in the proxy group.

Transmission owners also contradict their desire for predictability when they urge the Commission to "retain the flexibility to consider new proxy groups and rely on record-specific case-by-case analysis."[14] The Associations discuss the substantive flaws with the transmission owners' proxy group proposals in Section II.D, below, but we note here that the Commission can achieve both predictability and flexibility by establishing clear screening criteria and identifying the limited circumstances in which those criteria can be relaxed.[15]

B. ROEs for Different Commission-regulated Industries (Questions B1 – B4)

As with the Associations' opening comments, we are not specifically addressing questions relating to whether the Commission should apply a single ROE policy across electric, interstate natural gas and oil pipeline industries. On certain issues, however, the Associations address the comments submitted by representatives of other Commission-regulated industries, including the Interstate Natural Gas Association of America ("INGAA") and the Association of Oil Pipe Lines ("AOPL").

C. Performance of the DCF Model (Questions C1 – C3)

In our opening comments, the Associations showed that the DCF model is accepted by academicians and industry alike and has performed well in estimating the cost of equity for electric utilities in a variety of stock-market and interest-rate conditions. The Associations

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[13] *Id.* at 31 (explaining that by relying on applicable percentiles rather than range-based measures, "the significance of whether low and high outlier results are retained would be greatly diminished.").

[14] NETOs Comments at 32; *see also* EEI Comments at 4 (the Commission should adopt proxy group selection methods that "provide flexibility to the Commission to be responsive to market conditions."); PJM TOs Comments at 47 (urging "a more flexible approach to the exclusion from the proxy group of companies with merger activity").

[15] *See* Associations Comments at 23-24 (recommending that the Commission establish bright-line screening criteria and only loosen those criteria when the resulting proxy group has fewer than four members).

supported these conclusions with the expert statements by Professor Cornell and Mr. Gorman.[16] Accordingly, while it may be reasonable to utilize other well-designed models to determine the market cost of equity in conjunction with the DCF, reliance on such additional models is certainly not necessitated by any weaknesses in the DCF model itself.

The opening comments of transmission owner commenters support retaining the DCF model to determine the cost of equity, while at the same time purporting to identify flaws with the model.[17] These comments break no new ground and offer no new evidence in assessing the DCF model's performance. According to EEI, the DCF model's "fundamental limitation is its underlying assumption that current growth rates, dividend payout ratios, and stock price valuation levels will persist in perpetuity," which "poses challenges to the accuracy of its results in high or low interest rate environments."[18] EEI, however, simply cites a whitepaper that makes theoretical criticisms directed at the general constant-growth DCF model. The Commission's proposed two-step DCF model tempers the "perpetuity" assumption by incorporating short- and long-term dividend-growth estimates. EEI asserts that a two-step DCF model "likely increases the inaccuracy of the model," but EEI does not provide reasons or evidence that this is so. The whitepaper on which EEI relies, in turn, relied on the unsupported assumption that U.S. Gross Domestic Product ("GDP") growth will return to the explosive rate of the 1870-1970 "American Century," when growth in population, electrification, urbanization, mechanized transportation, sanitation, and telecommunication converged in a historically unique, one-time transition to a modern economy.[19]

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[16] Associations Comments at 15-20.

[17] *See* EEI Comments at 15; NETOs Comments at 22; MISO TOs Comments at 3, 38-40; PJM TOs Comments at 16-26; AEP Comments at 7.

[18] EEI Comments at 15-16.

[19] *See A Customer Coalition Response to the Edison Electric Institute's Whitepaper on the Federal Energy*

Referring to question C.1, EEI states that "when there is a divergence in stock prices relative to the present value of projected future cash flows, the efficacy of the [DCF] model breaks down."[20] But, EEI provides no evidence that such divergence is so common that it poses a significant problem in determining the cost of equity. That individual investors make short-term buy or sell decisions based on many factors, including expected stock prices and dividend yields,[21] is hardly news, but as the Associations' comments and its expert statements showed, such investor behavior does not undermine the efficient-market hypothesis or the overall efficacy of the DCF model to determine the cost of equity.

The comments of various transmission-owning public utilities really do not engage with the Commission's inquiries in Questions C.1 to C. 3.b. The MISO TOs' comments do not address these questions at all. The NETOs' response to Question C.1 is simply to defend the use of multiple models.[22] They call Question C.2 a "distraction" and deem Questions C.3.a. and C.3.b. unnecessary and irrelevant.[23] Responding to Question C.3, the PJM TOs argue that any concerns about the DCF model are allayed by using multiple financial models.[24] AEP's comments are similar.[25] In short, nothing in the opening comments should dissuade the Commission from continuing to rely on the DCF model to determine the cost of equity, either as the sole estimation approach, or in combination with other well-designed models.

Regulatory Commission's Two-Step DCF Methodology for Calculating Allowed Returns on Equity at 11 (June 2018) (citing Robert J. Gordon, *The Rise and Fall of American Growth* (2016)), *available at* https://www.publicpower.org/system/files/documents/Final%20Customer%20Coalition%20Whitepaper%20Response.pdf.

[20] EEI Comments at 15-16.

[21] *See id*. at 16.

[22] NETOs Comments at 15-22.

[23] *Id*. at 22-25.

[24] PJM TOs Comments at 16-19.

[25] AEP Comments at 7-8.

D. Proxy Groups (Questions D1-D11)

1. The Commission must retain appropriate proxy group selection criteria.

Several transmission owner commenters proceed from the flawed premise that "[t]he lack of a large, representative comparison group has become an increasing concern in recent years."[26] Leaving aside the question of who exactly holds this "concern," the transmission owner commenters do not identify the number of proxy companies that they would consider insufficient. In gas pipeline ROE cases, the Commission has indicated that a proxy group with as few as four members is adequate to determine an allowed ROE using the DCF model.[27] As the Associations explained in their opening comments, even after applying reasonable screening criteria, there currently are enough regulated utility stocks from which to select a robust comparable risk proxy group to set a base ROE for an electric transmission company.[28] The Commission, therefore, should not generically loosen the proxy group criteria in response to ill-defined "concerns" that the proxy group they produce may sometimes be too small.[29] Nor should the Commission relax proxy group screening criteria to admit less risk-appropriate stocks

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[26] EEI Comments at 25; *see also* AEP Comments at 9; PJM TOs Comments at 46; SoCalEd Comments at 13.

[27] *See* Associations Comments at 23, n.58.

[28] *See id*. at 23-26, Exh. A-2 at 18:14-18. The Associations' position appears to be confirmed by information in SoCalEd's Comments showing numerous potential proxy companies at all but the highest and lowest credit rating rungs. *See* SoCalEd Comments at 16, Table 3.

[29] Pointing to a whitepaper prepared for EEI by ScottMadden, EEI suggests that the Commission could loosen or discard the credit rating screen to expand the proxy group in particular cases. *See* EEI Comments at 27. The Associations addressed this issue in their opening comments, including the suggestion that credit ratings are only relevant to debt costs. *See* Associations Comments at 34, n.97; *see also id.*, Exh. A-2 at 25:13-14 (explaining that "the stability and predictability of utilities' cash flows impact both bond holders' and equity holders' investment risk in a similar manner."). The NETOs specifically endorse the use of credit ratings in identifying comparable risk proxy companies, noting that they are "an objective measure of risk because credit ratings are the result of comprehensive analyses by independent third parties that are widely referenced by investors." NETOs Comments at 28. Further, it appears to be common ground that application of the credit rating screen will not incentivize public utilities to behave in ways that might impact their credit ratings. *See* Associations Comments at 35; NETOs Comments at 39-41.

in a particular case, unless the standard screening criteria result in fewer than a pre-specified minimum proxy group size (*e.g.*, four companies).[30]

2. Outlier tests are necessary to ensure a reasonable range of proxy group returns.

The transmission owner commenters generally attack the outlier tests (both high and low) that the Commission proposed in the *Coakley* Order, urging the Commission to adopt policies that likely would result in higher low- and high-end results in the proxy group range(s) of returns.[31] As the Associations explained in their opening comments, the Commission could largely avoid such disputes by using the median (or other distribution-based measure) as the measure of central tendency for identifying the just and reasonable ROE from within the proxy group range of returns.[32] The significance of outlier tests is driven by reliance on the midpoint as the appropriate measure of central tendency for a proxy group range of returns, and the attention devoted to these screens in the transmission owners' opening comments largely can be explained by their support for use of the midpoint.

If, contrary to the Associations' arguments, the Commission uses the midpoint as the measure of central tendency to determine allowed ROEs, it is essential that the Commission preserve some form of outlier screen for both high- and low-end results.[33] The transmission owners generally agree, conceptually, with a screen for low-end outliers tied to bond yields, but they contend that a 100 basis point risk premium is too narrow and/or that a "dynamic threshold"

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[30] *See* Associations Comments at 21-26. This framework adequately addresses the "asymmetric risk" arguments raised by SDG&E and SoCalEd relating to wildfire risk. *See* SoCalEd Comments at 10-12, 14-15, 19; SDG&E Comments at 2-7. The Associations also note that recently passed California legislation, Assembly Bill 1054 (approved July 12, 2019), contains provisions related to addressing wildfires caused by utility infrastructure, including the establishment of a wildfire fund to pay eligible claims arising from covered wildfires.

[31] *See, e.g.*, EEI Comments at 29-32; NETOs Comments at 33-38; MISO TOs Comments at 9-14; SoCalEd Comments at 18-19.

[32] Associations Comments at 26-33; *see also* INGAA Comments at 67 (explaining that "[w]hen an ROE is set at the median of a range of proxy group returns, an outlier-test is unnecessary.").

[33] *See* Associations Comments at 32-34.

reflecting changes in interest rates should be used.[34] SoCalEd goes so far as to suggest that "the low-end threshold should be estimated by using a risk premium formula based on the CAPM model."[35] Contrary to these arguments, Mr. Gorman showed that 100 basis points above the utility bond yield remains an appropriate low-end outlier screen.[36] He demonstrated, in particular, that there is no need to adjust the risk premium threshold to account for interest rate changes because risk premiums do not vary widely across changes in interest rate levels over time.[37]

Although it is important to retain outlier screens if the Commission continues to rely on the midpoint as the measure of central tendency, the Associations have expressed some concerns with the Commission's existing high-end outlier test (150 percent above the median) and its "natural break" standard.[38] Instead of using a 150 percent multiplier to screen for high-end results, the Commission should utilize accepted and objective statistical tests for outliers, of which there are several.[39] Associations continue to recommend using two standard deviations as the high-end outlier threshold.[40] Similarly, a more objective quantification of the "natural break" test is required, and the Commission could adopt one of the approaches from the record evidence cited in the Associations' initial comments.[41]

The transmission owner commenters, for their part, take issue with the concept of applying any high-end outlier test. AEP's comments include a paper by William Avera and John

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[34] *See, e.g.*, EEI Comments at 29-31; NETOs Comments at 33-34; MISO TOs Comments at 9-10; PJM TOs Comments at 37-38; AEP Comments at 11.

[35] SoCalEd Comments at 18.

[36] Associations Comments, Exh. A-2 at 20-23.

[37] *See id.* at 21-23.

[38] *See* Associations Comments at 32-34.

[39] *See id.* at 33.

[40] *Id.*

[41] *Id.* at 34, n.95.

Thompson suggesting that statistical high-end outlier tests, including use of standard deviation screens, are inappropriate within the framework the Commission uses to determine the allowed ROE. They argue that, because the proxy companies and ROE results are already subject to a number of screens intended to ensure an appropriate zone of reasonableness, there is no basis to screen out high-end results using statistical measures.[42] This argument assumes its own conclusion, however, insofar as it is presumes that the Commission's other screening criteria will produce only "reasonable and reliable" high end results so that further statistical screening is not required.[43] In truth, the other criteria applied by the Commission in selecting proxy companies and screening unreasonable results are not guaranteed to produce reliable high-end observations, and statistical screening for high-end outliers remains appropriate, particularly if the Commission persists in relying on the midpoint as the measure of central tendency in certain circumstances.

Similar reasoning applies to arguments that the Commission should dispense with the high-end outlier screen for the results of the two-stage DCF.[44] MISO TOs contend in this regard that "use of a long-term growth rate component already moderates the DCF model's estimated cost of equity, rendering a high-end outlier test unnecessary."[45] Here again, this argument presupposes that one component of the DCF formula – long-term growth – will address any and all variables that might cause an ROE result to be a high-end outlier.

3. The Commission should use the median as the measure of central tendency.

The Associations' opening comments explained in detail why the Commission should use the median rather than the midpoint as the measure of central tendency of the zone of

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[42] *See* AEP Comments, Att. A at 2-7.

[43] *Id.* at 7.

[44] *See* MISO TOs Comments at 14.

[45] *Id.* at 11; *see also id.* at 14.

reasonableness for determining an RTO-wide ROE.[46] The transmission owners, in contrast, generally support use of the midpoint, with some commenters urging the Commission to employ the midpoint in making single-utility ROE determinations.[47] The Commission should reject the transmission owner commenter positions.

The PJM TOs argue that "[t]here is no valid basis for distinguishing between the just and reasonable ROEs of transmission owners in neighboring RTOs based on the fact that in one RTO, the same ROE applies to all transmission owners, while in the other, individual ROEs are set."[48] The Associations agree with the general proposition that there is no reason to use different measures of central tendency in RTO-wide and single-utility cases, but, contrary to the PJM TOs' position, this proposition supports use of the median, not the midpoint.[49] The Associations have explained in this regard that "[g]iven the Commission's correct and judicially-affirmed finding that the median best represents investor requirements in single-utility cases, it follows that the median should be applied in all cases."[50]

In their paper attached to AEP's comments, Avera and Thompson contend that "the Commission should use midpoints to determine central tendency of the zone of reasonableness for RTO-wide ROEs and individual electric utilities given current capital market conditions."[51] Their main argument is that, while the median may be a better measure of central tendency in a

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[46] *See* Associations Comments at 37-43, Exh. A-2 at 26-35.

[47] *See, e.g.*, AEP Comments at 14-18, Att. A; PJM TOs Comments at 42-45; SDG&E Comments at 8-9. The PJM TOs argue that the Commission should at least utilize the midpoint when setting the ROE for any electric utility participating in an RTO, regardless of whether the proceeding involves a single, RTO-wide ROE. *See* PJM TOs Comments at 43-44.

[48] PJM TOs Comments at 44.

[49] *See* Associations Comments at 38.

[50] *Id.* If the Commission were to rely on the median rather than the midpoint as the measure of central tendency, the Associations agree that it might be appropriate to adopt some sort of materiality threshold in applying the Commission's merger activity screen. *See id.* at 35-36; *see also, e.g.*, EEI Comments at 25-26; PJM TOs Comments at 47-48; AEP Comments at 10.

[51] AEP Comments, Att. A at 2-3.

skewed distribution,[52] "the electric utility proxy groups created for groups of electric utilities using FERC policies are unlikely to have extreme outliers and therefore any skewness does not cause a distortion."[53] They also argue that, where the highest and lowest values in the range are reliable, "[i]gnoring the highest and lowest values of this reasonable range, as the utilization of median would do, would be to throw away useful data."[54]

First, the median is not a superior measure of central tendency *only* when the applicable distribution of results meets some standard measure of skewness. Mr. Gorman explained that the median is a better measure of central tendency, even recognizing that the Commission's screening criteria should produce a risk-appropriate proxy group.[55] *Second*, it is simply incorrect to suggest that using the median "ignores" the highest and lowest and values in the range.[56] Drs. Avera and Johnson themselves state in their paper, that "both measures of central tendency consider all of the observations but extract different information about central tendency."[57] The use of the midpoint to set the ROE for a group of utilities is the exception to the Commission's general rule that the median is a superior measure of central tendency – and this exception is no longer supportable.[58]

E. Financial Model Choice (Questions E1 – E11)

There appears to be little dispute that, if the Commission utilizes multiple models to determine the cost of equity, the choice of model(s) should not change based on shifts in capital market conditions. The Associations observed in their initial comments that "there is no

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[52] *Id.* at 9.
[53] *Id.* at 15.
[54] *Id.* at 13.
[55] *See* Associations Comments, Exh. A-2 at 26-35.
[56] AEP Comments, Att. A at 13.
[57] *Id.* at 16.
[58] *See* Associations Comments at 37-43.

evidence that actual investors in electric utility stocks . . . peg their choice of financial models (as distinguished from model inputs) to particular points on the business cycle,"[59] and the transmission owners appear generally to concur with this sentiment.[60] Similarly, there is a consensus that alternative models are complementary of the DCF and one another.[61] This is not to say, however, that the Associations and the transmission owner commenters agree on the models that might be used to determine an authorized ROE. As discussed in section II.K below, the transmission owners' support for the Expected Earnings model is wholly unjustified, and any reasonable approach for determining the market cost of equity cannot incorporate expected earnings.

The Associations and the transmission owners generally concur that state ROEs can serve as a reference point in considering a proposed transmission ROE in Commission proceedings.[62] As the Associations and others have pointed out, however, it can be difficult, if not impossible, to draw direct apples-to-apples comparisons between FERC-authorized ROEs and state-authorized ROEs, given the multitude of factors that can influence the allowed ROEs across the various states.[63] Thus, the Commission should not adopt any bright-line rules with respect to using state ROEs as a point of reference, including EEI's blanket suggestion that, "[i]n determining the reasonableness of the ROE calculated using the four models, transmission ROEs should be higher than state ROEs absent extraordinary circumstances."[64]

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[59] *Id.* at 45.

[60] *See, e.g.*, AEP Comments at 19 (arguing that "the Commission should not attempt to identify a 'best' model . . . or identify particular conditions in which some models are better than others . . . ."); NETOs Comments at 47 (observing that "investors do not completely reject certain models and adopt entirely new models in their analyses based on shifting capital market conditions.").

[61] *See, e.g.*, Associations Comments at 48-53; EEI Comments at 10-13; NETOs Comments at 50-51.

[62] *See* Associations Comments at 56-58, Exh. A-2 at 40-43; EEI Comments at 14; NETOs Comments at 52-54; MISO TOs Comments at 21; AEP Comments at 19.

[63] *See* Associations Comments at 56-58; Eastern Massachusetts Consumer-Owned Systems Comments at 50-52.

[64] EEI Comments at 14; *see also* NETOs Comments at 54 (arguing that "if vertically integrated utility state ROEs

F. Mismatch Between Market-Based ROE Determinations and Book-Value Rate Base (Questions F1-F5)

The Associations' opening comments explained why there is no "mismatch" when market-based allowed returns on equity are applied to book-value rate base. The Associations showed that the allowed cost of equity should be based on financial market values; that parent- and operating-company market-to-book ratios are unimportant for purposes of determining the market-based cost of equity; and that no adjustments to ROE determinations should be made because of any such "mismatch."[65]

The good news from the other opening comments submitted in this proceeding is that other commenters agree: There is no "mismatch" between market-based ROE determinations and book-value rate base, and the Commission should not alter its ROE policies to address this non-issue. Thus, EEI deems the mismatch issue "inconsequential."[66] Similarly, the NETOs "do not agree that there is a 'mismatch' between market-based ROE determinations and book-value rate base" and argue that the Commission "should not revise its use of the models to account for any deviation in the market-to-book ratio from one, or any perceived 'mismatch' that is inherent to public utility cost-of-service regulation …."[67] As the MISO TOs state, "There is no sound rationale for adjusting ROEs based on market-to-book ratios."[68]

If earnings/book ratios were utilized (as in the "Expected Earnings" method), they would need to be adjusted using market/book ratios in order to translate those earnings/book ratios into

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are higher than the ROE resulting from application of the Coakley Methodology, the resulting transmission ROE may be inadequate to satisfy *Hope* and *Bluefield*.").

[65] Associations Comments at 58-71.

[66] EEI Comments at 12.

[67] NETOs Comments at 55, 62.

[68] MISO TOs Comments at 22.

an indication of the cost of equity.[69] But the better approach is to apply neither earnings/book ratios nor a market/book ratio adjustment thereto.

G. First Prong of ROE Determination (Questions G1 – G4)

The transmission owner commenters generally endorse the quartile screening approach proposed in the Commission's *Coakley* Order to evaluate whether an existing authorized ROE is unjust and unreasonable.[70] The Associations' opening comments, in contrast, explained that "an existing base ROE is no longer just and reasonable if it is found to exceed the cost of equity, as measured by the best available empirical tool(s), applied to an appropriate study period."[71] The Commission's proposed quartile screening approach, the Associations explained, is untenable insofar as it would insulate from challenge a portion of the range in excess of the cost of equity identified by such empirical tools.[72] The problems with the Commission's proposal would only be magnified by the PJM TOs' recommended approach, under which the composite range would be divided into three equal parts.[73] The PJM TOs' method has the virtue of demonstrating the arbitrariness of dividing the composite range into four, rather than some other number of, segments. But its end result would be to insulate an even larger portion of the range above the cost of equity from challenge than the already-unreasonable quartile approach.[74]

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[69] *See* Associations Comments at 64-68, 72-73.

[70] *See* EEI Comments at 7-9; NETOs Comments at 63-65; MISO TOs Comments at 23-24.

[71] Associations Comments at 75.

[72] *See id.* at 75-85.

[73] *See* PJM TOs Comments at 8-13.

[74] If the Commission does adopt the quartile approach, it would be inappropriate to impose a "clear and convincing" evidentiary standard to rebut the presumption of reasonableness that the Commission would apply to ROE results falling within the corresponding risk quartile, as proposed by a number of the transmission owners. *See, e.g.*, NETOs Comments at 68; PJM TOs Comments at 2, 15-16. In general, the preponderance of the evidence standard applies in Commission proceedings. *See e.g.*, *Louisiana Pub. Serv. Comm'n v. Entergy Corp.*, Opinion No. 521, 139 FERC ¶ 61,240 at PP 35, 106 n.217 (2012), *order on reh'g*, 155 FERC ¶ 61,064 (2016); *see also Sea Island Broad. Corp. v. FCC*, 627 F.2d 240, 243 (D.C. Cir. 1980) (explaining that "use of the 'preponderance of evidence' standard is the traditional standard in civil and administrative proceedings. It is the one contemplated by the [Administrative Procedure Act].").

The Commission should also reject efforts by the transmission owners to erect unreasonable and extra-statutory barriers to FPA section 206 complaints challenging public utility ROEs. The Associations explained in their opening comments that complainants challenging an existing base ROE should be required to make a *prima facie* showing that it exceeds the cost of equity, regardless of whether a prior complaint remains pending.[75] Such a *prima facie* showing may be made by presenting equity cost studies based on methods adopted by the Commission and comparing the resulting current equity cost to the subject utility's allowed base ROE.[76]

The additional hurdles the transmission owners seek to impose on the exercise of FPA section 206 rights under successive complaints are improper. As the transmission owners generally concede, the Commission has correctly rejected their argument that successive complaints are precluded under the 15-month limit on refunds in FPA section 206(b).[77] The Commission has allowed successive complaints upon a showing that the current cost of equity is lower than the respondent utility's (or utilities') allowed ROE, and has recognized the importance of allowing successive complaints 'given that what is at issue is return on equity,' which, 'in contrast to other cost of service issues…can be particularly volatile.'"[78] Transmission owner proposals that complainants demonstrate, for example, "*sustained* changes in market conditions since the existing rate was established,"[79] and/or "that a reasonable amount of time has passed since the existing ROE was established"[80] could erect a *de facto* prohibition on

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[75] *See* Associations Comments at 85-88.

[76] *Id.* at 85.

[77] *See* NETOs Comments at 71; MISO TOs Comments at 27; *see also, e.g., Golden Spread Elec. Coop., Inc. v. Sw. Pub. Serv. Co.*, 151 FERC ¶ 61,126 at P 21 (2015) ("*Golden Spread*").

[78] *Golden Spread* at P 21.

[79] EEI Comments at 8 (emphasis added).

[80] *Id.* at 8-9; *see also* PJM TOs Comments at 16.

successive complaints as a substitute for the *de jure* prohibition that the Commission has concluded is not supported under FPA section 206(b). Such threshold hurdles on complaints, moreover, would accord asymmetrical treatment to filers under FPA sections 205 and 206, contrary to the aims of the Regulatory Fairness Act.[81]

H. Model Mechanics and Implementation – General (Questions H.1.1 – H.1.6)

In our opening comments, the Associations supported the Commission's use of Institutional Brokers' Estimate System ("IBES") data as a good proxy for investor consensus on growth rates. Specifically, the Associations recommended the Commission use a source-weighted combination of IBES data (as posted on reuters.com, which shows the number of contributed analysts) with a comparable aggregator of analyst growth estimates, such as Bloomberg or First Call.[82] The Associations did not recommend using Value Line for this purpose, since it does not represent a consensus estimate of analysts.[83]

The comments by various transmission owners generally argue that, because investors are using other sources alongside IBES estimates, the Commission should continue using IBES growth rates, while also considering comparable alternatives when supported by the record in particular cases.[84]

The MISO TOs also argue that the Commission should not consider the number of analysts supporting a growth rate estimate in weighing the credibility of that estimate and, thus, should consider growth estimates from Value Line.[85] The Associations' opening comments, however, argued that there are better alternatives to Value Line, such as Bloomberg and First

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[81] *See generally* Associations Comments at 86-88.

[82] *See id*. at 90-93 (describing specific proposal for DCF studies of electric utility parent stocks).

[83] *See id.* at 91.

[84] *See* EEI Comments at 19-20; NETOs Comments at 73-77; MISO TOs Comments at 34-36; PJM TOs Comments at 23; AEP Comments at 23-24.

[85] MISO TOs Comments at 36-37.

Call, which are used by investors and are more transparent and reliable sources of growth estimates, because they are based on consensus aggregations of multiple, independent analysts.[86] Given this limitation on Value Line's estimates, the Associations also recommend the Commission not use Value Line for the growth estimates in the DCF study of the equity market used in the CAPM.[87]

Another issue is how the Commission uses multiple growth estimates. EEI argues that the Commission should not average multiple growth projections, "because this would distort the full range of investor expectations."[88] The objective of this recommendation, as made clear in the whitepaper EEI cites, is to obtain multiple DCF results for each company in the proxy group and, thus, increase the odds that an especially high result will raise the top of the DCF range—thereby distorting and destabilizing the proxy group midpoint, which EEI seeks to apply in all cases as the measure of central tendency.[89] The PJM TOs pursue the same gambit.[90] But that approach wrongly maximizes the weight given to whatever near-term growth estimate is least representative of the multiple estimates that investors see for a particular utility stock and for the proxy group. This problem is avoided by the Associations' recommended approach: use the median of the proxy group results as the measure of central tendency, and for each member of the proxy group, determine a single first-step growth estimate by averaging the growth estimates of IBES and another comparable source, weighted by the number of contributing analysts.[91] If the Commission continues its present policy of using the midpoint of the range of proxy group results in setting the allowed return for a group of public utilities, however, the Commission

[86] *See* Associations Comments at 91-93.
[87] *See id.* at 93-94.
[88] EEI Comments at 20.
[89] *See id.* at 21-22.
[90] *See* PJM TOs Comments at 25, 42-45.
[91] *See* Associations Comments at 93.

should reject EEI's and PJM TOs' recommendations to broaden the range of the proxy group results which further complicate and reduce the predictability and stability of the results of the Commission's ROE methodologies.

I. Model Mechanics and Implementation – DCF (Questions H.2.a.1 – H.2.a.6)

A number of transmission owners urge the Commission to fundamentally modify the DCF method proposed in the *Coakley* Order by adopting a single-stage constant growth DCF that would eschew consideration of a long-term growth rate.[92] The primary argument advanced for this approach is that "there is no reason to believe investors base their dividend growth expectation on long-term economic projections."[93] The Associations' initial comments explained at length why this argument does not support using a single-stage constant growth DCF model.[94] Notably, AOPL specifically agreed that it is reasonable to use a two-stage DCF with long-term growth based on projected GDP growth.[95]

J. Model Mechanics and Implementation – CAPM (Questions H.2.b.1 – H.2.b.4)

1. The Commission's market risk premium estimate should be consistent with unbiased, published, widely used, market risk premium estimates.

Accurately estimating the market risk premium is a critical element of applying the CAPM model. Investors, advisory services, and academics have developed a variety of tools to estimate the market risk premium, and several organizations publish market risk premium estimates that are widely used by investors. For example, Duff & Phelps publishes forward looking estimates in its annual Valuation Handbook, including a "long-horizon expected equity

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[92] *See, e.g.*, NETOs Comments at 88-89; MISO TOs Comments at 38-40; PJM TOs Comments at 19-22.

[93] PJM TOs Comments at 20; *see also* NETOs Comments at 88.

[94] *See* Associations Comments at 97-98, 99-107.

[95] *See* AOPL Comments at 22 (explaining that "since it is not possible to predict with any accuracy which companies will exceed GDP growth and which will not, the use of GDP for all companies as one element in the overall growth forecast is reasonable as a policy matter."); *see also id.* at 40.

risk premium (supply-side)" and a "Duff & Phelps recommended equity risk premium (conditional)."[96] Both are relied on by investors, and the former has frequently been adopted by the Delaware Court of Chancery for use in the CAPM in appraisal actions.[97] Professor Aswath Damodaran also publishes a forward-looking market risk premium estimate.[98]

The Commission could adopt one of these unbiased publications as a source for the market risk premium to be used in the CAPM analyses in regulatory proceedings. But if the Commission were to instead accept market risk premium estimates produced for the sole purpose of litigation, it should at least compare those litigation estimates to the unbiased, published estimates used by investors. Where the results are significantly different, the Commission should try to understand why that is the case.

2. Financial theory does not support using a single-stage DCF to calculate the market risk premium.

The transmission owners advocate for estimating the market risk premium by performing a single-stage DCF analysis on the dividend-paying companies in the S&P 500.[99] The Associations explained in detail why such an approach is not supported by financial theory or investor expectations.[100] In short, that approach depends on the false premise that investors believe dividends for companies in the S&P 500 will grow forever at a rate equal to the IBES 3-5 year earnings growth estimates.

One of the transmission owners' rationales for assuming that high, short-term growth rates can be sustained forever is that the growth rates are applied to the S&P 500 index, which is

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[96] Associations Reply Comments, Exh. A-7 at n.13.

[97] *Id.*

[98] *Id.* at n.11.

[99] *See, e.g.*, MISO TOs Comments at 40-41; NETOs Comments at 90-92; PJM TOs Comments at 31-32.

[100] Associations Comments at 99-106.

regularly updated to contain companies with high market capitalization.[101] That argument is incorrect because: (1) the short-term growth rates are applied to individual companies in the S&P index, not to the index itself; (2) the dividend-paying companies of the S&P 500 are used as a proxy for the entire equity market, which cannot, as a whole, grow faster than the economy forever; (3) when S&P updates its index to include a new company that has a higher market capitalization, it also adjusts the divisor of the index so that the index value is held constant; and (4) unbiased, published estimates of S&P 500 growth rates are much lower than the rates implied by a single-stage DCF.[102]

A second rationale is that the two-step DCF model that the Commission applies to utility stocks is not relevant to companies in the general economy.[103] As Professor Cornell explained in his initial affidavit, outside of the regulatory context, it is standard practice to use multi-stage DCF models to calculate the cost of equity.[104] The specific two-step DCF approach that the Commission has adopted for utilities (*i.e.*, weighting short-term and long-term growth projections to construct an implied constant growth rate) can achieve a similar result, though it is not as robust as using a truly multi-stage DCF model that separately models short-term and long-term growth estimates.[105] But the fact remains that multi-stage DCF studies are used by investors and academics in the general economy as well as the utility industry. Importantly, Professor Damodaran, one of the leading proponents of using a market-wide DCF to calculate a

[101] MISO TOs Comments at 40-41 (citing Opinion No. 531-B at P 113; Opinion No. 551 at P 170).
[102] *See* Associations Comments at 104-5 (discussing these four flaws in greater detail).
[103] New England TO Comments at 91-92.
[104] Associations Comments, Exh. A-1 at 22-28.
[105] *Id.*

forward-looking market risk premium, uses a two-stage DCF model and specifically warns against exclusive reliance on short-term growth rates.[106]

The final rationale offered for using a single-stage DCF to calculate the market risk premium is that investors supposedly do not base their forecast growth expectations of the S&P 500 on long-term GDP growth forecasts.[107] First, that is factually incorrect: investors are well aware that long-run economy-wide growth limits the growth potential of an economy-wide stock portfolio. Accordingly, Professor Cornell recommends "using long-run nominal growth rates for [GDP] forecast by the Federal Reserve and leading private forecasting firms" as the long-run growth rate used to calculate the market risk premium.[108] Professor Damodaran uses an even lower estimate for his long-run growth rate: basing it on 10-year Treasury bond yields rather than on the GDP forecast.[109]

Whether investors use GDP estimates, 10-year Treasury bond yields, or some other long-term estimate, the fact is that no rational investor believes that the long-term sustainable growth rate on the S&P 500 is equal to the short-term estimates. GDP estimates are a reasonable proxy for investor expectations of the long-term sustainable growth rate. In fact, historical records show that there is a correlation between GDP growth rates and S&P 500 growth rates: nominal GDP growth over the past ninety years was 6.1%; S&P 500 growth was 5.8% over roughly the same period.[110] Mr. Gorman concludes that "over long periods of time, it is reasonable to expect that the growth rate in the S&P 500 will continue to track the growth rate of the nominal GDP because these markets are interrelated, and can only grow over long periods of time at growth

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[106] Associations Reply Comments, Exh. A-7 at 7-8.

[107] PJM TOs Comments at 28; New England TOs Comments at 80.

[108] Associations Reply Comments, Exh. A-7, at 7, n.11.

[109] *Id.*

[110] Associations Reply Comments, Exh. A-8 at Table 3.

rates that are reasonably comparable to one another."[111] Similarly, a survey of forward-looking estimates confirms that independent advisory firms expect S&P 500 growth rates to be comparable to GDP growth over the long-term.[112]

Ultimately, the proof is in the pudding: a single-stage DCF of the S&P 500 companies produces a market risk premium in excess of 8%, while most published estimates are in the 4-6% range. The transmission owners provide no valid justification for using a method that produces results that are inconsistent with every unbiased, published estimate.

3. The ECAPM methodology is unsound and should not be adopted.

Several commenters advocate that the Commission should consider an Empirical CAPM (ECAPM) methodology in lieu of, or in addition to, the standard CAPM methodology.[113] Consistent with the Commission's previous holdings, the Commission should not give any weight to the ECAPM methodologies when determining just and reasonable ROEs.

First, the ECAPM method is theoretically unsound, and there is no evidence that investors rely on the ECAPM to calculate the cost of equity. Professor Cornell explains that the ECAPM "is not based on economic theory" and "has not received support in the academic literature in decades."[114] The NETOs assert that the ECAPM model is used by some state commissions and is described in *New Regulatory Finance*, but they do not present any evidence that this model is used outside the regulatory context. The standard CAPM model, while not perfect (no model is), is widely used by investors, academics, and regulators. If the Commission were to adopt any modification to the standard CAPM, it should adopt a modification that has

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[111] *Id.* at 18:14-15 – 19:1-2.

[112] *Id.* 15-16 (showing long-term estimates of nominal GDP growth is around 4.2% and that the median projection of long-term S&P 500 growth is 3%-5%); *see also id.* at Table 2.

[113] *See, e.g.,* NETOs Comments at 94-95; PJM TOs Comments at 27-28.

[114] Associations Comments, Exh. A-7 at 5.

been adequately studied and gained wide acceptance.[115] The ECAPM does not meet that standard.

Second, the ECAPM relies on several unstated assumptions that have not been adequately analyzed. Because the ECAPM is premised on an empirical regression, there are important and unresolved questions about the time period over which the regression is conducted: should the regression be recalculated in every case, or should the Commission accept factors that were calculated over a decade ago by Dr. Morin? If the empirical regression is recalculated in each case, how many time periods should be included in the regression? What should be the interval of those time periods?[116] And, even if those timing questions could be resolved, other assumptions must be made about how systemic risk is modelled in the regression analysis and which companies are included in the regression.[117] Without widespread consensus on how those questions should be answered, the ECAPM devolves into an adjustment to an otherwise widely-used and accepted model.

Third, the ECAPM adjustment to the standard CAPM model is duplicative of the adjustment that Value Line makes to its betas.[118] If the ECAPM is used with Value Line adjusted betas, it would double count the impact of low betas on the CAPM result. Mr. Gorman analyzes the impact to the standard CAPM model of applying the ECAPM and of using Value Line adjusted betas, and he concludes that making both adjustments "significantly distorts the

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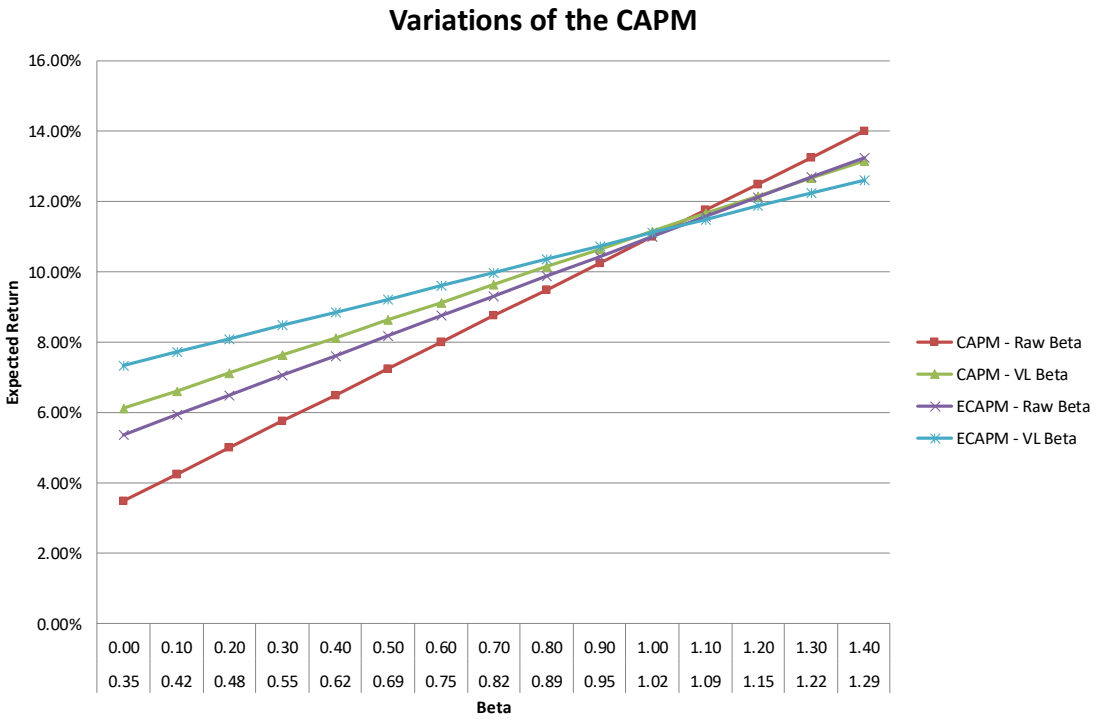
[115] The Fama-French factor model has been studied extensively, and yet even that model is insufficiently proven to justify using it in regulatory proceedings. Professor Cornell notes that the Fama-French model and other factor models "remain highly controversial," are "cumbersome to implement and require complex and still unproven statistical techniques." Associations Comments, Exh. A-1 at 31; *accord* NETOs Comments at 94.

[116] *See* Associations Reply Comments, Exh. A-7 at 5-7 (describing the implicit assumptions in the ECAPM).

[117] *Id.*

[118] *See generally* Associations Reply Comments, Exh. A-8 at 12-13.

security market line by further increasing the intercept point and nearly flattening the slope."[119] The chart below graphically demonstrates how the security market line is distorted by making both adjustments.[120] It shows that the ECAPM using raw betas (purple line) and the standard CAPM using Value Line betas (green line) have very similar impacts compared to using the standard CAPM using raw betas (red line).



4. Commenters agree that Value Line is an appropriate source of betas.

In our opening comments, in response to Question H.2.b.2, the Associations noted that there is no evidence that the absolute risk of utility stocks or the broader stock market has increased, or that relative risk of utility stocks to the broader stock market has changed. In any

[119] *Id.* at 12:16-18.

[120] *Id.* at Figure 1.

event, CAPM studies do not depend on constant absolute or relative risks.[121] The opening comments of the various transmission-owning public utilities do not dispute these matters.

In response to Question H.2.b.3, the Associations' opening comments noted that the conventional source of beta values for CAPM studies and Value Line, uses assumptions and calculation methods that produce betas erring on the high side. Nonetheless, the Associations believe these beta values can be reasonable to use, albeit with some caution, and without further, *ad hoc* adjustments, which may increase measurement errors.[122] The comments of various transmission-owning public utilities support using Value Line as an appropriate data source for the CAPM beta value.[123]

K. Model Mechanics and Implementation – Expected Earnings (Questions H.2.c.1 – H.2.c.4)

1. Transmission Owners provide no evidence that investors use the Expected Earnings model to calculate the cost of equity. (E1)

Several transmission owners make vague claims about investors relying on the Expected Earnings model, but closer scrutiny reveals that there is no evidence for such claims. EEI, for example, states that "[v]arious forms of [the DCF, CAPM, Expected Earnings, and Risk Premium] models are widely used by investment analysts in determining the cost of equity."[124] But EEI provides no citation for that bald assertion. In fact, a paper that EEI attaches to its comments implicitly contradicts EEI's claim: the ScottMadden, Inc. ("ScottMadden") paper cites multiple academic and industry sources to show that investors "use...the CAPM to compute the cost of equity,"[125] and it cites the CFA Level I Program Curriculum to support the claim that

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[121] *See* Associations Comments at 107-9.

[122] *See id*. at 110.

[123] *See* NETOs Comments at 93-94; MISO TOs Comments at 41-42; PJM TOs Comments at 30.

[124] EEI Comments at 10.

[125] *Id*., Att. A at 34, nn.86-87.

"the [Risk Premium] model reflects valuation techniques relied on in practice,"[126] but it provides no similar citation for investor reliance on Expected Earnings models.[127] The implication of that conspicuous silence is clear: EEI's expert, ScottMadden, could find no evidence that investors rely on Expected Earnings models.

Similarly, the NETOs provide no independent verification of their claim that investors rely on Expected Earnings models to calculate the cost of equity. Their witness, Mr. Quackenbush, asserts, "based on [his] experience in investment community" that he "observe[s] that equity investors use...evaluations of Expected Earnings" to "evaluate utility equities."[128] But his subsequent description of his experience suggest that he has not actually observed any investors using the ratio of expected earnings per share to book value per share (*i.e.*, the ratio that makes up the Commission's proposed Expected Earnings model).[129] And even if his observation were true, Mr. Quackenbush does not assert that investors use Expected Earnings to *estimate utilities' cost of equity.*

In fact, Mr. Quackenbush goes on to explain the critical difference between the valuation of utility equities and estimating the cost of equity.[130] He states that "the cost of capital estimation process is...but an intermediate step" to equity valuation, which is "the end goal of investors."[131] Even if he were correct that some investors consider Expected Earnings in making

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[126] *Id.* at 32, n.81.

[127] *Id.* at 34-35 (not even claiming that investors rely on Expected Earnings, let alone providing citations).

[128] NETOs Comments, Attachment B at 17.

[129] Mr. Quackenbush details how, at UBS, he spent hours calculating earnings per share and book value per share estimates. *Id.* at 24-26. He resorts to much vaguer language, however, when discussing whether investors calculate the ratio of those two values: "Some investors will undoubtedly make this expected earnings-to-book value calculation while others will not." *Id.* at 29. In that passage, he does not indicate the purpose for which an investor might calculate the expected earnings-to-book ratio.

[130] *Id.* at 18.

[131] *Id.*

some investment decisions, it provides no evidence for the relevant inquiry for this Commission: whether investors use the Expected Earnings methodology to estimate utilities' cost of equity.

They do not. Professor Cornell explains in detail that the academic literature affirmatively disavows the use of Expected Earnings on the book value of a firm's equity (*i.e.*, the Expected Earnings methodology) to estimate the cost of equity capital.[132] Even Dr. Vilbert, who endorses the use of Expected Earnings, admits that "the Expected Earnings method has no theoretical basis as a means of estimating the market cost of capital."[133] Instead, he says, it "represents additional information available to investors for their consideration *when making investment decisions*."[134] The same could be said for astrology, but that does not mean that using that information to estimate the cost of equity would be a rational Commission practice.[135] Moreover, neither Mr. Quackenbush nor Dr. Vilbert asserts, much less shows, that investors use earnings/book ratios in isolation from market/book ratios. Investors who use those factors together are, in effect, applying earnings/price ratios. Investors' reference to earnings/price ratios is neither surprising nor supportive of using an Expected Earnings model.

In short, no witness has put forward any credible evidence that investors consider Expected Earnings to estimate utilities' cost of capital, or any credible evidence that the output of an Expected Earnings model indicates their cost of capital.

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[132] Associations Comments, Ex. A-1 at 6, 10, 15, 31-32; Associations Reply Comments, Exh. A-7 at 2-4.

[133] INGAA Comments, Att. A at 47.

[134] *Id* (emphasis added).

[135] *See* Associations Comments at 44 & n.118 (providing evidence of an investment fund that gleans insights from the movements of celestial bodies) (*citing* Simon van Zuylen-Wood, *Is the Key to Beating the Market Written in the Stars?*, Business Week (July 27, 2018), https://www.bloomberg.com/news/features/2018-07-27/is-the-key-to-beating-the-market-written-in-the-stars).

2. Accounting-based rates of return are irrelevant—not complementary—to market-based estimates of the cost of equity.

Even the commenters and experts witnesses who advocate for using the Expected Earnings methodology admit that "it is an accounting rate of return, not a market-based estimate."[136] They try to spin that fact as a positive, claiming that Expected Earnings is "consequently the most complementary to the other models."[137] But being the most different from the other models does not make it most complementary. The DCF and CAPM are complementary because they use different methods to achieve the same objective (*i.e.*, estimating the cost of equity). In contrast, the Expected Earnings method has a different objective from the DCF and CAPM methods. Thus, the Expected Earnings method is not complementary to the DCF and the CAPM; rather, it is irrelevant to the DCF's and CAPM's objective of estimating the cost of equity.

EEI similarly attempts to treat the Expected Earnings' shortcomings as a strength, arguing that—unlike the market-based methodologies—the Expected Earnings is "independent from swings in market data."[138] That is actually a reason *not* to consider the Expected Earnings methodology. A methodology that does not change when market data changes fails to reflect the principles of *Bluefield*, which requires that the just and reasonable ROE vary with "changes affecting opportunities for investment, the money market and business conditions generally."[139]

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[136] INGAA Comments, Att. A at 47; *see also* NETOs Comments, Att. B at 23; AOPL Comments, App. A at P 51.

[137] NETOs Comments at 50.

[138] EEI Comments, Att. A at 35.

[139] *Bluefield Waterworks and Improvement Co. v. Pub. Serv. Comm'n of West Virginia*, 262 U.S. 679, 693 (1923) ("*Bluefield*").

L. Model Mechanics and Implementation – Risk Premium (Questions H.2.d.1 – H.2.d.3)

1. Mixing historical and projected bond yields will not produce a better estimate of the cost of equity.

In our opening comments, the Associations noted that even the best Risk Premium studies are inherently less accurate than well-constructed DCF or CAPM studies. Thus, when equity costs are declining, Risk Premium studies reflect regulatory lag and tend to produce results exceeding the current cost of equity. Nonetheless, Risk Premium studies are commonly used, and they directly reflect current financial (*i.e.*, bond) market conditions. While the Associations do not favor using the Risk Premium method to determine the cost of equity for electric utilities, we acquiesce in its use as a general method.[140]

That said, the Associations caution that Risk Premium studies must be properly constructed and performed. In response to Question H.2.d.1, the Associations stress that Risk Premium studies should be internally consistent in their use of bond-yield data, as explained in Mr. Gorman's expert statement. Thus, Risk Premium studies should compare the cost of equity for historical study periods to the actual, contemporaneous bond yields for the study period—and not to projected bond yields for future periods. In any event, because projected bond yields do not reflect the actual, current cost of capital, and are unreliable indicators of the future cost of capital, projected bond yields should not be used in Risk Premium studies to estimate the current market cost of equity.[141]

The NETOs argue that the Risk Premium method can properly use, and mix, both historical and projected bond yields, and that the Commission should continue to consider both

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[140] *See* Associations Comments at 126.

[141] *Id.* at 127-129.

types of bond yields.[142] They endorse averaging Risk Premium study results using historical and projected bond yields.[143] The MISO TOs and PJM TOs also support this averaging the result of two separate Risk Premium studies, one using historical bond yields and one using projected bond yields.[144]

The Associations do not support this mixing of actual and projected bond yields, or the use of projected bond yields at all. It is unclear how averaging actual bond-yield results with unreliable projected bond-yield results produces a better estimate of the cost of equity. The issue is not that risk premiums change over time, or are inversely proportional to interest rate levels; it is that projected bond yields are unreliable indicators of the current cost of equity.[145]

2. Using projected bond yields to calculate risk premiums is unreliable and unduly speculative.

The transmission owners support using projected bond yields to calculate risk premiums.[146] This is not a question of using a "historic" versus "forward-looking" Risk Premium model because the Risk Premium model always uses historic data to calculate a spread between bond yields and regulatory outcomes, and then applies that spread prospectively using the current bond yields. The question is whether the risk premium spread should be calculated using actual or projected bond yields.

The transmission owners' main argument for using projected, rather than actual, bond yields is that projected bond yields are "more reflective of investors' forward-looking expectations"[147] and that investors believed that "bond yields would change from the then-

[142] *See* NETOs Comments at 97-98.
[143] *See id.* at 98.
[144] *See* MISO TOs Comments at 43; PJM TOs Comments at 36.
[145] *See* Associations Comments at 127-129.
[146] MISO TOs Comments at 43-44; NETOs Comments at 97-98; PJM TOs Comments at 36.
[147] MISO TOs Comments at 44.

current historical bond yields."[148] Although it is axiomatic that investors believe bond yields will change, that is not sufficient reason to calculate a risk premium based on projected bond yields. Investors also believe that stock prices will change, but the DCF is performed using current stock prices not predictions of future stock prices. Current stock prices and current bond yields are the best reflection of actual investor expectations, and are the most reliable inputs to use for cost of capital studies. Unlike mere forecasts of future bond yields, actual bond yields embody investment decisions backed by actual financial commitments.

Furthermore, projected bond yields do *not* represent investor expectations. Mr. Gorman presents a study that shows, over the last 18 years, analysts have consistently projected increases in bond yields that never materialized.[149] Investors are aware that projected interest rates are "highly unreliable, and seldom accurately match the market's actual cost of capital demands."[150] The Commission was, therefore, correct in finding that "projected yields used in risk premium analyses are speculative and less reliable than historical yields."[151]

3. The Risk Premium methodology is not compatible with a finding of anomalous market conditions.

In response to Question H.2.d.2, the Associations' opening comments explained why the Risk Premium method's underlying assumptions are incompatible with a finding that bond yields or other financial-market conditions, are "anomalous." The Risk Premium method directly reflects bond yields, assumes these yields have linear relationship to equity costs, and assumes

[148] NETOs Comments at 98.

[149] Associations Reply Comments, Exh. A-8 at 4.

[150] *Id.*

[151] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 551, 156 FERC ¶ 61,234, 62,161 (2016) ("Opinion 551").

the subject utility presents risks comparable to those of utilities in past rate cases. A finding of "anomalous" market conditions logically precludes use of the Risk Premium method.[152]

The NETOs deem this question irrelevant if the Risk Premium method is not used by itself, but in conjunction with the other three proposed methods.[153] The NETOs argue that a finding of anomalous market conditions does not preclude the use of the Risk Premium method if it is used alongside the other methods.[154] But they do not attempt to delve into the contradictions inherent between such a finding and the Risk Premium method's underlying assumptions. Finally, the NETOs argue that the particular Risk Premium studies they have presented in the pending New England rate cases obviate any concerns over anomalous market conditions by using an annual averaging approach.[155] But the only anomalous market conditions that annual-average calculations might mitigate are very short-term disruptions of less than a year. Moreover, the time series of NETO Risk Premium studies shows clearly that their Risk Premium results are distorted upward by an idiosyncratic and error-based aspect of the ROE-bond yield spreads that NETOs impute to the 2006-09 period. Specifically, "NETOs' inferred risk premium/interest rate relationship is bizarre during 2006-09, reflecting the fact that bond yields were rising sharply while allowed base ROEs as reflected in the data set were not, which in turn reflects the fact that so many of those data set cases did not actually involve the determination of new base ROEs using updated financial information."[156] This anomaly is larger and more solidly demonstrated than any supposed "anomaly" affecting utility-proxy DCF results, and it is not cured by clumping the risk premium data set into annual sub-sets.

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[152] *See* Associations Comments at 129-130.

[153] *See* NETOs Comments at 98.

[154] *See id.* at 99.

[155] *See id.*

[156] *See Coakley v. Bangor Hydro-Elec. Co.*, CAPS' Paper Hearing Principal Reply Brief, Reply Affidavit of Dr. J. Randall Woolridge, Exh. No. CAP-600 at 26, Docket Nos. EL11-66-001, *et al.*, (filed Mar. 8, 2019).

III. CONCLUSION

The Associations appreciate the opportunity to provide these reply comments on the Commission's NOI. As explained above and in our opening comments, the *Coakley* method for evaluating ROE complaints and determining just and reasonable equity returns, as proposed by the Commission, is contrary to the FPA and the standards of reasoned decision-making. Nothing included in the opening comments of the transmission owners rebuts the Associations' identified objections to the proposed new approach, and, as explained above the numerous changes to the *Coakley* method proposed by the transmission owner commenters would seriously exacerbate the problems with the proposed method. Accordingly, if the Commission intends to pursue changes to its policies for determining just and reasonable ROEs, it should adopt the revisions to its proposed new approach described by the Associations.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served, via first-class mail, electronic transmission, or hand-delivery the foregoing upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, DC this 26th day of July, 2019.

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