

**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

Inquiry Regarding the Commission’s Policy for Determining Return on Equity))))	Docket No. PL19-4-000
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**INITIAL COMMENTS OF
THE EDISON ELECTRIC INSTITUTE**

I. INTRODUCTION

The Edison Electric Institute (“EEI”) respectfully submits the following comments in response to the Notice of Inquiry (“NOI”) issued by the Federal Energy Regulatory Commission (“FERC” or “Commission”) on March 21, 2019. The Commission seeks information and stakeholder views regarding whether, and if so how, it should modify its policies concerning the determination of the return on equity (“ROE”) to be used in designing jurisdictional rates charged by public utilities.¹ Specifically, the Commission seeks comment on the following: (1) the role of the Commission’s base ROE in investment decision-making and what objectives should guide the Commission’s approach; (2) whether uniform application of the base ROE policy across the electric, interstate natural gas pipeline and oil pipeline industries is appropriate and advisable; (3) performance of the Discounted Cash Flow (“DCF”) model, (4) proxy groups; (5) financial model choice; (6) mismatch between market-based ROE determinations and book-value rate base; (7) how the Commission determines whether an existing ROE is unjust and

¹ *Inquiry Regarding the Commission’s Policy for Determining Return on Equity*, 166 FERC ¶ 61,207 (2019) (“NOI”).

unreasonable under the first prong of section 206 of the Federal Power Act (“FPA”);² and (8) model mechanics and implementation.

EEI is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for about 220 million Americans, and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than 7 million jobs in communities across the United States. EEI’s members are committed to providing affordable and reliable electricity to customers now and in the future. EEI’s members make considerable investments in needed and beneficial transmission infrastructure—investments that the Commission and Congress have recognized are critical to ensure a reliable, cost-effective, and modern bulk power system. To that end, EEI is uniquely situated to address matters concerning the Commission’s policies with respect to transmission rates and how such policies impact the development of transmission infrastructure. Accordingly, EEI members are directly affected by and can provide a broad-based perspective on the questions raised in the NOI. EEI submits the following comments to assist the Commission with its evaluation of existing ROE policies to develop stable, predictable, and beneficial policies in support of transmission investment. As discussed herein, EEI generally supports the proposal in the NOI.

II. EXECUTIVE SUMMARY

Transmission is the backbone of the Bulk Electric System and continued investment is needed to meet the needs of the future. The predictability and stability of transmission ROEs is vitally important in attracting the necessary capital to expand and enhance the nation’s energy grid to meet tomorrow’s emerging energy challenges. EEI member companies appreciate the

² 16 U.S.C. § 824e (2012).

Commission's efforts in seeking to provide for just and reasonable rates for customers while maintaining its dedication to capital attraction standards.

EEI generally supports the Commission's proposed methodology in the orders directing briefs in the Northeast Transmission Owners' ("NETOs") and Midcontinent Independent System Operator Transmission Owners' ("MISO TOs") ROE proceedings before the Commission (collectively, the "Briefing Orders")³ on which the Commission seeks comment in the NOI.⁴ The Briefing Orders and the NOI propose to use the DCF, CAPM, Expected Earnings, and Risk Premium models in the Commission's ROE analysis to determine ranges of potentially reasonable ROEs and the ultimate placement of an ROE within the zone of reasonableness, rather than relying solely on the DCF methodology. By doing so, the Commission appropriately broadens its analysis to reflect practices commonly used by investors in evaluating their investment opportunities. Broadening the tools available to determine the cost of equity estimates better reflects how investors make decisions and will lessen the impact of many of the fluctuations and limitations in model assumptions and outcomes. Thus, as discussed herein, EEI supports the Commission's proposal to use all four methodologies in its ROE analysis.

Predictability and stability of transmission ROEs is vitally important in attracting the necessary capital to expand and enhance the nation's energy grid to meet tomorrow's emerging energy challenges. While the Commission's proposal to employ multiple models and various data sources to smooth out potential limitations of any one model is appropriate, the Commission must use reasoned judgment in determining just and reasonable ROEs. The Commission should

³ *Martha Coakley v. Bangor Hydro-Elec. Co.*, 165 FERC ¶ 61,030 (2018) ("NETO Briefing Order"); *Ass'n of Businesses Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, 165 FERC ¶ 61,118 (2018) ("MISO Briefing Order") (together, the "Briefing Orders").

⁴ NOI at P 28.

not rely on a mechanistic application of formulas if the results from the analyses do not provide predictability, stability, are not reflective of long-term markets, or are simply illogical or unreasonable. In order to provide flexibility to the Commission to be responsive to market conditions, these comments suggest methods by which the Commission can provide for the robust selection of proxy groups. These include expanding the universe of companies of similar risk profiles, reviewing the current policy of eliminating utilities engaged in merger and acquisition activities, adjusting the low-end outlier test to reflect capital market conditions, and eliminating the high-end and natural break outlier tests.

III. BACKGROUND

In 2017, the U.S. Court of Appeals for the District of Columbia Circuit (“D.C. Circuit”) issued an opinion in *Emera Maine v. FERC*⁵ vacating and remanding the Commission’s decision in Opinion No. 531. Opinion No. 531 established a two-step DCF methodology for determining just and reasonable ROEs and set the ROE for the NETOs at the midpoint of the upper half of the zone of reasonableness produced by the two-step DCF analysis.⁶ In vacating this decision, the D.C. Circuit found that the Commission failed to show that the NETO’s existing ROE was unjust and unreasonable as required by section 206 of the FPA before proceeding to set a new just and reasonable ROE through application of the two-step DCF methodology.⁷ The court also determined that the Commission failed to explain its reasoning (beyond its finding of anomalous

⁵ 854 F.3d 9 (D.C. Cir. 2017) (“*Emera Maine*”).

⁶ *Coakley, Mass. Attorney Gen. v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234, *order on paper hearing*, Opinion No. 531-A, 149 FERC ¶ 61,032 (2014), *order on reh’g*, Opinion No. 531-B, 150 FERC ¶ 61,165 (2015) (“Opinion No. 531”).

⁷ *Emera Maine*, 854 F.3d at 27.

capital market conditions) to support its decision to place the NETOs' ROE at the midpoint of the upper half of the zone of reasonableness.⁸

After the D.C. Circuit issued its opinion in *Emera Maine*, the Commission issued the Briefing Orders in the NETO ROE case as well as in the MISO TOs' dockets proposing a new ROE methodology. The new methodology the Briefing Orders proposed establishes a composite zone of reasonableness by averaging the results of the DCF methodology, the CAPM model, and the Expected Earnings model. This composite zone of reasonableness will then be divided into quartiles to determine presumptively just and reasonable ROEs for (1) below-average risk utilities, (2) average risk utilities, and (3) above-average risk utilities.

Under this methodology, any complaint or challenge to an existing ROE under section 206 of the FPA will be dismissed if the Commission determines that the existing ROE falls within the quartile of the presumably just and reasonable ROEs for a utility of similar risk. If an existing ROE under section 206 of the FPA is deemed to be unjust and unreasonable under this standard, the Commission will then determine a new just and reasonable ROE by averaging the estimated cost of equity produced by each of the three methodologies referenced above in addition to the Risk Premium model. Using this average cost of equity, the Commission will place the ROE in the central tendency of the respective zone of reasonableness for utilities of similar risk profiles. Subsequently, the newly determined ROE, plus any transmission rate incentives granted pursuant to section 219 of the FPA, will be capped at the top of the broader zone of reasonableness determined in the first prong of the section 206 analysis. The Briefing Orders then directed the NETOs and the MISO TOs to file briefs analyzing the merits and applicability of the proposed methodology to their pending proceedings.

⁸ *Id.*

Recognizing that its ROE policies extend beyond the specific interests of the NETO and MISO TOs, the Commission subsequently issued this NOI to solicit broader feedback from stakeholders affected by ROE policies as the Commission re-evaluates its policies following the *Emera Maine* decision.

IV. COMMENTS

A. EEI generally supports the methodology proposed in the Briefing Orders because it is an effective means of providing stable, predictable, and adequate returns for electric transmission owners to attract capital investment.

The methodology proposed in the Briefing Orders appropriately addresses the D.C. Circuit's remand in *Emera Maine* and makes significant progress in restoring administrative efficiency and regulatory certainty to transmission ROE proceedings.⁹ The predictability and stability of transmission ROEs is vitally important in attracting the necessary capital to expand and enhance the nation's energy grid to meet tomorrow's emerging energy challenges.¹⁰ By clarifying how it plans to address both prongs of its section 206-mandated analysis and by incorporating a broader set of methodologies and analyses, the Commission makes important strides in mitigating the instability of transmission rates. It also addresses the regulatory uncertainty and administrative costs and burdens generated by years of extensive litigation to the ultimate benefit of consumers. The proposed methodology both reflects the breadth of data that investors consider when making investment choices and provides the necessary predictability of transmission rates. However, as with any arithmetic methodology, there are limitations that necessitate the Commission's reasoned judgment when the model generates an ROE determination that is illogical or unreasonable given investor expectations. Therefore, the Commission must employ sound judgment in determining a just and reasonable ROE and must not rely solely on the mechanistic output of any one methodology or combination of models.

To date, the Commission has framed its discussion of revising its policy for determining just and reasonable ROEs in the context of FPA section 206 proceedings. The Commission should also clarify that its policy applies to section 205 proceedings in which a public utility seeks to establish a new just and reasonable base ROE, and that the four financial models may be used for that purpose.

1. The proposed methodology appropriately correlates just and reasonable rates with the level of risk.

In the NOI, the Commission seeks comment on whether its proposed approach to determining whether an existing ROE is unjust and unreasonable under the first prong of section 206 of the FPA and whether the proposed approach is reasonable.¹¹ The proposed approach creates a rebuttable presumption that the current ROE is just and reasonable if it falls within the range of the presumably just and reasonable ROEs for utilities of similar risk. EEI believes this approach is reasonable. The proposed methodology addresses the D.C. Circuit’s determination that the FPA “creates a broad range of potentially lawful ROEs rather than a *single* just and reasonable ROE.”¹² In addition, it appropriately establishes the threshold that a complainant must meet to demonstrate that an existing rate may be unjust and unreasonable. The Commission indicates that it intends to “dismiss an ROE complaint if the targeted utility’s

⁹ See NOI Questions A1, A2 at P 31. Q A1) To what extent would the ROE methodology described in [the] Briefing Orders impact the predictability of ROE determinations and the costs for market participants of making or intervening in such proceedings? Q A2) How would using the ROE methodology described in [the] Briefing Orders affect an investor’s ability to forecast the ROE the Commission would establish in a litigated proceeding and the ability of participants to propose, contest, and settle base ROEs as compared to using only the DCF methodology?

¹⁰ See WIRES, *The Coming Electrification of the North American Economy: Why We Need a Robust Transmission Grid*, pp. ii-vii (March 2019). The report finds that \$30-90 billion of transmission investments will be needed by 2030 to meet changing system needs to accommodate increasing electrification with an additional \$200-600 billion needed from 2030 to 2050.

¹¹ See NOI Questions G1, G2 at P 37. Q G1) How should the Commission determine if existing ROEs are just and reasonable? Q G2) Is the quartile approach that the Commission proposed in [the] Briefing Orders appropriate? If not, how should the Commission revise the methodology?

¹² *Emera Maine* at 23 (emphasis added).

existing ROE falls within the range of presumptively just and reasonable ROEs for a utility of its risk profile—unless that presumption is sufficiently rebutted.”¹³ This approach significantly improves upon the Commission’s current practice of setting all ROE complaints for hearing merely because complainants were able to demonstrate that the current DCF methodology produces any number lower than the existing ROE.¹⁴

The proposed approach creates a rebuttable presumption that the current ROE is just and reasonable if it falls within the range of the presumably just and reasonable ROEs for a utility of similar risk; any party that files a complaint challenging an ROE within that range must demonstrate that the current circumstances warrant a lower ROE in order to make a *prima facie* showing that the existing ROE may be unjust and unreasonable. To avoid the burdens inherent in litigation that may ultimately be determined to be unwarranted, the Commission should use reasoned judgment when reviewing the complaint, as well as any interventions or responses, to determine whether complainants have established clear evidence that an existing rate is no longer just and reasonable despite that rate falling within the range of the appropriate risk profile. Such evidence should include: (1) whether the particular circumstances of a utility’s financial standing and ability to attract capital exceeds its current risk profile;¹⁵ (2) what magnitude of change would be achieved in adjusting the ROE considering the time and expense of protracted hearings; (3) a demonstrable showing of sustained changes in market conditions since the existing rate was established; and (4) a showing that a reasonable amount of time has passed

¹³ NETO Briefing Order, 165 FERC at P 16.

¹⁴ See Suede G. Kelly & Edison Electric Institute, *To Ensure That Its Policies Support the Continued Development of Reliable and Resilient Transmission Infrastructure, FERC Should Discontinue Its Practice of Allowing Pancaked Complaints*, p. 8 (August 2018) (“Pancaking Whitepaper”), attached hereto as Attachment B.

¹⁵ *Martha Coakley, Attorney General of the Commonwealth of Massachusetts, et al., v. Bangor-Hydro Elec. Co., et al.*, Initial Paper Hearing Brief of the New England Transmission Owners, Docket Nos. EL11-66-001, *et al.*, p. 12 (filed Jan. 11, 2019) (“NETOs Paper Hearing Brief”).

since the existing ROE was established – recognizing that it would be unreasonable to reset the ROE soon after it was established given the ongoing fluctuation in market inputs and assumptions.¹⁶ The Commission’s reasoned judgment is especially important in entertaining successive (pancaked) complaints before a new ROE determination has been made, including whether the factors cited in the complaint, beyond the simple extension of the 15-month refund period, substantively warrant a successive challenge. Successive complaints are not permitted in the first instance under the FPA,¹⁷ but if the Commission persists in its policy of not automatically rejecting pancaked complaints, then it should use reasoned judgment as described above in determining whether to set the complaint for hearing or reject it outright.

By providing a clear framework by which all parties can reasonably replicate results and measure outcomes, the Commission ensures that public utilities, complainants, and intervenors are equipped with the best information to determine the costs and benefits of challenging an existing rate before FERC. This approach also has the benefit of reducing the adjudicative backlog and the strain on Commission resources from setting all matters for protracted hearings and litigation, which has been the practice to date.

2. Incorporating multiple methodologies ensures a robust analysis of potentially just and reasonable ROEs and reflects the breadth of resources investors use in analyzing their investment opportunities.

The Commission should use various financial models and analyst projections in determining just and reasonable ROEs in both section 205 and section 206 proceedings. The Commission proposes to determine whether an existing ROE remains just and reasonable by

¹⁶ See Pancaking Whitepaper, pp. 10-11.

¹⁷ Pancaking Whitepaper, pp. 7-8. (“... FERC has no authority to supplant the rate that ultimately derives from the first complaint with the rate that derives from the second complaint because, under section 206, FERC has no authority to change a rate that has not been first shown to be unjust and unreasonable.”).

(1) relying on the three financial models that produce zones of reasonableness—the DCF, CAPM, and Expected Earnings models—to establish a composite zone of reasonableness; and (2) relying on that composite zone of reasonableness as an evidentiary tool to identify a range of presumptively just and reasonable ROEs for utilities with a similar risk profile to the targeted utility.¹⁸

If such an ROE is then determined under that methodology to be no longer just and reasonable, the Commission will then “rely on all four financial models in the record—i.e., the three listed above, plus the Risk Premium model—to produce four separate cost of equity estimates [and will] then give them equal weight by averaging the four estimates to produce the just and reasonable ROE.”¹⁹ Because no single method can capture perfectly all of the factors considered by investors or reflect accurately all market conditions, the Commission’s proposal to give equal weight to each methodology when determining the zone(s) of reasonableness is appropriate.²⁰ Again, the Commission’s reasoned judgment is necessary to avoid illogical or unjust and unreasonable results.

EEI agrees that the DCF, CAPM, Expected Earnings, and Risk Premium models should be considered in the Commission’s ROE analyses, with equal weighting of each model. Various forms of all of these models are widely used by investment analysts in determining the cost of equity and therefore reflect investor expectations. Broadening the tools available to determine cost of equity estimates will better reflect how investors make decisions and lessen the impact of many of the fluctuations and limitations in model assumptions and outcomes.²¹ This also will

¹⁸ NETO Briefing Order at P 16.

¹⁹ *Id.* at P 17.

²⁰ See NOI Question E7 at P 35. Q E7) If the Commission were to consider multiple models, how should it weigh them?; see also NETO Briefing Order at P 15; ScottMadden & Edison Electric Institute., *Transmission Investment: Revisiting the Federal Energy Regulatory Commission’s Two-Step DCF Methodology for Calculating Allowed Returns on Equity*, pp. 11, 31 (Dec. 2017) (“ScottMadden”), attached hereto as Attachment A.

²¹ See NOI Questions E1-E6 at P 35. Q E1) What models do investors use to evaluate utility equities? Q E2) What role do current capital market conditions play in the choice of model used by investors to evaluate utility equities? Q E2.a) If capital market conditions factor into the choice of model, how do investors determine and evaluate those conditions? Q E3) Are any models thought to be superior or inferior to others? If so, why? Q E4) How are

reduce the volatility and uncertainty of allowed returns that the use of a single methodology perpetuates. Today, it is widely recognized that investors use a variety of tools to assess the cost of equity and do not rely solely on the DCF model. Including additional commonly accepted models in the ROE analysis will help ensure that the resulting ROE better reflects actual investor expectations.

Furthermore, all of the ROE models that the Commission proposes to use are based on, and incorporate assumptions, which may vary according to changing market conditions and that different investors rely upon to varying degrees.²² Investors and industry practitioners recognize that adhering to a single approach and its single outcome can lead to unreliable results and conclusions. In a whitepaper that ScottMadden prepared on behalf of EEI, the authors observe that investors do not rely on a single ROE model, but in fact employ multiple ROE models “because no single model provides accurate results under all market conditions, and the results of any single model should be viewed in the context of its consistency with alternative ROE methodologies.”²³ Accordingly, multiple methods are used in academia and in practice, and the results of each of these models informs the ultimate ROE determination.²⁴

The Commission’s proposed approach recognizes that investors use all four of the models that the Commission proposes to use. The Commission stated that “[i]n relying on a broader range of record evidence to estimate NETOs’ cost of equity, we ensure that our chosen ROE is

alternative models redundant or complementary with each other and/or the DCF model? Q E5) To what extent do alternative models avoid any deficiencies of the DCF model and/or operate better in diverse capital market conditions? Q E6) To the extent that investors use multiple models, should the Commission combine them in its analysis or use the “best” one that would apply in all market conditions?

²² See ScottMadden, p. 31.

²³ *Id.*, p. 12.

²⁴ *Id.* (citing Eugene Brigham and Michael Ehrhardt, *Financial Management: Theory and Practice*, 12th Ed. (Mason, OH: South-Western Cengage Learning, 2008), at 346).

based on substantial evidence and bring[s] our methodology into closer alignment with how investors inform their investment decisions.”²⁵ Because estimation of cost of equity is an imperfect science, informed judgment is crucial in weighing all market and credit factors related to investor choices. There is no single methodology that captures perfectly all market conditions and factors. Thus, the Efficient Market Hypothesis, which suggests that market prices reflect all publicly available information, is appropriately applied here.²⁶

Relying on multiple financial models instead of a single model can help mitigate the limitations of any particular model and more effectively reflects different financial inputs and conditions for investors to consider and evaluate. The Commission indicates that its goal in relying on multiple financial models is to reflect investors’ reliance on more than one model. For example, the Commission seeks comment on the mismatch between market-based rate ROE determinations and book-value rate base and whether this mismatch is a problem.²⁷ Mismatches between market-based rate ROE determinations and book-value rate base are inconsequential and will not create problems in the ROE analysis if all financial models, as proposed by the Commission, are retained to smooth out the impact of the differences or assumptions built into any particular model.²⁸

²⁵ NETO Briefing Order at P 15.

²⁶ ScottMadden, p. 24. *See* NOI Question H.1.4 at P 38. Q H.1.4) Should the Commission continue to rely on the efficient market hypothesis, which underlies the DCF and CAPM models? Why or why not?

²⁷ *See* NOI Question F1 at P 36. Q F1) Does the mismatch between market-based ROE determinations and a book value rate base support current market values? Is this mismatch a problem?

²⁸ *See Martha Coakley, Massachusetts Attorney General et al.*, Initial Brief on Paper Hearing of Eastern Massachusetts Consumer-Owned Systems, Docket No. EL11-66-001 *et al.*, pp. 19-25 (filed January 11, 2019); *Association of Businesses Advocating Tariff Equity, et al. v. Midwest Independent System Operator, Inc. et al.*, Initial Brief of the Commission Trial Staff, Docket No. EL14-12-003, pp. 6-8 (filed February 13, 2019); Initial Paper Hearing Brief of the MISO Complaint-Aligned Parties, Docket No. EL14-12-003, pp. 40-45 (filed February 13, 2019).

Recognizing that the use of multiple methodologies and data sources captures variables in market conditions and smooths out anomalies, the Commission should use state ROEs as a benchmark in determining whether the output of the methodologies is indeed just and reasonable and sufficient to attract necessary capital. The Commission has consistently observed that developing and constructing electric transmission facilities is inherently riskier than developing and constructing distribution facilities, thus warranting a higher ROE than is typically seen in state ROE proceedings.²⁹ As stated in Opinion No. 531:

The financial and business risks faced by investors in companies whose focus is electric transmission infrastructure differ in some key respects when compared to other electric infrastructure investment, particularly state-regulated electric distribution. For example, investors providing capital for electric transmission infrastructure face risks including the following: 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.³⁰

The commitment of large amounts of funds over long time periods associated with transmission development causes much greater uncertainty over capital markets than is typically presented by distribution plant investment. Thus, while there are risks and challenges associated with the construction, operation, and maintenance of both distribution and transmission assets, they are different. The heightened risks and challenges confronted by transmission investors are not always present in developing electric distribution facilities.

²⁹ See NOI Questions E9-E10 at P 35. Q E9) How, if at all, should the Commission consider state ROEs? Q E9.a) How and why do state ROEs vary by state? Q E9.b) How are certain state ROEs more or less comparable to Commission ROEs? Q E10) If the Commission considers state ROEs, how should it compare FERC-jurisdictional transmission ROEs with state ROEs that apply to utilities that are (a) distribution and transmission companies; or (b) distribution, generation, and transmission companies?

³⁰ Opinion No. 531, 147 FERC at P 149.

Accordingly, state ROEs should be considered as an additional data point in establishing transmission ROEs. In determining the reasonableness of the ROE calculated using the four models, transmission ROEs should be higher than state ROEs absent extraordinary circumstances.³¹ This is important to note not only because of the inherent differences between the risk profiles of interstate transmission assets relative to state-regulated distribution assets, but also because of the differences in ROE-setting procedures among the states. State commissions each have different processes, inputs, models, timing, and cost sharing frameworks that directly influence the ROEs in that state. Therefore, state ROEs can vary greatly from state to state. Because of this variance, state ROEs should just be another data point in determining FERC-regulated transmission ROEs. The Commission's transmission ROE policy must provide for returns that can attract sufficient capital to achieve its mandate to provide returns commensurate with risk and its policy goal of ensuring adequate investment in transmission.

Finally, the Commission should recognize that a mechanistic approach to calculating ROEs (even if it is based on averaging four different methodologies) may at times yield unjust and unreasonable results. For this reason, as discussed above, it is important for the Commission to consider other benchmarks like state ROEs when setting ROEs. Benchmarking and evidence such as that described above (for evaluating successive complaints) should be considered as possible reasons to depart from the ROE produced from application of the proposed framework in situations where that result may be unjust and unreasonable given the circumstances of a particular case.

³¹ *Id.* at P 148. "The Commission has repeatedly held that it does not establish utilities' ROE based on state commission ROEs for state-regulated electric distribution assets, because those ROEs are established at different times in different jurisdictions which use different policies, standards, and methodologies in setting rates." (internal citation omitted).

3. Although the DCF methodology is a useful tool, the DCF model results can be unreliable and should not be the sole determinant of a just and reasonable ROE.

As discussed above, all methodologies contain strengths and limitations in their application because not all inputs or underlying assumptions can accurately reflect market conditions or investor expectations in every situation. The DCF methodology is a useful tool in determining just and reasonable returns and should remain part of the Commission's toolkit, despite some limitations. The increase in ROE disputes pending before the Commission and the resulting volatility the subject public utilities face demonstrate that the DCF methodology has certain limitations that illustrate the need for consideration of additional methods, rather than serving as the Commission's sole indicator of the cost of equity.³² As Dr. Morin states, "by relying solely on the DCF model at a time when the fundamental assumptions underlying the DCF model are tenuous, a regulatory body greatly limits its flexibility and increases the risk of authorizing unreasonable rates of return. The same is true for any one specific model."³³

The DCF methodology's fundamental limitation is its underlying assumption that current growth rates, dividend payout ratios, and stock price valuation levels will persist in perpetuity.³⁴ Therefore, when there is a divergence in stock prices relative to the present value of projected

³² See NOI Questions C1-C3.b at P 33. Q C1) The DCF model assumes stock prices are equal to the present value of projected future cash flows. Is there evidence of situations when these assumptions are inaccurate? Q C2) Have current and projected proxy company earnings over the last 10 to 20 years increased in a manner that would justify any increases in their stock prices over the same period, consistent with DCF model assumptions? Q C3) How does the DCF methodology perform over a wide range of interest rate conditions? Q C3.a) What specific assumptions of the DCF model, if any, do not work well in low or high interest rate environments? Q C3.b) Is there evidence that the volatility of price-to-earnings ratios over the last 10 to 20 years, assumed to be constant in the DCF methodology, has been driven by the wide swings in interest rates over this period? If so, would the constant P/E assumption impact the award of reasonable ROEs?

³³ Roger A. Morin, *New Regulatory Finance*, Public Utilities Reports, Inc. (2006), p. 28.

³⁴ See ScottMadden, pp. 8-9.

future cash flows, the efficacy of the model breaks down.³⁵ For example, when investors look at short-term trading positions to hedge their risks or increase their earnings, the DCF methodology's long-term assumptions create a mismatch between investor expectations and the DCF results. Similarly, the long-term assumptions in the DCF methodology do not capture investor expectations with respect to gains after merger activity or projected monetary policy changes.³⁶ FERC's adoption of a multi-stage DCF model arbitrarily tied to the 20-year growth rate of the entire American economy does not remedy this shortcoming, but rather likely increases the inaccuracy of the model.

Although the DCF methodology is useful in approximating the cost of equity, sole reliance on this methodology—as with sole reliance on any methodology—can produce results that fail to reflect investor expectations and behaviors in all market conditions. Indeed, the Commission recognized this in the Briefing Orders, noting that “the DCF methodology alone no longer captures how investors view utility returns because investors do not rely on the DCF alone and the other methods used by investors do not necessarily produce the same results as the DCF.”³⁷

In addition, the DCF's assumption that market conditions will continue in perpetuity poses challenges to the accuracy of its results in high or low interest rate environments.³⁸ This flaw became particularly acute after the 2008 recession as the Federal Reserve lowered interest rates to stimulate market growth. In this low-interest rate environment, complainants began

³⁵ See NOI Question C1 at P 33. Q C1) The DCF models assumes stock prices are equal to the present value of projected future cash flows. Is there evidence of situations when these assumptions are inaccurate?

³⁶ See ScottMadden, p. 9.

³⁷ NETO Briefing Order at P 40.

³⁸ See NOI Question C3 at P 33. Q C3) How does the DCF methodology perform over a wide range of interest rate conditions?

challenging ROEs due to the lower results produced by the DCF methodology. Interest rates are subject to federal monetary policies and other market activities that are not incorporated in the underlying assumptions of the DCF methodology, which therefore may cause skewed results that do not reflect the longer-term needs of investors. In this vein, the DCF methodology is particularly sensitive to varying market conditions, including interest rates, because it assumes conditions will remain in perpetuity.³⁹ Its results were unduly depressed by the anomalous market conditions that persisted following the recession of 2008/2009. Such results are in direct contrast to the Commission's objective of ensuring just and reasonable rates that are stable and predictable. This emphasizes the need to average various methodologies and benchmark results with observable market trends in order to smooth over deficiencies in any one methodology's inputs.

4. The Expected Earnings methodology is a valuable measure of utility returns and is widely used by investors and the Commission should retain it in its ROE analysis.

The Commission should retain the Expected Earnings model as part of the ROE analysis because it fills a gap that the remaining models do not address. The Expected Earnings model provides a "direct measure of observable investor expectations" for future returns because it provides a determination of the projected returns on book value for the firms in the proxy groups using published analyst forecasts provided by Value Line.⁴⁰ Because the DCF model's projected returns are calculated based on the market value of the utility's stock, rather than the book value of equity, the Expected Earnings model ameliorates the effects of the mismatch between market

³⁹ ScottMadden, p. 8; *see also* Morin, *New Regulatory Finance*, pp. 432-433.

⁴⁰ ScottMadden, p. 12.

and book value.⁴¹ A benefit of the Expected Earnings model is that its “expected values are directly observable rather than inferred using a mix of market-based pricing data and secondary assumptions about investor expectations (*e.g.*, growth rates).”⁴² These assumptions about investor behavior can limit the DCF and the CAPM models, whereas the Expected Earnings model’s results are “independent from swings in market data.”⁴³ In fact, “the expected earnings approach provides a direct guide to ensure that the allowed ROE is similar to the returns that investors expect other utilities of comparable risk will earn on invested capital.”⁴⁴ As noted by the Commission “any methodology has the potential for errors or inaccuracies,”⁴⁵ and “the expected earnings analysis and DCF analysis are used to estimate two different types of returns, each valid in its own right, that investors rely upon in determining whether to invest in a particular company.”⁴⁶ This supports the Commission’s proposal to include multiple methodologies in its ROE analysis.⁴⁷ As stated by Dr. Morin, the Expected Earnings methodology is “firmly anchored in regulatory tradition” and “is not influenced by the regulatory process to the same extent as market-based methods.”⁴⁸ To exclude only the Expected Earnings model based on its perceived limitations, while retaining the DCF, CAPM, and Risk Premium

⁴¹ *Id.*, pp. 34-35 (“The market value, except under very rare circumstances, is not equal to the book value. Given this mismatch, it is useful to consider a direct measure of the expected return on the book value, versus market value, of expected utility stocks.”).

⁴² *Id.*, p. 34.

⁴³ *Id.*, p. 35.

⁴⁴ *Martha Coakley, Attorney General of the Commonwealth of Massachusetts, et al., v. Bangor-Hydro Elec. Co., et al.*, Reply Paper Hearing Brief of the New England Transmission Owners, Docket Nos. EL11-66-001, *et al.* at Attachment A, Affidavit of Adrien M. McKenzie 106:2-4 (filed March 8, 2019).

⁴⁵ NETO Briefing Order at P 38.

⁴⁶ Opinion No. 531-B, 150 FERC at P 130.

⁴⁷ NETO Briefing Order at PP 34-38.

⁴⁸ Morin, *New Regulatory Finance*, p. 392.

models despite their limitations, undercuts the reasoning justifying the Commission’s proposal to use multiple methodologies.

5. The Commission should consider alternatives to IBES data in order to capture the full range of growth estimates relied upon by the investment community.

Although the Commission has indicated that it is willing to “use short-term growth data published by a source comparable to IBES,”⁴⁹ the Commission has consistently relied on IBES growth data despite its limitations including, at times, reflecting only one analyst’s input.⁵⁰ In fact, investors are moving away from IBES and relying more heavily on Bloomberg.⁵¹ Accordingly, the Commission should permit additional sources of growth estimates to maintain consistency with investor behavior.

Again, the crux of the determination of a range of reasonable returns is to reflect the assumptions and expectations of investors. Investors rely on “data from a variety of data sources to develop their return expectations, and a wide range of growth estimates may be reflected in stock prices.”⁵² Including additional sources of published projected growth data in the Commission’s ROE analysis is consistent with the Efficient Market Hypothesis.⁵³ The NOI notes that alternative growth estimates by Bloomberg, Zacks, S&P Capital, Morningstar, and Value Line all could produce useful data estimates reflecting the wide range of analyst

⁴⁹ *Ass’n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 551, 156 FERC ¶ 61,234 (2016) at P 64 (“Opinion No. 551”).

⁵⁰ See NOI Questions H.1.1 - H.1.1.b. Q H.1.1) Are IBES data a good proxy for “investor consensus”? Q H.1.1.a) If not, are there better alternatives, such as Bloomberg, Zacks, S&P Capital, Morningstar, and Value Line? Q H.1.1.b) Should the Commission combine data from multiple sources?

⁵¹ *Belmont Mun. Light & Co., et al., v. Central Maine Power Co., et al.*, Docket No. EL16-64-002, Exhibit No. NET-02200 Answering Testimony of Adrian M. McKenzie 114:14 – 115:3 (filed March 24, 2017).

⁵² ScottMadden, p. 24.

⁵³ *Id.*

projections used by investors.⁵⁴ However, the Commission should not attempt to average the results of multiple growth projections because this would distort the full range of investor expectations.⁵⁵

6. The Commission must consider unique risk profiles, current market conditions, and federal precedent regarding capital attraction standards in determining the ultimate placement of an ROE within the zone of reasonableness.

The Commission poses several questions regarding placement of the ROE within zones of reasonableness and fixed ROEs.⁵⁶ In reviewing its ROE policies, the Commission should be cognizant of the balance between its statutory mandate to provide for just and reasonable rates and the need to maintain capital attraction standards. The Commission must protect both sides of the equation: ensuring that customers are not exposed to unreasonably high rates while providing sufficient “confidence in the financial soundness of the utility... to maintain and support its credit and enable it to raise capital necessary for the proper discharge of its public duties.”⁵⁷

⁵⁴ See NOI at P 38: Q H.1.1.a.) ...are there better alternatives, such as Bloomberg, Zacks, S&P Capital, Morningstar, and Value Line? Q H.1.5.) Should growth rates be based on Value Line, IBES, or alternative estimates?

⁵⁵ ScottMadden, p. 24, n.57.

⁵⁶ See NOI Questions A3-A4.b at P 31, G4-G4.a at P 37. Q A3) Currently, public utilities in different [ISOs/RTOs] may receive different ROEs, despite all using national proxy groups, due primarily to differences in when FPA section 205 or 206 proceedings were initiated. Are such variations justified, and if not, should the Commission consider applying the same ROE to all utilities in RTOs/ISOs based on the most recent proceeding? Q A4) Should the ROE reflect the cost of capital at the time of the investment or be subject to adjustment to reflect the contemporary ROE required by investors? Q A4.a) Should the Commission consider a “vintage approach,” with ROE fixed for the life of the asset at the time that each asset was completed? Q A4.b) Would such “vintage approach” need to be coupled with an annual national default ROE for investments made in that year, so as to minimize the need for numerous annual litigated ROE proceedings for each public utility that make and investment during that year? What procedure should be used to determine such default ROE? Q G4) In single utility rate cases, the Commission determines the central tendency of the zone of reasonableness based on the median of the proxy group ROEs. Is the approach outlined in [the Briefing Orders] appropriate in single utility rate cases given that the proxy company ROEs tend to cluster near the center of the zone of reasonableness, making the middle quartile relatively narrow? Q G4.a) Would it be reasonable to determine the central tendencies of the upper and lower halves of the zone of reasonableness for single utilities based on a midpoint analysis, so as to produce approximately equal ranges of presumptively just and reasonable ROEs for below average, average, and above average risk utilities?

⁵⁷ *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm’n*, 262 U.S. 679, 693 (1923) (“Bluefield”); see also *FPC v. Hope Nat. Gas. Co.*, 230 U.S. 591, 603 (1944) (“Hope”), “the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks... [and] should be

Central to the Supreme Court’s *Hope* and *Bluefield* standard is the intrinsic link between risk and the ability to attract capital. In this vein, the questions asked by the Commission regarding measures of central tendency, establishing RTO-wide or nationwide ROEs, and how to account for certain market conditions are all tied to compensating public utilities for the level of risk they endure to maintain their financial integrity and attract investment in order to serve their customers reliably.

The Commission asks whether it should continue to use midpoints to determine the central tendency of the zone of reasonableness when determining RTO-wide ROEs.⁵⁸ The Commission should retain its long-standing approach of using “the midpoint of the zone of reasonableness as the appropriate measure of central tendency for a diverse group of average risk utilities.”⁵⁹ The use of multiple ROE methodologies as proposed in the Briefing Orders in no way undercuts the Commission’s rationale for using the midpoint. The CAPM and Expected Earnings analyses serve the same purpose as the DCF: estimating a range of reasonable return for the utilities whose rates are under consideration. As the Commission has recognized, the CAPM and Expected Earnings, like the DCF, use proxy groups to determine this range.⁶⁰ Indeed, the Commission even uses the same screens for developing the proxy group for all three analyses. The D.C. Circuit’s reasoning affirming the use of the midpoint for a range of reasonableness produced by a DCF analysis of a diverse group of utilities applies with equal

sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.” (together, “*Hope* and *Bluefield*”).

⁵⁸ See NOI Question D10 at P 34.

⁵⁹ NETO Briefing Order at P 17, n.46.

⁶⁰ *Id.* at P 49

strength to the ranges produced by the CAPM and Expected Earnings analyses – “only the midpoint emphasizes that range as it is equally placed between the top and bottom values.”⁶¹

To the extent that the Commission considers any updates to the central tendency of the zone of reasonableness to be used when determining public utility ROEs, the Commission should consider returning to its prior practice of using the midpoint of the zone of reasonableness to determine ROEs for individual public utilities.⁶² While this would be an evolution of the Commission’s current ROE policy for single utility rate cases, EEI and its members respectfully submit that such an adjustment is justified in light of changes facing the electric utility industry. As Chairman Chatterjee has recognized, the energy landscape in the United States “is currently undergoing a dramatic and historic transformation” driven by a variety of factors, including but not limited to “the shale revolution, the rise in the deployment of renewable energy resources and new technologies, the evolution of competitive markets, and changes in consumer preferences.”⁶³ In the face of these dramatic and historic changes, the Commission should allow ROEs in individual public utility cases to be set based on the midpoint to “appropriately reflect (and take due account of) the entire range of results indicated by the proxy group,” thereby setting returns at levels that reflect the full range of risks facing public utilities today.⁶⁴

The Commission asks whether there should be a set national or annual default ROE for all transmission owners. There should not be a default ROE because utilities face different risks and therefore require different returns. Some RTOs have one ROE for all transmission-owning

⁶¹ *Pub. Serv. Comm’n of Ky. v. FERC*, 397 F.3d 1004, 1010 (D.C. Cir. 2005).

⁶² As the Courts have recognized, until 2008, the Commission used the midpoint to establish the ROE for both individual electric utilities of average risk and diverse-risk utilities filing jointly. *S. Cal. Edison Co. v. FERC*, 717 F.3d 177, 183 (D.C. Cir. 2013).

⁶³ See Remarks of Chairman Neil Chatterjee, NARUC Conference (February 13, 2019), available at <https://www.ferc.gov/media/videos/chatterjee/2019/021519-chatterjee.pdf>.

⁶⁴ *ISO New England, Inc.*, 109 FERC ¶ 61,147, at P 203 (2004).

members; such an approach is reasonable and should be considered where the members support it. However, and importantly, utilities in the same RTO can, if they so choose, apply for a different ROE if they feel the single, RTO-wide ROE is not compensatory.

Base ROEs must compensate public utilities for the risks associated with building, owning, and operating transmission and should provide assurance to their investors that they will be compensated for their opportunity costs, i.e., investing in other, similarly risky enterprises. Thus, the base ROE must reflect contemporary market conditions in order to attract needed investment. Because transmission assets are long-lived assets, the base ROE at the time of development may not be the same level to attract investment throughout the asset's life or the life of the company. Public utilities continue to develop needed transmission to serve their customers as well as enhance and maintain current assets for 50 years or more to reflect ever-changing environmental conditions, technological improvements, regulatory requirements, and the asset/equipment condition.

Recognizing this, EEI member companies do not agree with a "vintage approach" for fixing a base ROE for the life of an asset at the time each asset was completed.⁶⁵ This approach fails to recognize that because the transmission system is comprised of long-lived assets that are constantly being upgraded and expanded, the ROE must be adjusted periodically to reflect the cost of equity associated with owning and operating the system as it evolves through time under changing market conditions. There are a number of problems associated with using a "vintage" ROE under the traditional regulatory construct. First, the "vintage" base ROE may have been set

⁶⁵ See NOI Questions A4a-b at P 31.? Q A4.a) Should the Commission consider a "vintage approach," with ROE fixed for the life of the asset at the time that each asset was completed? Q A4.b) Would such "vintage approach" need to be coupled with an annual national default ROE for investments made in that year, so as to minimize the need for numerous annual litigated ROE proceedings for each public utility that make and investment during that year? What procedure should be used to determine such default ROE?

under completely different conditions with a different risk profile and could therefore result in a mismatch with current investment needs.⁶⁶ In other words, the vintage approach appears to be fundamentally at odds with the objectives of the cost of equity concept, which is to allow a company to earn a fair, or “competitive,” return based on invested capital and to maintain a healthy credit rating. Both of these objectives rely on an evaluation of current competitive market returns, expectations and financial conditions, not those of ten or twenty years ago. Such historic information is irrelevant to investors’ current assessments of where to invest or how to value a stock.

Requiring a “vintage” approach in which base ROEs are set for the life of the asset also results in administrative difficulties in accounting for a multitude of different transmission projects having different returns within the same company. Not only is this approach deficient in meeting capital attraction standards, but it would also be administratively inefficient and cumbersome for utilities, regulators, and customers. Accordingly, this approach is not likely to result in an adequate and fair return that will attract capital over time. Such a result would be counter to the regulatory certainty and predictability that the Commission’s ROE policy seeks to provide. Providing this type of certainty over the life of the asset would be better addressed through project-specific transmission incentives pursuant to section 219 of the FPA. As discussed in more detail in EEI’s response to the transmission incentives Notice of Inquiry filed concurrently in Docket No. PL19-3-000, project-specific ROE incentives should continue to be

⁶⁶ Economic theory suggests the return for a company in a competitive market will adjust to reflect the marginal cost of capital of the industry over time (because new entrants will compete away excess returns, and companies will close if they earn below the cost of capital). When viewing regulation as a substitute for market forces for utilities that have been granted monopoly franchises, it is therefore appropriate to allow ROE to fluctuate over time with current market return requirements.

applied for the life of the project for which the ROE incentive was awarded to provide certainty to investors.

B. The Commission should consider relaxing proxy group composition thresholds in order to generate a robust proxy group.

The Commission should update its guidelines for the identification of proxy groups to be more consistent with capital market conditions and investor expectations. As described below, changes to the proxy group screen for merger and acquisition (“M&A”) activity is warranted due to continuing consolidation in the industry. Additional updates to the proxy group selection include considering: (1) other industries of comparable characteristics for inclusion or as a benchmark; (2) all utilities with investment-grade credit ratings on a case-by-case basis; (3) updating the low-end outlier test to account for changes in utility bond yields and interest rate forecasts (*i.e.*, not rigidly adhering to the 100 basis point threshold when financial theory holds that a higher premium over debt is needed in a low interest rate environment; (4) eliminating the high-end outlier test; and (5) eliminating the natural break test.

1. M&A activity should not be a bright-line disqualifier.

Updates to the proxy group guidelines are necessary due to changes in the industry that result in unintended consequences for proxy group composition. The lack of a large, representative comparison group has become an increasing concern in recent years. If a proxy group is too small, it will not accurately reflect the true comparability of risks among the group and will be less reliable for the ROE analysis.⁶⁷

⁶⁷ ScottMadden, p. 20 (“The ultimate effect [of excluding utilities based on M&A activity] is a smaller and possibly less robust proxy group to which the DCF model can be applied.”).

The Commission has long held that the proxy screen should exclude companies engaged in M&A activity that would significantly affect the inputs into its DCF methodology.⁶⁸ However, this approach has resulted in two problems. First, eliminating companies engaged in M&A activity from the proxy group has significantly reduced the pool of proxy group companies because increased M&A activity and the resultant consolidation within the electric industry decreases the universe of eligible proxies,⁶⁹ which can, in turn, affect the zone of reasonableness.⁷⁰ Second, excluding companies from the proxy group effectively lowers the investment attractiveness of the proxy group as a whole, which results in downward pressure on the subject company's ROE.⁷¹

To address the Commission's concern with M&A activity significantly affecting the inputs of the various methodologies, the Commission should consider a *de minimis* threshold for M&A activity in considering whether to disqualify companies from the proxy group based on such activity.⁷² One possible threshold is a comparison of the magnitude of the M&A activity with the size of the parties to the proposed transaction. If the M&A activity constitutes a relatively small proportion of the involved companies overall (for example, around 5-10 percent of market capitalization), the company need not be eliminated from the proxy group. Further, even if the threshold is exceeded, the Commission should examine whether the M&A activity

⁶⁸ See Opinion No. 531 at P 114.

⁶⁹ ScottMadden, p. 20, n.47 (noting in the early 1990s there were nearly 100 investor-owned utility companies). As of December 2017, there are 43 publicly traded companies. See Edison Electric Institute, *2017 Financial Review—Annual Report of the U.S. Investor-Owned Electric Utility Industry* (2018), p 94.

⁷⁰ See NOI Question D1.b at P 34. Q D1.b) Are there corresponding proxy groups sufficiently large given the continued consolidation of the industry?; see also ScottMadden, p. 20 (noting the reduction in the top end of the zones of reasonableness established in Opinion Nos. 531 and 551 by the acquisitions of UIL Holdings Corporation and TECO Energy, Inc.).

⁷¹ See ScottMadden, p. 20.

⁷² See NOI Question D8.a at P 34. Q D8.a) If so, should the Commission revise its standards of what conduct constitutes merger and acquisition activity?

has appreciably affected the stock price and disqualify only those companies whose stock price clearly has been unreasonably affected by the M&A activity.

2. Investment-grade companies could be included in proxy groups, on a case-by-case basis, in section 205 filings.

The Commission should consider permitting the expansion of proxy groups to include all investment-grade companies on a case-by-case basis when a utility makes an FPA section 205 filing.⁷³ In cases with small representative proxy groups, eliminating companies with credit ratings more than one notch above or below the subject company's credit rating can lead to a proxy group that is too narrow to reflect properly the risk associated with the company at issue and may not fully account for the evolution of a company's credit rating.⁷⁴ There is no direct relationship between credit ratings, which are an "evaluation of a borrower's ability to meet its financial obligations (debt payments) in a timely manner", and the cost of equity.⁷⁵ Where sufficient evidence is provided, the Commission should consider the incorporation of all investment-grade companies, which, under those circumstances, could align companies with similar risk and increase the pool of potential proxy group companies.⁷⁶

3. Proxy groups could include other industries, on a case-by-case basis, if the existing proxy group is narrow or significantly limited.

The Commission could consider permitting the expansion of, on a case-by-case basis when a utility makes an FPA section 205 filing, proxy group composition to include cost of equity estimates from other rate-regulated industries, or non-utility companies with similar

⁷³ See NOI Question D6 at P34. Q D6) What would be the impact of the Commission modifying the credit rating screen to include all investment-grade utilities in the proxy group?

⁷⁴ Southern California Edison, Transmission Owner Tariff Rate Filing, Exhibit SCE-25, Prepared Direct Testimony of Dr. Bente Villadsen at 20, Docket No. ER19-1553-000 (filed Apr. 11, 2019) ("Villadsen Testimony").

⁷⁵ ScottMadden, p. 20

⁷⁶ *Id.*, pp. 20-21.

overall equity investment risk levels.⁷⁷ The *Hope* and *Bluefield* comparability standard does not necessarily limit the selection of proxy companies to those operating in the same industry.⁷⁸

Proxy groups could include capital intensive network-based companies beyond just electric utilities if the unique factors of the case warrant inclusion of them. Network-based companies that could potentially be included in a proxy group may include water, natural gas distribution, oil and natural gas pipelines, pipeline master limited partnerships, telecom services, telecom utility, cable TV, trucking, railroads, and air transport.⁷⁹ As an alternative, should a proxy group prove to be too narrow or limited for a robust analysis, benchmarking against other industries would improve confidence in the proxy group results.

In addition, because utilities must compete for capital with the universe of investment opportunities available in the market place, non-regulated firms with comparable total risk may provide a useful proxy for determining the cost of equity for electric transmission investments. Investors have choices and they therefore look across several industries to determine where to invest. Companies of similar risk can be a good proxy for the cost of equity for transmission service. A risk-comparable non-utility proxy group could be identified using selection criteria that screen based on risk characteristics including, but not necessarily limited to, (1) credit rating (i.e., requiring investment grade ratings); (2) Beta coefficient; (3) Value Line Safety Rating; (4)

⁷⁷ See NOI Questions D3, D3.a at P 34. Q D3) Should the Commission consider non-energy companies when selecting proxy groups? Q D3.a) What non-energy industries or securities have comparable risk to public utilities and natural gas and oil pipelines, if any?

⁷⁸ The Commission described the *Hope* and *Bluefield* standard as requiring the Commission “to set a rate of return commensurate with other enterprises of comparable risk and sufficient to assure that enough capital is attracted to the utility to enable it to meet the public’s needs.” NETO Briefing Order at P 4, n.11 (internal citations omitted).

⁷⁹ Villadsen Testimony at 44.

Value Line Financial Strength Rating; (5) dividend yield; (6) market capitalization; and (7) country of domicile.⁸⁰

4. The Commission should adjust the low-end outlier test to reflect changing capital market conditions.

The low-end outlier test should be revised because capital market conditions have changed since this construct was originally established.⁸¹ As described in the NETO Briefing Order, the Commission under the low-end outlier test

excludes from the proxy group companies whose ROE fails to exceed the average 10-year bond yield by approximately 100 basis points, taking into account any natural break between the cost of equity estimates of the companies excluded from the proxy group and the lowest cost of equity estimate of the companies included in the proxy group.⁸²

The basis for the exclusion of these low-end outliers is that investors are unlikely to purchase common stock if there is little to no difference in the return yielded by less-risky debt.⁸³

However, recent large changes in capital markets have rendered this 100 basis points risk premium no longer reasonable.⁸⁴ Thus, the Commission should consider potential modifications to the low-end outlier test.

Primarily, the Commission should consider using a dynamic threshold that reflects changes in interest rates. This would account for the inverse relationship between interest rates

⁸⁰ ScottMadden, pp. 22-23

⁸¹ See NOI Questions D4., D4.a at P 34. Q D4) What, if any, are appropriate high- and low-end outlier tests? Q D4.a) The Commission currently excludes from the proxy group companies whose ROE fails to exceed the average 10-year bond yield by approximately 100 basis points. Should the low-end outlier test continue to be based on a fixed value relative to the costs of debt or (a) should it be based on its value relative to the median (i.e. less than 50 percent of the median); or (b) still reflect the cost of debt but vary based on interest rates?

⁸² NETO Briefing Order at P 51 (citing Opinion No. 531, 147 FERC ¶ 61,234 at P 123).

⁸³ *Id.*

⁸⁴ ScottMadden, p. 29.

and the equity risk premium.⁸⁵ Due to the steady decline in utility bond yields, a considerable upward adjustment to the risk premium threshold for low-end outliers is appropriate.⁸⁶ For example, ScottMadden in December 2017 suggested a 240 basis point risk premium to account for the nearly 200 basis point decline in the six-month average Moody's Baa utility bond since 2006.⁸⁷ A January 2019 Southern California Edison filing calculated a spread of 231 basis points using a risk premium formula based on the CAPM model.⁸⁸ A dynamic threshold would allow the Commission greater flexibility for a more robust result. This flexibility is inherent in existing ROE policy, which notes the flexibility of the test for low-end results.⁸⁹ A low-end threshold that takes into account the changing spread over time between utility bond yields and utility equity⁹⁰ would improve the accuracy of the Commission's ROE policy.

An alternative modification could use published bond yield forecasts, accounting for the forward-looking concept of cost of equity by using a forward-looking low-end outlier test.⁹¹ This test would apply "the Commission's approximately 100 basis point premium to published consensus bond yield forecasts [which] would address investors' expectations for changing capital market conditions."⁹² These consensus projections show expected increases in corporate Baa debt yields in the next few years, consistent with investor expectations of interest rate increases as the Federal Reserve moves forward with normalizing rates that had been subject to

⁸⁵ *Id.*, p. 29; *Association of Businesses Advocating Tariff Equity, et. al., v. Midcontinent Independent System Operator, Inc., et al.*, Supplemental Initial Brief of MISO Transmission Owners, pp. 7-8, Docket No. EL14-12-003 (Feb. 13, 2019) ("MISO TOs' Supplemental Brief").

⁸⁶ *Id.*

⁸⁷ ScottMadden, p. 29.

⁸⁸ SCE Motion on Briefing Order, pp. 12-13.

⁸⁹ Opinion No. 531 at P 122.

⁹⁰ SCE Motion on Briefing Order, p. 11.

⁹¹ ScottMadden, pp. 29-30.

⁹² *Id.*, p. 30.

downward pressure after the 2008 financial crisis.⁹³ Using published consensus bond yield forecasts to calculate the low-end threshold is a possible change to the ROE analysis that would bring it further in line with changing capital markets.

5. The Commission should eliminate the high-end outlier test and the natural break test.

The Commission should eliminate the high-end outlier test and the natural break test for high-end outliers for the ranges produced by the DCF, CAPM, and Expected Earnings models.⁹⁴

In the NETO Briefing Order, the Commission

proposes to treat as high-end outliers any proxy company whose cost of equity estimated under the model in question is more than 150 percent of the median result of all of the potential proxy group members in that model before any high or low-end outlier test is applied, subject to a “natural break” analysis similar to the approach the Commission uses for low-end DCF analysis results.⁹⁵

The NETO Briefing Order applies this high-end outlier test to each of the DCF, CAPM, and Expected Earnings analyses. However, the effect of applying a high-end outlier test to each of the methodologies unnecessarily collapses the range of reasonable returns that would be expected by investors. In addition, the Commission should not apply the proposed natural break test that would exclude from the proxy group companies who fail low- and high-end thresholds, “taking into account any natural break between the cost of equity estimates of the companies excluded from the proxy group and the lowest cost of equity estimate of the companies included in the proxy group.”⁹⁶ The natural break analysis does not have an economic basis, is

⁹³ *Id.*, pp. 29-30.

⁹⁴ See NOI Questions D4, D4.b at P 34. Q D4) What, if any, are appropriate high- and low-end outlier tests? Q D4.b) How, if at all, should the Commission’s approach to outliers vary among different financial models?

⁹⁵ NETO Briefing Order at P 53.

⁹⁶ NETO Briefing Order at PP 51, 53 (internal citations omitted).

unnecessary, and is subjective.⁹⁷ The difference between different cost of equity estimates does not provide relevant information to evaluate the reasonableness of estimates at the upper end of the range.⁹⁸ Nor does the natural break analysis recognize that the process of identifying the proxy group is intended to identify the population of all comparable utilities, not a statistical sample.⁹⁹ The natural break analysis is unnecessary in light of the low-end outlier thresholds that the Commission has proposed to screen for economically illogical results, and has already been rejected by the Commission for the upper end of the range in one proceeding.¹⁰⁰ Finally, the natural break test is subjective and based on an arbitrary determination of where the line of economic logic, or illogic, is drawn.¹⁰¹

C. In re-evaluating its approach for determining just and reasonable ROEs, the Commission must continue to recognize the critical role and value of electric transmission in achieving the goals of the Commission and meeting the evolving needs of customers.

EEI member companies appreciate the Commission's efforts in seeking to provide for just and reasonable rates for customers while maintaining its dedication to capital attraction standards. Central to the need for a balanced, well-thought-out approach to stable and predictable ROEs is the guiding principle that transmission energy infrastructure is the backbone of a well-functioning electric grid. A robust transmission system enables public utilities to

⁹⁷ MISO TOs' Supplemental Brief, p. 9; NETOs Paper Hearing Brief, p. 42.

⁹⁸ McKenzie Testimony at 24:7-12.

⁹⁹ *Id.*, 25:3-26:3 ("The key fallacy underlying this misuse of statistical concepts is that estimating the cost of equity does not involve a process of sampling at all. On the contrary, through application of proxy group criteria, the Commission has identified *all* of the utilities deemed to be of comparable risk to the NETOs. In other words, the array of cost of equity estimates produced by the alternative analyses represent the *population*, not a sample.") (emphasis in original).

¹⁰⁰ NETOs' Paper Hearing Brief, pp. 45-46 (citing, *inter alia*, Opinion No. 531-B at P 79); see MISO TOs' Supplemental Brief, p. 9.

¹⁰¹ NETO's Paper Hearing Brief, p. 46.

integrate more renewable energy resources and to deliver more clean energy to customers; enhances the reliability and resiliency of the grid; enables the deployment of new technologies; optimizes the grid's performance and lowers the cost of delivering energy by reducing congestion; and helps to keep electricity bills low for customers. To meet the needs and expectations of our customers, continued investment in the transmission system is needed because there continue to be significant transformations in how electric energy is generated and delivered.

With every advancement in technology, Americans are more plugged in and more connected, using electric energy in more ways than ever before. The ever-increasing dependence on electric energy underscores the vital importance of the energy grid for our nation's security and prosperity and for the lives of all Americans. Investments in the transmission system accommodated the rapid proliferation of technology in the U.S., including household appliances, computer technology, transportation, and communication, which was not originally envisioned by the system's engineers a century ago. On average, EEI's member companies invest more than \$100 billion each year on generation, transmission, and distribution to make the energy grid smarter, stronger, cleaner, more dynamic, and more secure. This investment in smarter energy infrastructure is helping achieve a shared vision of a smart, secure, and increasingly clean energy system that works to the benefit of all customers. Reaching the full potential of a modernized energy grid requires ongoing investment. This ongoing investment is facilitated by energy policies that recognize the value of transmission and support stable, predictable, and just and reasonable rates.

V. CONCLUSION

EEI appreciates the opportunity to submit comments in response to the NOI and commends the Commission for its proposal to provide for stable, predictable, and just and reasonable rates for transmission investment. Recognizing the importance of supportive policies to attract investment in transmission to meet evolving customer needs and demands, EEI asks the Commission to consider the recommendations made herein to utilize all available tools, data sources, and reasoned judgment in determining just and reasonable rates to the benefit of consumers. EEI looks forward to continued dialogue with the Commission on these issues.

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June 26, 2019

Attachment A

ScottMadden and Edison Electric Institute

Transmission Investment: Revisiting the Federal Energy Regulatory Commission's
Two-Step DCF Methodology for Calculating
Allowed Returns on Equity

December 2017



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Edison Electric Institute

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TABLE OF CONTENTS

- 1. EXECUTIVE SUMMARY.....1
- 2. INTRODUCTION AND BACKGROUND.....4
- 3. THE DCF MODEL: PREMISE, LIMITATIONS, AND COMMISSION APPLICATION.....7
- 4. RATES OF RETURN ON EQUITY PRODUCED BY THE COMMISSION’S TWO-STEP DCF ANALYSIS ARE NOT CONSISTENT WITH THOSE PRODUCED BY ALTERNATIVE ROE MODELS AND OTHER MARKET INDICATORS.....11
- 5. THE COMMISSION CAN ADJUST ASSUMPTIONS AND DATA INPUTS USED IN THE DCF METHODOLOGY TO HELP ENSURE THAT AUTHORIZED RETURNS ARE JUST AND REASONABLE.....19
- 6. THE COMMISSION SHOULD ALSO CONSIDER BENCHMARKING AGAINST ALTERNATIVE MODELS TO HELP ENSURE THAT AUTHORIZED RETURNS ARE JUST AND REASONABLE.....31
- 7. CONCLUSION AND SUMMARY OF RECOMMENDATIONS.....38

1: EXECUTIVE SUMMARY

The electric power industry is vital to American jobs and our nation's economy. A recent report, [Powering America: The Economic and Workforce Contributions of the U.S. Electric Power Industry](http://mjbradley.com/sites/default/files/PoweringAmerica.pdf),¹ finds that the industry, as a whole, supports more than 7 million American jobs and contributes \$880 billion or 5 percent of total gross domestic product ("GDP"). Because virtually every sector of the economy depends on safe, reliable, affordable, and increasingly clean energy, the industry's contribution may be considered the first 5 percent of GDP.

Electric transmission infrastructure is the backbone of the energy grid and is one of the nation's most capital-intensive assets. The energy grid provides a range of benefits to customers, including reliable electricity, congestion relief, robust wholesale market competition, and access to a diverse and changing energy portfolio. New transmission investments also deploy advanced monitoring systems and other technologies designed to ensure a more flexible and resilient energy grid.

Consistent with the goals of the Administration, Congress, and the Federal Energy Regulatory Commission ("Commission" or "FERC"), members of the Edison Electric Institute ("EEI") are committed to investing in the smarter energy infrastructure needed to deliver America's energy future. EEI's member companies invested \$20.8 billion in transmission infrastructure in 2016 and expect to invest an additional \$90 billion through 2020 to make the transmission system more efficient, more dynamic, and more secure and to continue to provide customers with the affordable, reliable, safe, and increasingly clean energy they need.² However, the method by which the Commission establishes allowed shareholder returns on equity ("ROEs")—and, therefore influences private investment in transmission infrastructure—may not adequately support the level of investment needed to maintain and enhance the energy grid.

EEI member companies require shareholder support in the form of capital investment and regulatory support in the form of sound ratemaking policy in order to build, own, and operate the transmission infrastructure that ensures reliable and affordable service to customers. Consistent with long-standing Supreme Court precedent established in *Hope* and *Bluefield*, the Commission is required to set a return on shareholder investment at a level that is "commensurate with returns on investments in other enterprises having corresponding risks,"³ and that is "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 raise capital necessary for the proper discharge of its public duties."⁴

In 2014, the Commission issued Opinion No. 531, with the goal of providing stable, predictable, and adequate returns for transmission investment.⁵ That goal, however, has not been achieved despite the Commission's valued efforts. Even with the guidance of Opinion No. 531, ROEs resulting from the current

¹ M.J. Bradley & Associates (Aug. 2017), <http://mjbradley.com/sites/default/files/PoweringAmerica.pdf>.

² Estimated transmission investments are just that—estimates—and are not guaranteed, as market conditions can and do change. Investor confidence supported by regulatory stability is necessary to ensure that infrastructure needs, including replacement and new infrastructure to meet customer needs, are met.

³ *FPC v. Hope*, 320 U.S. 591, 603 (1944) ("Hope").

⁴ *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679, 693 (1923) ("Bluefield"); *see also FPC v. Hope*, 320 U.S. 591, 603 (1944). ("Commensurate with returns on investments in other enterprises having corresponding risks . . . [and] sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.")

⁵ See the transcript of the 1006th Commission Meeting of the Federal Energy Regulatory Commission, Thursday, June 19, 2014. Available at: <https://www.ferc.gov/CalendarFiles/20140703074240-transcript.pdf>.

Discounted Cash Flow (“DCF”) model (which, like all models, has inherent limitations) are producing estimates below other widely accepted alternative ROE estimation models and market indicators, such as state-determined ROEs for lower risk distribution investments, suggesting that these ROE estimates are below levels necessary to support the Commission’s stated policy goals and to meet long-standing capital attraction standards. In 2017, the U.S. Court of Appeals for the D.C. Circuit vacated and remanded Opinion No. 531, presenting a very timely opportunity for the Commission to review its model used to calculate the range of values used to set ROEs.

Because transmission infrastructure often is a 50-plus year commitment, investors require adequate and stable returns over the long-term to provide financing for continuous infrastructure re-investment. EEI believes the time is now for the Commission to step-back and to assess whether the inherent limitations (or shortcomings) of the DCF, and the adjustments the Commission has made to the DCF methodology, are leading to outcomes necessary to meet capital attraction standards and policy goals at a time when the transmission system requires expansion and enhancement.

Regardless of the models employed, informed judgment must be applied to determine the applicability of individual model results in the context of the capital market environment. Although the DCF model is theoretically sound, its assumptions are quite limiting and rarely hold outside of the theoretical realm. These assumptions can engender unreliable results, particularly when investor expectations are not consistent with the DCF model’s assumption that current market conditions will persist.

Practitioners and academics recognize that financial models simply are tools to be used in the ROE estimation process and that the strict adherence to any single approach, or to the specific results of any single approach, can lead to misleading conclusions. As such, the Commission’s recent use of alternative ROE models (such as the CAPM, Risk Premium, and Expected Earning approaches) and market indicators to benchmark and check the reasonableness of the results of the DCF approach is reasonable and should be continued. This position is consistent with the *Hope* and *Bluefield* finding that the method employed is not controlling when determining just and reasonable rate levels.⁶ Benchmarking against additional models would balance the fluctuations in the two-step DCF method’s results and, ultimately, would increase the stability and reliability of the Commission’s approach to ROE estimation.

In addition, this paper recommends the following modifications to temper, but not eliminate, existing shortcomings in the current method of employing the two-step DCF approach:

- Broaden the proxy group by modifying existing screening criteria and expanding the universe of companies eligible for inclusion.
- Consider additional sources of published analyst growth rate estimates when determining the zone of reasonableness.
- Reducing the weight currently given to the GDP growth rate in the application of the two-step DCF method, *i.e.* from 1/3 to 1/5, and incorporating an inflation adjusted long-term GDP estimate such as Morningstar’s approach in the *Ibbotson SBBI Valuation Yearbook*; in the alternative, removing GDP from the application of the DCF model altogether.
- Re-examine the thresholds used to determine which DCF results do not pass tests of economic logic, and ensure the thresholds applied appropriately account for current capital market conditions.

EEI is very supportive of the Commission’s efforts in Opinion No. 531 to address anomalous market conditions and to revise the DCF methodology to address shortcomings. Despite that effort, however, a rote

⁶ See *Hope* at 602.

application of the DCF methodology as conceived in Opinion No. 531 does not produce authorized ROEs adequate to ensure ongoing capital attraction.

EEI offers this white paper to facilitate a holistic review and discussion of the calculation and assessment of transmission investment ROEs, while maintaining the balance between investor and customer interests. We look forward to engaging with all stakeholders to ensure that essential investments in our nation's energy infrastructure can be made today and in the future.

2: INTRODUCTION AND BACKGROUND

The electric transmission network is the backbone of the nation's energy grid. The energy grid connects and enables a diverse and rapidly evolving set of energy resources, ensures reliable service for customers, enables competitive electricity markets, and provides reasonable electricity prices for customers. Transmission accounts for only about 11 percent of an electric customer's total bill, but it is a critical component in delivering reliable, affordable electricity to customers.⁷

As the nation's mix of energy resources continues to evolve and customers demand increased choice over the sources and delivery of their energy, the electric power industry is undergoing significant transformation to enable the flexibility to meet these demands. To this end, electric companies are making significant investments to enhance the transmission system to make it more efficient, more dynamic, and more secure and to continue to provide customers with affordable, reliable, safe, and increasingly clean energy. EEI's member companies are dedicated to planning and enhancing the nation's transmission network to meet customers' changing needs and expectations, investing \$20.8 billion in transmission infrastructure in 2016 and an estimated additional \$90 billion in transmission infrastructure through 2020.⁸

Congress, the Administration, and the Commission have continuously recognized the numerous benefits of a robust transmission system.⁹ For example, the Energy Policy Act of 2005 ("EPA 2005") set forth several statutory requirements intended to support transmission investment. In 2012, the Commission reaffirmed its pricing policy, which provided incentive rates to ensure electric companies continue developing, constructing, operating, and maintaining the nation's vital transmission infrastructure. In addition, the Commission advanced its strategic goal of supporting transmission development by enabling regional and interregional coordination processes, as well as supporting allocation of costs for the selected transmission solutions that meet customer and system needs. In 2014, the Commission issued Opinion No. 531, discussed in more depth later, with the goal of providing stable, predictable, and adequate returns for transmission investment.¹⁰

The Commission has significant influence over transmission infrastructure investment through the ROEs it authorizes and the regulatory certainty it provides. This white paper reviews the limitations of the Commission's two-step DCF model and recommends that the Commission take action to ensure that ROEs support and encourage necessary investment in transmission infrastructure.

As this paper demonstrates, the Commission's current application of the two-step DCF model now produces ROEs that are inconsistent with stated Commission policy goals and that do not meet well-established capital attraction standards, strongly indicating that the Commission's current approach is not producing reliable estimates of the just and reasonable rates of return needed to attract investment in transmission infrastructure, particularly in the current capital market environment. The Commission should review the application and

⁷ U.S. Energy Information Administration, Annual Energy Outlook 2017, January 2017. Reference case. Table 8: Electrical supply, disposition, prices, and emissions. Available at:

https://www.eia.gov/energyexplained/index.cfm?page=electricity_factors_affecting_prices

⁸ <http://www.eei.org/issuesandpolicy/transmission/Pages/default.aspx>.

⁹ The U.S. Department of Energy's (DOE's) August 2017 Staff Report on Electricity Markets and Reliability acknowledged the need for "major transmission additions to connect the remote generation to the rest of the grid and to load centers." It also recommended that DOE and related federal agencies accelerate and reduce costs for the licensing, relicensing, and permitting of grid infrastructure, including transmission. Available on the DOE website at:

https://energy.gov/sites/prod/files/2017/08/f36/Staff%20Report%20on%20Electricity%20Markets%20and%20Reliability_0.pdf

¹⁰ See *Coakley v. Bangor-Hydro Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234, *order on paper hearing*, Opinion No. 531-A, 149 FERC ¶ 61,032 (2014); *reh'g denied*, Opinion No. 531-B, 150 FERC ¶ 61,165 (2015).

results of the two-step DCF method and should make adjustments that would address the limits of the DCF model and that reflect assumptions that are more appropriate given current market conditions.

In particular, this paper highlights the benefits of using alternative models to help estimate and benchmark ROEs. The Commission's recent use of alternative ROE models (such as the CAPM, Risk Premium, and Expected Earning approaches) and market indicators to benchmark and check the reasonableness of the DCF approach in establishing the zone of reasonableness is appropriate and should be continued. Alternative ROE models account for factors and conditions not considered by the DCF model, including measures of capital market risk. Using multiple methods to estimate ROEs is consistent with equity investor practice and helps to ensure ROEs support the Commission's stated policy goals, meet well-established capital attraction standards, and encourage transmission investment. Regardless of the models employed, informed judgment must be applied to determine the applicability of individual model results in the context of the capital market environment.

In addition, the Commission should review assumptions and data inputs that are fundamental to its two-step DCF model. These assumptions are driving the inconsistent ROEs that result from the model. This paper assesses the impacts of certain assumptions and data inputs on the resulting ROEs and suggests that the Commission consider modifying these assumptions. This, too, will help to establish ROEs that are consistent with investor expectations and current market conditions.

In early 2017, the D.C. Circuit remanded Opinion No. 531, in which the Commission adopted the two-step DCF method for electric companies.¹¹ This presents an opportunity for the Commission to revisit its approach to setting ROEs. Changes to the current DCF model's assumptions, as well as a re-evaluation of the Commission's overall approach to calculating ROEs, are necessary to ensure the consistently just and reasonable returns needed to attract investment at a time when the transmission system is in the process of expansion and enhancement.

2.1 Continued Investment in Transmission Infrastructure Is Critical to the U.S. Economy

The electric power industry is vital to American jobs and our nation's economy. A recent report, [Powering America: The Economic and Workforce Contributions of the U.S. Electric Power Industry](#),¹² finds that the industry as a whole supports more than 7 million American jobs and contributes \$880 billion or 5 percent of total GDP. This is the first 5 percent of GDP because virtually every sector of the economy depends on safe, reliable, affordable, and increasingly clean energy.

The electric transmission system is one of the most capital-intensive assets in the country. It provides a range of benefits to customers: reliable electricity service, congestion relief, robust wholesale market competition, and access to diverse energy resources. Because the majority of the U.S. transmission system was built in the 1960s and 1970s, significant replacements and/or upgrades are required now and in coming years to maintain and to improve system performance. Extensive investments also are needed to integrate new renewable and distributed energy resources and to respond to a rapidly changing energy mix. To facilitate this changing energy landscape and to meet customers' changing needs, EEI's member companies continue to introduce innovative transmission technologies, such as fiber optic communications, advanced conductor technology, enhanced power device monitoring, and energy storage devices in transmission projects. At the same time, EEI's members continue to invest in the transmission system to maintain and to improve its resiliency against both cyber and physical threats.

¹¹ *Emera Maine v. FERC*, 854 F.3d 9 (D.C. Cir. 2017).

¹² M.J. Bradley & Associates (Aug. 2017), <http://mjbradley.com/sites/default/files/PoweringAmerica.pdf>

2.2 Regulatory Certainty Encourages Private Transmission Investment

Because transmission infrastructure is a long-term commitment, often serving the public for 50 years or more, investors require adequate and stable returns over the life of this infrastructure. The stability and predictability of authorized returns is of paramount importance to investors, who must commit capital to long-lived assets with multi-year development cycles.¹³

Regulatory certainty is needed to obtain and to maintain financing for both new projects and continuous infrastructure re-investments at reasonable cost. Moreover, adequate ROEs serve to maintain the transmission owner's financial integrity, ultimately helping to keep debt rates low to the benefit of customers. The authorized ROE affects not only the cash flows and credit metrics that support the financial strength of the transmission owner, it also provides an indication of the regulatory support—and risk—associated with a given electric company and the jurisdiction in which it operates.¹⁴

Just and reasonable returns strengthen investors' perception of the regulatory environment and support an electric company's ability to attract capital efficiently throughout various market cycles. Accordingly, it is essential that the Commission's methodology for determining the allowed ROE provide the stable, predictable, and adequate returns needed to attract the investment necessary to expand and to enhance the transmission system.

2.3 ROEs for Transmission Investment Must Be Commensurate With Risks

The U.S. Supreme Court has established the foundation on which a utility's ROE is determined to be just and reasonable, finding that the return should be commensurate with the return available to firms of comparable risk; should compensate investors fairly for capital they have invested; should enable the utility to offer a return adequate to attract new capital on reasonable terms; and should maintain the utility's financial integrity.¹⁵ The Supreme Court recognized that investors have many investment alternatives, even within a given market sector, and, therefore, a company's financial profile must be adequate on a relative basis to ensure its ability to attract capital under a variety of economic and financial market conditions.

Investors in transmission assets assume numerous risks and challenges, including long lead times, significant development opposition from affected stakeholders, and extensive state and federal permitting and siting processes. Within the electric power sector, transmission investments differ from other electric company infrastructure investments, including distribution infrastructure, whose projects tend to be smaller in scale, lower in cost, and shorter in duration.¹⁶ DCF estimates for transmission that are below these less risky alternative investments are not commensurate with these risks. This disconnect between DCF results and investment risk discourages investment in transmission and is inconsistent with the U.S. Supreme Court's long-established foundational standards for assessing whether rates are just and reasonable.

¹³ Suppliers of equity capital for investor-owned electric companies include individual investors as well as institutional owners, such as pension funds, government retirement funds, mutual funds, insurance companies, and endowments.

¹⁴ The terms "electric company" and "utility," as used in this document, are intended to be consistent with the term "public utility" as it is used in the Federal Power Act [16 U.S.C. § 824(e)].

¹⁵ See *supra* note 3.

¹⁶ Opinion No. 531 at P 149. The Commission found that investing in transmission infrastructure is inherently more risky than distribution infrastructure.

3: THE DCF MODEL: PREMISE, LIMITATIONS, AND COMMISSION APPLICATION

Before discussing the limitations of the DCF model and discussing potential solutions suggested in this paper, it is important to review the theoretical premise of the model and the general issues raised by certain key underpinning assumptions.

3.1 The Theoretical Premise of the DCF Model

The DCF model holds that the price that investors are willing to pay for an asset equals the present value of a future stream of net cash flows discounted at the cost of capital. In the case of a utility stock, the future cash flows received are in the form of dividends (and the appreciation in market price if the stock is sold at the end of a finite holding period).

As the Commission noted, “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.”¹⁷ The general form of the model is expressed as follows:

Equation [1] - General Form of the DCF Model

$$P = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \dots + \frac{D_\infty}{(1+k)^\infty}$$

Where:

P	=	<i>The current stock price</i>
$D_1 \dots D_\infty$	=	<i>Expected future dividends</i>
K	=	<i>The discount rate, or required ROE</i>

Equation [1], which solves for price from an infinite number of terms, can only be estimated in practice if one is willing to make a variety of assumptions. The simplest version of Equation [1] assumes constant growth in dividends in perpetuity. If we assume that dividends grow at a constant growth g and that g is less than k , Equation [1] reduces to:

Equation [2]

$$P = \frac{D_1}{k - g}$$

If we further assume the market price of a stock reflects its intrinsic value, Equation [2] can be rearranged and used to deduce the required cost of equity. In that case Equation [2] can be simplified and rearranged into the familiar form as shown in Equation [3].

¹⁷ Opinion No. 531 at P 14.

Equation [3]—Constant Growth Model

$$k = \frac{D_0(1 + g)}{P} + g$$

<i>Where:</i>	P	=	<i>The current stock price</i>
	D_0	=	<i>The current dividend</i>
	k	=	<i>The discount rate, or required ROE</i>
	g	=	<i>The expected growth in dividends and stock price</i>

Equation [3] often is referred to as the “constant growth DCF” model, in which the first term is the expected dividend yield and the second term is the expected capital gains yield (the portion of total return attributable to growth in stock price). This model is intuitively appealing because it makes explicit the two basic ways a firm distributes net income to shareholders. First, a portion of net income is distributed directly through a dividend payment. Second, remaining net income is retained for reinvestment intended to grow earnings and, as a result, increase stock price (capital gains). In this way, there is an inverse relationship between the dividend yield and capital gains yield: the more net income paid out as dividends, the less net income is available to facilitate growth.

3.2 General Limitations of the DCF Model

Although the DCF model is theoretically sound, it is important to recognize that its assumptions are quite restrictive and rarely hold outside of the theoretical realm. To use Equation [3] to estimate a constant required ROE, one must make several strict assumptions, including:

- (1) The required ROE is greater than the expected growth rate;
- (2) Earnings, book value, dividends, and stock price all grow at the same, constant rate in perpetuity;
- (3) The dividend payout ratio remains constant in perpetuity; and
- (4) The Price to Earnings (“P/E”) ratio remains constant in perpetuity.

DCF model results may be unreliable when investor expectations are not consistent with the DCF model’s assumption that current market conditions [*e.g.*, valuations levels (P/E ratios) and dividend payout ratios] will persist in perpetuity.

Evidence on the applicability of the constant growth DCF model is mixed. Academic research has shown that there has been a strong correlation between stock prices and present value calculations when measured over relatively long historical periods, but that the relationship can break down in the short term.¹⁸ Because application of the DCF method to determine the cost of equity assumes that the current stock price reflects the discounted value of expected dividends in perpetuity, the results of the DCF model should be viewed with caution when there is a breakdown in the relationship between stock prices and dividends.

One study focused on back-tests of the constant-growth DCF model concludes that even under “ideal” circumstances,

¹⁸ See A. Nasseh, J. Strauss, “Stock prices and the dividend discount model: did their relation break down in the 1990s?” *The Quarterly Review of Economics and Finance* Vol. 44, No. 2, (May 2004), pg. 191–207; see also, “The Dividend Discount Model in the Long-Run: A Clinical Study,” Foerster, Stephen R; Sapp, Stephen G, *Journal of Applied Finance*; Fall 2005; 15, 2; pg. 55; see also, Xiaoquan Jiang and Bon-Soo Lee, “An Empirical Test of the Accounting-Based Residual Income Model and the Traditional Dividend Discount Model,” *The Journal of Business*, Vol. 78, No. 4 (July 2005), pg. 1465-1504.

“... [I]t is difficult to obtain good intrinsic value estimates in models stretching over lengthy periods of time. Shorter horizon models based on five or fewer years show more promise. Any model based on dividend streams of ten years or more, whether as a teaching tool or in practice, should be used with caution, as they are likely to produce low-quality estimates.”¹⁹

Because Equation [3] is derived from a valuation model that assumes a perpetual dividend stream, it is best viewed as an *approximation* of the true required ROE.²⁰ For example, firms do not pay dividends at a constant dividend yield. Rather, continuous movements in stock prices, coupled with “sticky” dividend policies create continuous changes in dividend yield, contrary to the model’s assumptions.

Moreover, the constant growth DCF model assumes that investors are using the net present value analysis in Equation [2] to determine the purchase price they are willing to pay for a stock. Consequently, the DCF model will not produce accurate estimates of the market-required ROE if the market price of a stock diverges from investors’ estimates of its intrinsic value (*i.e.*, the calculated net present value of an investment based on its expected risk and return characteristics).

Deviations between market prices and intrinsic valuations can occur when investors take short-term trading positions to hedge risk (*e.g.*, a “flight to safety”), to speculate (*e.g.*, momentum trades), or to increase current income (*i.e.*, a “reach for yield”).²¹ DCF estimates can also deviate from investors’ required return when the growth rates used in the model fail to reflect the investor growth expectations embodied in observable stock prices. Examples of this divergence include investors’ speculations over the potential gain from a merger, or investors’ valuations reflecting assumptions about future changes to fiscal and monetary policy actions (such as tax policy changes) that have not yet been factored into reported analyst growth rates.

3.3 The Commission’s Adoption and Implementation of Its Two-Step DCF Methodology

The two-step DCF approach adopted by the Commission in Opinion No. 531 is a constant growth DCF model that uses a blended growth rate that reflects both short- and long-term growth assumptions.²² The Commission’s two-step DCF method relies on a 6-month average dividend yield²³ and a composite growth rate giving 2/3 weight to short-term analyst earnings growth projections and 1/3 weight to a long-term (GDP) growth rate projection. In Opinion No. 531, the Commission relied on Thomson Reuters’ Institutional Brokers’ Estimate System (“IBES”) five-year analyst earnings growth estimates as the short-term growth rate estimate. To develop the long-term growth rate, the Commission relied on an average of GDP growth projections from IHS Global Insight, the Energy Information Administration (“EIA”), and the Social Security Administration (“SSA”).²⁴ Consistent with prior precedent, the Commission established an ROE

¹⁹ See P. McLemore, G. Woodward, and T. Zwirlein, “Back-tests of the Dividend Discount Model Using Time-varying Cost of Equity,” *Journal of Applied Finance*, No. 2, 2015, pg. 75-94.

²⁰ For example, Dr. Roger Morin notes the DCF model does not always provide reliable results in his widely cited text on utility cost of capital. See Roger A. Morin, *New Regulatory Finance*, Public Utility Reports, Inc., 2006 at 28, and 431-436.

²¹ Some investors may select relatively high dividend yield companies as a “reach for yield” in response to the shortage of investment alternatives that provide adequate yield in today’s capital market, rather than investing in stocks based on their long-term return potential.

²² The form of the constant growth DCF model applied by the Commission reflects the “half growth” approach, where the dividend yield is increased by one half the growth rate.

²³ The monthly dividend yield is based on the latest announced dividend divided by the average of the high and low price for the month.

²⁴ See Opinion No. 531-A at P 39. Also note, the Commission instituted a paper hearing to review the adopted long-term growth estimate and concluded its approach in Opinion No. 531 was reasonable. See *id.* at P 1.

zone of reasonableness using the low and high DCF estimates, excluding low-end results that did not pass tests of economic logic. The Commission relied on the midpoint as the measure of central tendency.²⁵

In Opinion No. 531, the Commission relied on DCF model results from a group of comparable-risk companies selected using the following selection criteria:

- (1) Is a domestic company considered an electric utility by Value Line Investment Survey (“Value Line”);
- (2) Has a credit rating no more than one notch above or below the subject utility or utilities, using both Standard & Poor’s (“S&P”) and Moody’s where available;
- (3) Pays dividends and has neither made nor announced a dividend cut during the six-month study period;
- (4) Has not been party to major merger or acquisition activity during the six-month study period significant enough to distort DCF inputs; and
- (5) Has DCF results that pass threshold tests of economic logic.²⁶

The Commission’s two-step DCF model produces a single growth estimate for each proxy company. Prior to Opinion No. 531, the Commission used a one-step form of the constant growth DCF model. When applying the one-step DCF model, the Commission considered high and low DCF estimates for each proxy company based on high and low dividend estimates and high and low growth estimates.²⁷ The use of a range of growth rate estimates for each company, rather than a single average growth estimate, generally resulted in a more robust zone of reasonableness.²⁸

²⁵ See Opinion No. 531 at PP 9, 118, 122, 142, and 151. The Commission has historically used the midpoint as the measure of central tendency when estimating the cost of equity for a group of electric utilities, and used the median when estimating the cost of equity for a single electric utility; *see id.* at P 26.

²⁶ *Id.* at PP 92, 114 and 124.

²⁷ For the dividend component of the model, the Commission considered high and low dividend yield estimates based on the 6-month average of high and low stock prices. For the growth component of the model, the Commission considered analyst growth projections from IBES as well as a sustainable growth estimate. *See id.* at P 25.

²⁸ In August 2005, Congress enacted the Energy Policy Act of 2005. Seeking to end a two-decades-long period of underinvestment in transmission and, to some extent, in response to the 2003 blackout, Congress dedicated several sections to promote the expansion and modernization of the nation’s electricity grid. Congress directed the Commission to establish a program of incentives to invest in electric transmission, recognizing that capital investments in electric transmission infrastructure produce significant benefits for electric customers and society as a whole. Congress directed the Commission to create incentives that, among other things, promote investment in the “enlargement, improvement, maintenance, and operation” of transmission facilities and encourage technologies that enhance the efficiency and operations of existing facilities. In July 2006, the Commission issued a final decision (Order No. 679) establishing its policy on transmission incentives. In 2012, the Commission issued a policy statement clarifying its transmission incentives policy. While not the central focus of this white paper, it is worth noting that when approving ROE incentives, which were encouraged by EPAct 2005, the Commission has traditionally capped the sum of the ROE incentives and the base ROE at the top end of the then-existing zone of reasonableness. In Opinion No. 531, the Commission ruled that in setting a new base ROE, it would revisit whether the combination of previously approved incentive ROEs and the new base ROE exceeded the top end of the newly created zone of reasonableness and, if so, would reduce the total ROE accordingly. *See* Opinion No. 531-B at PP 139-46. Lowering the top end of the zone often causes the total ROE to meet or exceed the cap, creating the additional effect of Opinion No. 531 potentially to limit or cap previously approved ROE incentives.

4: RATES OF RETURN ON EQUITY PRODUCED BY THE COMMISSION'S TWO-STEP DCF ANALYSIS ARE NOT CONSISTENT WITH THOSE PRODUCED BY ALTERNATIVE ROE MODELS AND OTHER MARKET INDICATORS

The Commission uses the two-step DCF analysis to determine an ROE that meets the just and reasonable standard established by the Supreme Court in *Hope and Bluefield*. As noted earlier, under that standard, the return should be commensurate with those available on investments of similar risk and should enable the subject company to attract capital. As also noted earlier, the two-step DCF model is subject to limiting assumptions that may not be valid under all market or company-specific conditions and can produce results that are inconsistent with the “comparable risk” and “financial attraction” standards.

Consequently, it is important the two-step DCF model's results continue to be viewed as indicative, unless confirmed by other analyses. In fact, the Commission did just this in Opinion No. 531 to meet the requirements of *Hope and Bluefield* in setting an ROE at a level sufficient to attract investment in interstate electric transmission.²⁹ The Commission considered the results of additional analyses to benchmark ROE estimates. The Commission ultimately found an authorized ROE higher than the two-step DCF midpoint was appropriate.

Benchmarking against additional ROE analyses is consistent with the *Hope and Bluefield* “end result” doctrine, which states that it is the reasonableness of the result, not the method applied, that controls in determining whether a given rate is just and reasonable. Because capital markets change over time, the Commission should not use a formulaic approach or predetermined weighting of any particular model's results, but should continue to use informed judgment in estimating ROEs and to assess model results in the context of alternative ROE measures and other relevant benchmarks. This will help to enable authorized returns that support long-term investment in the transmission system.

The following section compares the midpoint and median electric utility two-step DCF model results to relevant benchmarks, including authorized returns, alternative ROE model results, and other market indicators.³⁰ This exercise strongly indicates that results of the Commission's current application of the DCF model are not consistent with the results of other models and market indicators, and are not adequate to establish just and reasonable rates.

The two-step DCF results presented below and used for comparative purposes are calculated using the Commission methodology outlined above in section 3.3.³¹

²⁹ Opinion No. 531 at P 150.

³⁰ The midpoint is the average of the highest and lowest values. The median is the middle value in a data set arranged in ascending or descending order when there is an odd number of observations, or the average of the two middle-most values when there is an even number of observations.

³¹ Consensus analyst growth rate projections are from Bloomberg rather than IBES due to historical data availability. The DCF and alternative ROE models (where applicable) have been applied using the Value Line universe of electric utilities as of April 30, 2017, excluding companies currently involved in major merger activity (Great Plains Energy, NextEra Energy, and Westar Energy). DCF results exclude low-end results that do not pass tests of economic logic, consistent with

4.2 Alternative ROE Models

A variety of well-recognized approaches to asset pricing have been developed in the financial literature, and investors use multiple ROE models in practice. They do so because no single model provides accurate results under all market conditions, and the results of any single model should be viewed in the context of its consistency with alternative ROE methodologies.

Charts 1a and 1b compare semi-annual results of the Commission's two-step DCF model with the results of the alternative ROE estimation methodologies—CAPM, Risk Premium, and Expected Earnings—recently considered by the Commission in electric rate cases. The results below, however, call into question the validity of relying solely on a mechanical application of the two-step DCF model.

As applied here, the Bond Yield Plus Risk Premium model adds an industry-specific premium, adjusted to reflect the current interest rate environment, to the yield on Moody's Baa-rated long-term utility bonds. Under the CAPM approach, a risk premium is specified relative to the yield expectations on Treasury (risk-free) debt. Here, a risk premium reflecting the proxy companies' risk levels relative to the overall market is added to 30-year Treasury yields.

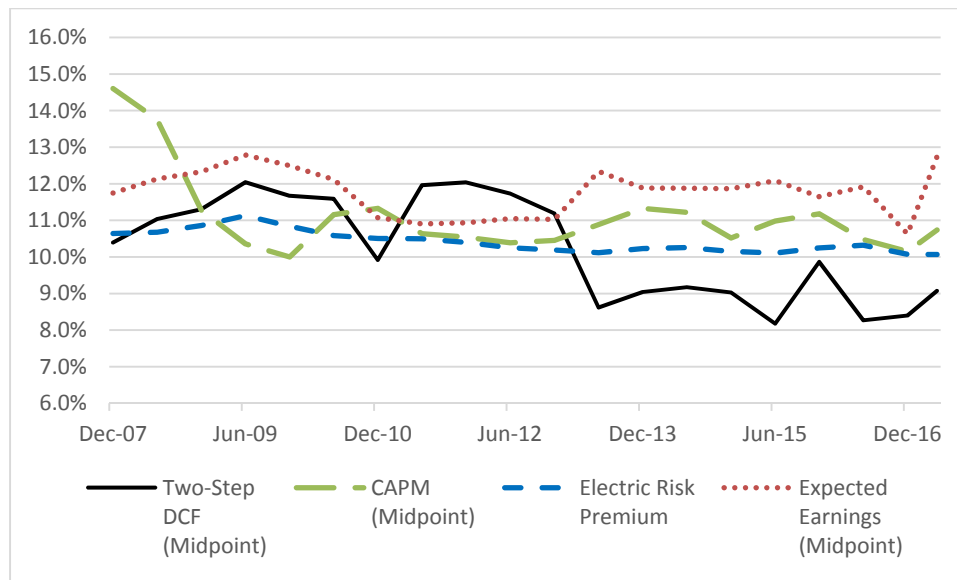
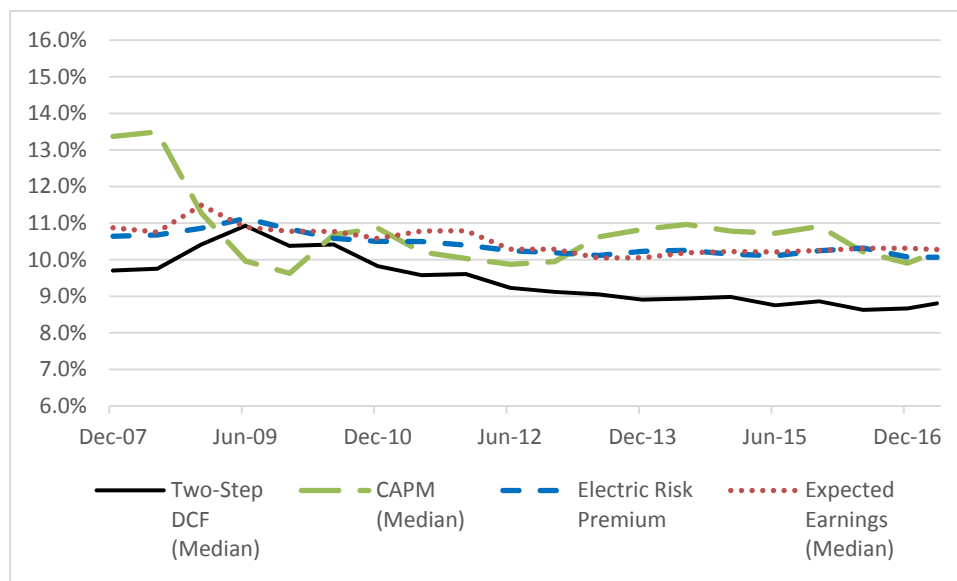
The Expected Earnings analysis calculates the projected returns on book value for the firms in the proxy group using published analyst forecasts provided by Value Line. The model, therefore, provides a direct measure of observable investor expectations for future earned returns on book equity.

Although all three models have their own underlying assumptions and limitations, none is subject to the same limiting assumptions that underpin the two-step DCF model discussed in Section 3. The additional methods, therefore, provide a check on the reasonableness of the two-step DCF model results.³²

The data in Charts 1a and 1b demonstrate that the recent downward trend in DCF model results is not consistent with the more consistent results from other ROE methods. The application of the ROE models presented here generally are similar to those relied on by the Commission in Opinion No. 531. The methods and assumptions used in the application of the models are discussed in more detail in Section 7.

Commission precedent (*i.e.*, results that are below the 6-month average of Moody's Baa Utility Bond Index yield plus 100 basis points).

³² The data in charts 1a and 1b also show that any ROE model may produce anomalous results under certain market conditions, such as the relatively high CAPM results in 2007 and 2008. These elevated results were related to relatively elevated Beta coefficients for electric utilities at the time.

Chart 1a: Midpoint Two-Step DCF Model Results vs. Other ROE Estimates**Chart 1b: Median Two-Step DCF Model Results vs. Other ROE Estimates**

The CAPM and Risk Premium methods are widely recognized approaches to estimating the cost of equity. Both are based on the basic financial tenet that, because equity investors bear the residual risk associated with ownership, they require a premium over the return they would have earned as a bondholder.³³

³³ See, e.g., Eugene Brigham and Michael Ehrhardt, *Financial Management: Theory and Practice*, 12th ed. (Mason, OH: South-Western Cengage Learning, 2008), at 346.

4.3 State-Level Authorized ROEs Are Higher Than Recent Two-Step DCF Model Results

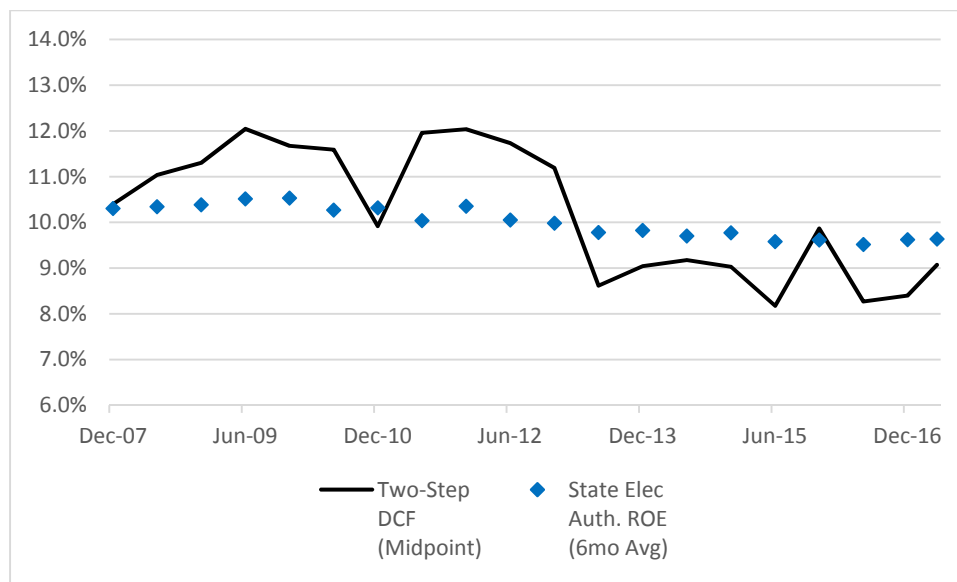
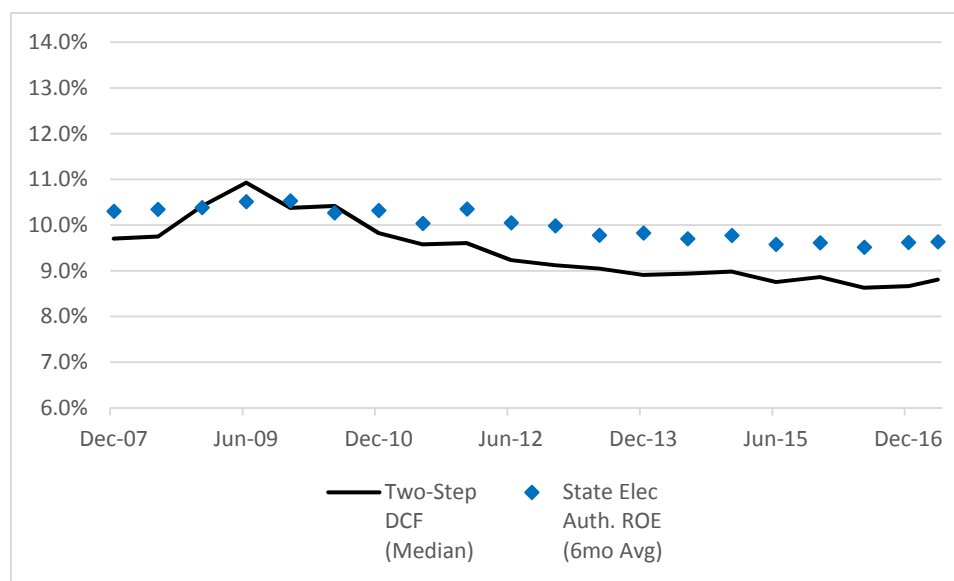
Returns available to electric utilities in other jurisdictions are an important consideration for investors.³⁴ Although the return authorized in any individual case will reflect the particular circumstances of that proceeding, taken together the authorized returns in other jurisdictions represent a comparison point that investors will use to frame their return requirements and arrive at investment decisions. A return that is not competitive on a risk-adjusted basis with those offered for investments in other parts of the electric power industry will diminish the attractiveness of FERC-regulated transmission investments and will push investors to endeavors with more attractive risk-adjusted returns (e.g., distribution facilities).

The Commission's Opinion No. 531 noted that investors providing capital for electric transmission infrastructure face unique challenges that increase their risk relative to state-regulated electric distribution investments. The incremental risks noted by the Commission included "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."³⁵ The Commission found that these risk factors increase risk relative to investments made by state-regulated distribution companies. Consequently, in keeping with the Commission's finding in Opinion No. 531, state-authorized ROEs provide a somewhat conservative benchmark.

Two-step DCF results generally are much lower than state-allowed ROEs over the past year. In fact (and as shown in Charts 2a and 2b), the two-step DCF model has produced results below state-regulated ROEs since 2013.

³⁴ In Opinion No. 531, the Commission used state-commission-authorized ROEs as a lower-bound check on the reasonableness of the two-step DCF model results to prevent Commission-regulated electric transmission companies from being at a competitive disadvantage relative to state-regulated electric utilities when raising capital. *See* Opinion No. 531 at PP 148-150.

³⁵ *Id.* at P 149.

Chart 2a: Midpoint Two-Step DCF Model Results vs. State-Authorized Electric ROEs³⁶**Chart 2b: Median Two-Step DCF Model Results vs. State-Authorized Electric ROEs³⁷**

4.4 Commission-Authorized Natural Gas Pipeline ROEs Are Another Appropriate Benchmark for Assessing Commission-Authorized ROEs

The Commission has used the two-step DCF approach to determine ROEs for natural gas and oil pipelines since the mid-1990s.³⁸ In *Southern California Edison*, the Commission stated it was not appropriate to

³⁶ Average of state-authorized ROEs authorized over the previous 6-month period reported by Regulatory Research Associates, calculated semi-annually (e.g., the value for December 2016 reflects the average of all state electric ROEs authorized from 7/1/2016 to 12/31/2016). Excludes limited issue riders and Illinois formula rates.

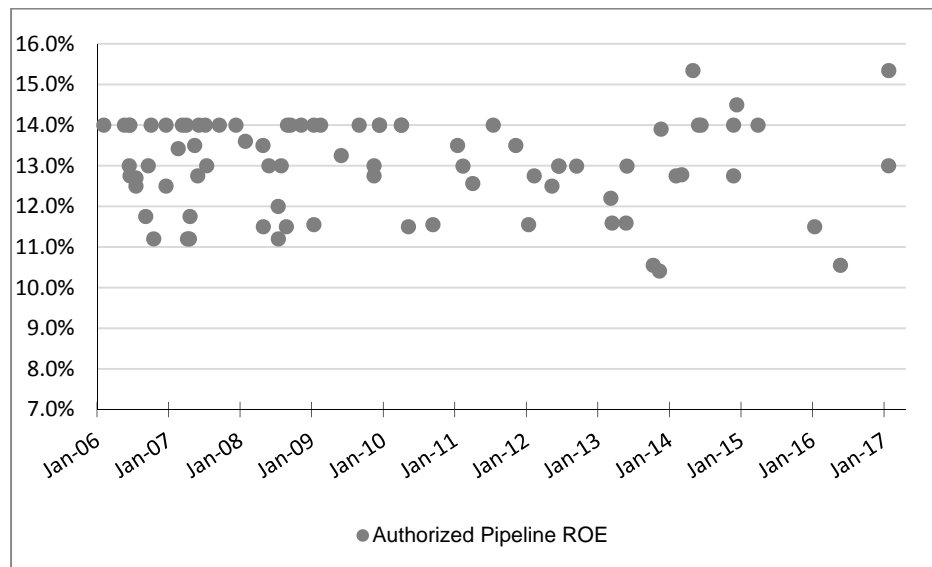
³⁷ *Id.*

³⁸ Opinion No. 531 at P 17.

consider returns in the natural gas industry when evaluating electric utilities because “the electric industry is just beginning a significant new phase of its restructuring.”³⁹ More recently, the Commission found the electric industry and its restructuring have matured.⁴⁰ Given the Commission now finds that the same two-step DCF model is appropriate for both industries, the trend in natural gas pipeline ROEs is relevant in assessing the trends in electric transmission ROEs.

Chart 3 suggests that there is no discernible downward trend in the authorized returns for natural gas pipelines.

Chart 3: Commission-Authorized Natural Gas Pipeline ROEs over Time⁴¹



Electric and natural gas transmission operations both are federally regulated, capital-intensive infrastructure investments. To the extent the Commission’s authorized ROEs for natural gas pipelines have not declined, the implied decline in required ROE for electric utilities (based on DCF results) warrants an investigation as to why the DCF model now produces lower results for electric utilities.

4.5 Earned ROEs for the Overall Market Have Not Declined; Therefore, a Declining Trend in ROEs for Electric Utilities Should Be Questioned

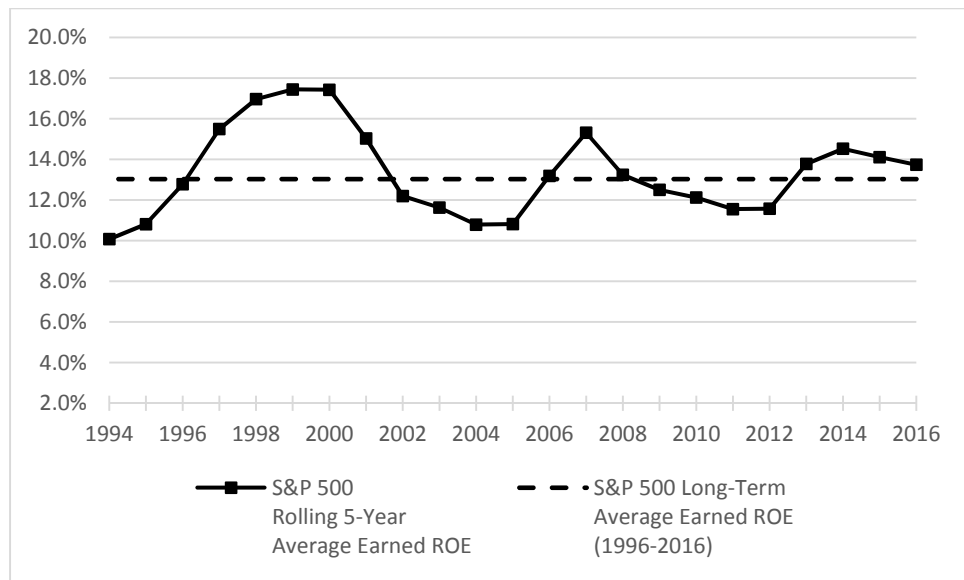
Another check on the reasonableness of the downward trend in required ROE for electric utilities implied by the two-step DCF model is the trend in the actual earned return on common equity for the overall equity market (as measured by the S&P 500 index; *see* Chart 4). As Chart 4 indicates, the weighted average earned return on common equity for companies in the S&P 500 index has fluctuated around its long-term average of approximately 13.00 percent, with the most recent five-year average reflecting a slightly higher return of 13.74 percent.⁴²

³⁹ *S. Cal. Edison Co.*, Opinion No. 445, 92 FERC ¶ 61,070 at 61,261 (2000).

⁴⁰ *See* Opinion No. 531 at PP 35-36.

⁴¹ Includes LNG. FERC-authorized ROEs based on general review of Commission orders available on: <https://elibrary.ferc.gov/idmws/search/fercensearch.asp>.

⁴² That is, the five-year average as of 2016. Source: Bloomberg Professional. Note, electric company risk as measured by the median Value Line Beta coefficient has been fairly stable since at least 2009, fluctuating between 0.70 and 0.75.

Chart 4: Moving 5-year Average Earned Return on Common Equity for S&P 500

To the extent the overall market's most recent five-year-average earned ROE has been above its long-term average, the downward trend in the required ROE for electric utilities implied by the two-step DCF model is a divergence from general trends in the competitive capital market.⁴³

4.6 Conclusion

For more than 30 years, the Commission has relied on some form of the DCF model as its principal method of estimating the cost of equity for electric utilities.⁴⁴ However, in recent years, this approach is not producing results that achieve the stated FERC policy goals or meet long-standing capital attraction standards.⁴⁵ Other widely accepted models suggest required shareholder returns are higher.

Sole reliance on the two-step DCF method can produce volatile cost of equity estimates because inputs and, therefore, results can and do change significantly from day to day. Benchmarking against other models would help to establish more stable ROE estimates. As noted in *Hope*, the Commission is not bound to the use of any single formula or set of formulae in determining rates.⁴⁶ Section 6 of this paper discusses alternative ROE models that the Commission should consider as benchmarks, along with the two-step DCF methodology, when determining an electric company's authorized ROE.

⁴³ The earned return on common equity is a backward-looking accounting measure, whereas authorized ROEs are set prospectively based on market data. Nonetheless, the earned ROE provides an indication of whether there has been an overall downward trend on the return earned on equity investments for the market generally.

⁴⁴ See, e.g., Opinion No. 531 at P 14, which notes the Commission has relied on the DCF model to provide an estimate of the investors' required rate of return for more than 30 years.

⁴⁵ In addition to the concerns expressed herein about the Commission's methodology for calculating ROE, the Commission has moved away from the broader goals of stability and predictability noted above by automatically setting any and all complaints for hearing and settlement, including those that "pancake" proceedings, creating an atmosphere of endless litigation and uncertainty. Despite the issuance of Opinion No. 531, transmission owners in New England and, by extension, the transmission-owning industry have endured six years of litigation without concrete ROEs. No clarity on the issue is in sight. Though not the focus of this white paper, the lack of certainty—which is a risk—caused by pancaked complaints and years of litigation has caught the eye of investor analysts and the financial community. The Commission should revisit its policy of allowing pancaked complaints as inconsistent with the FPA and the goals of certainty and efficiency.

⁴⁶ 320 U.S. at 602.

Results of alternative ROE models, as well as additional observable benchmarks (*e.g.*, the returns allowed to state-regulated utilities and the returns earned by public companies in the overall market), suggest the Commission's two-step DCF methodology may not always provide reasonable estimates of the cost of equity for electric transmission assets. As discussed in the next section, addressing specific issues with the application of the two-step DCF model may improve the likelihood the model will produce reliable estimates of market-required returns. The Commission has the flexibility to address these issues.

5: THE COMMISSION CAN ADJUST ASSUMPTIONS AND DATA INPUTS USED IN THE DCF METHODOLOGY TO HELP ENSURE THAT AUTHORIZED RETURNS ARE JUST AND REASONABLE

The following section discusses issues with the assumptions and data inputs used in the Commission's current application of the two-step DCF model and provides recommendations for potential modifications.

5.1 Proxy Group Selection for the Electric Power Industry

The cost of equity for a given enterprise depends on the risks attendant to the business in which the company is engaged. Because the cost of equity is a market-based concept, a group of publicly traded, risk-comparable companies typically is selected to serve as “proxies” in the application of ROE analyses. A significant benefit of using a proxy group is that it moderates the effects of anomalous, temporary events associated with any one company.

As noted, the Commission historically has relied on DCF analyses applied to proxy groups selected from the universe of companies considered electric utilities by Value Line. Selecting proxy companies that operate within the same general industry (*i.e.*, companies with regulated electric utility operations) is a practical and helpful approach to assembling an appropriately risk-comparable proxy group. It may, however, prove less reliable when electric companies are insufficient in number to provide a robust sample size, and there are no publicly traded, pure-play electric transmission companies to include in the proxy group.

The lack of a large, representative comparison group has become an increasing concern in recent years. Notably, the Value Line universe of electric utilities has declined in number over time, due to industry merger and acquisition activity. In early 2012, there were 52 companies in Value Line's universe of electric utilities across all credit ratings; by April 2017, the universe included 40 companies—a decline of nearly 25 percent.

Table 1: Mergers & Acquisitions in the Value Line Electric Utility Universe

	2012	2013	2014	2015	2016	2017
Electric Utility Count (beginning of year)	52	48	47	46	46	40
Removed Companies (Tickers; removed due to mergers and acquisitions)	<ul style="list-style-type: none"> • CV • CEG • PGN 	<ul style="list-style-type: none"> ▪ CHG ▪ NVE 	<ul style="list-style-type: none"> ▪ UNS 	<ul style="list-style-type: none"> ▪ TEG ▪ UIL 	<ul style="list-style-type: none"> ▪ CNL ▪ ITC ▪ POM ▪ TE 	<ul style="list-style-type: none"> ▪ EDE

Looking back further, the change has been even more extreme. The current universe is less than half the size it was in the early 1990s when EEI reported tracking 100 investor-owned electric companies.⁴⁷

Not only has the number of publicly-traded electric companies declined as target companies are merged into acquirers, the acquiring companies themselves often are electric utilities. Because one of the Commission's screening criteria excludes companies that are party to a merger or acquisition during the six-month study period significant enough to distort DCF inputs, the increase in utility merger activity further reduces the universe of potential proxy companies. The ultimate effect is a smaller and possibly less robust proxy group to which the DCF model can be applied.

Acquisitions also may have a significant effect on the zone of reasonableness established by the two-step DCF approach. For example, the DCF result for UIL Holdings Corporation set the top of the zone of reasonableness established in Opinion No. 531, but the company was acquired by Iberdrola S.A. in February 2015. Likewise, TECO Energy, Inc.'s DCF result set the high end of the zone of reasonableness in Opinion No. 551; that company was acquired by Emera Inc. in September 2015.^{48,49} Once those companies were acquired and no longer eligible proxies, the top of the range of reasonableness was reduced.

5.1.1 Potential Proxy Group Modification 1—Loosen Credit Rating Screen

Among the Commission's screening criteria is the requirement that proxy companies be rated within one credit rating "notch" (above or below) of the subject company (or companies) by both S&P's and Moody's ratings services. That requirement is overly restrictive, however, because the critical distinction from the perspective of equity holders is not based on credit ratings notches. Instead, it is based on whether a given company is rated above or below investment grade. Relaxing the credit rating threshold would increase the number of potential proxy companies while maintaining a sufficient degree of comparability, particularly for rate cases that involve a single electric company.

The proxy companies used to estimate the cost of equity for a company, or a group of companies, should have comparable equity risk. Credit ratings, however, are provided for the benefit of debt (bond) investors—they are not precise measures of equity (stock) risk. A credit rating is an evaluation of a borrower's ability to meet its financial obligations (debt payments) in a timely manner. Because debt and equity are fundamentally different securities with different risk and return profiles, different lives, and different investors, there is not a direct relationship between credit ratings and the cost of equity.⁵⁰

Because credit ratings can provide general information regarding risk and access to debt capital, they can provide a relevant data point. Credit ratings, however, are not direct measures of equity risk and the salient issue for selecting proxy companies is whether or not a company is below investment grade. Being below investment grade can meaningfully impair access to capital at reasonable terms and cost, and may preclude some institutional investors from purchasing the company's stock. Loosening the credit rating screening criteria to include all investment grade utilities would expand the pool of utilities available for inclusion in

⁴⁷ See Edison Electric Institute, *1992 Financial Review—Annual Report of the Investor-Owned Electric Utility Industry* (1993), at 43. The latest EEI index of investor-owned electric utilities included 44 companies; see, Edison Electric Institute, *2016 Financial Review—Annual Report of the U.S. Investor-Owned Electric Utility Industry* (2017), at 101.

⁴⁸ Opinion No. 531 at P 125 and Appendix.

⁴⁹ *Ass'n of Businesses Advocating Tariff Equity, et al. v. MISO*, Opinion No. 551, 156 FERC ¶ 61,234 at PP 20 and 65 (2016).

⁵⁰ For example, debt investors have a contractual, priority claim on cash flows not available to equity investors, and, as such, equity investors bear the residual risk of ownership. Further, because the life of debt is finite, debt investors' exposure to business and financial risk likewise is finite. Equity, on the other hand is perpetual and as such, equity investors are exposed to residual risk in perpetuity.

the proxy group. At a minimum, the Commission should include within the proxy group utilities within one notch of the subject utility based on either S&P or Moody's ratings, rather than both.

Charts 5a and 5b show that as of April 30, 2017, the majority of electric utilities fall into Standard & Poor's BBB- to A ratings range and Moody's equivalent Baa3 to A3 ratings range.⁵¹

Chart 5a: Value Line Electric Utilities—S&P's Credit Ratings

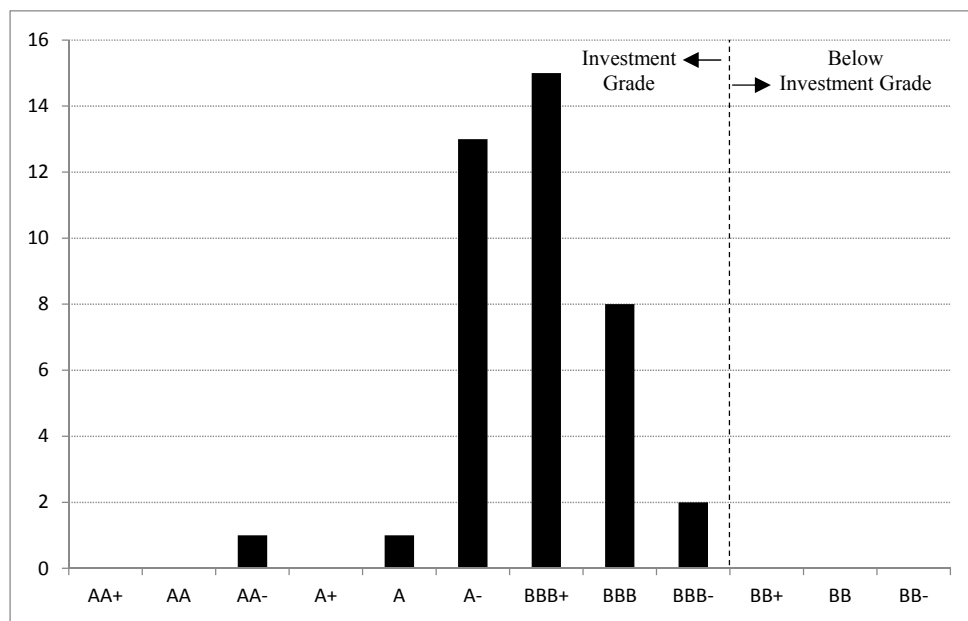
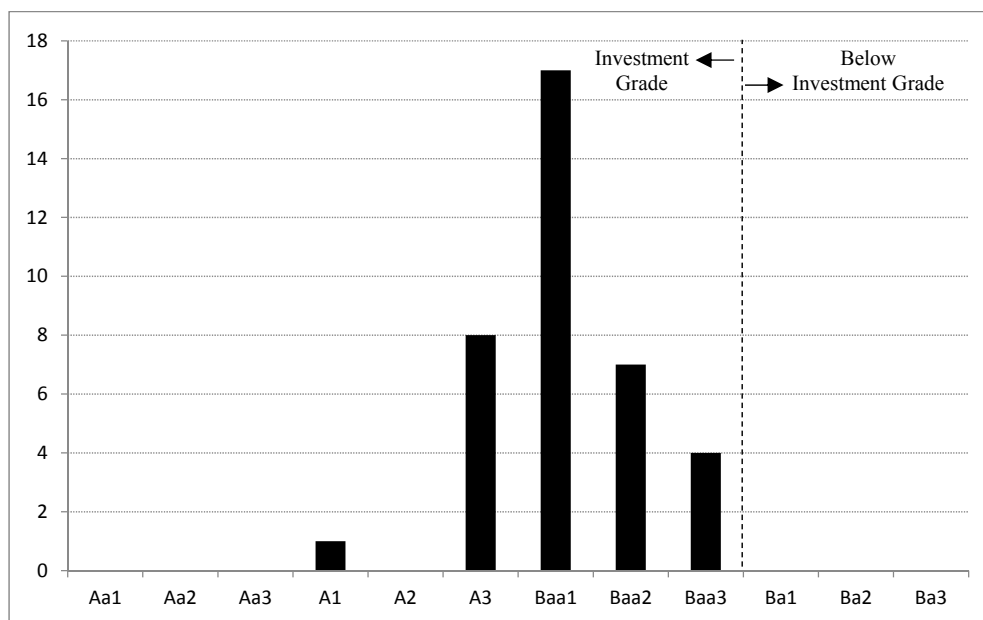


Chart 5b: Value Line Electric Utilities—Moody's Credit Ratings



⁵¹ Source: SNL Financial.

Table 2 provides two-step DCF results as of April 30, 2017, for a set of potential proxy groups selected using S&P credit rating ranges. If there was a direct relationship between credit ratings and the cost of equity, we would expect to see the lowest credit ratings associated with the highest cost of equity, reflecting the assumption that changes in ratings notches directly reflect changes in equity risk. However, the relationship is not demonstrated in the two-step DCF model results. Rather, the lowest DCF result (8.07 percent) is associated with the lowest credit rating (BBB-); there is no meaningful difference in DCF results among the remaining ratings notches. This demonstrates that the present credit rating criteria do not serve as an appropriate basis to fine-tune ROE estimates based on relative risk.

Table 2: Median Two-Step DCF Results Using S&P Credit Rating Screen Scenarios⁵²

Company Rating:	No Screen	A-	BBB+	BBB	BBB-
Proxy Rating Range (-/+ one notch)	All Investment Grade	BBB+/A	BBB/A-	BBB-/BBB+	BB+/BBB
Median DCF	8.81%	8.88%	8.86%	8.79%	8.07%
Proxy Group Count	36	27	33	23	10

5.1.2 Potential Proxy Group Modification 2—Consider a Separate DCF Analysis Using Companies from Other Industries as a Secondary Benchmark

Because there are no publicly traded, pure-play transmission companies, the proxy group already implicitly reflects business segments beyond electric transmission operations. The *Hope* and *Bluefield* comparability standard does not limit the selection of proxy companies to those operating in the same industry. Cost of equity estimates from other rate-regulated industries, or non-utility companies with similar overall equity investment risk levels, may provide a useful corroborating method to determine returns that will enable electric transmission assets to attract capital efficiently and effectively in an open and competitive market.

Cost of equity estimates for oil and natural gas pipelines, for example, would provide information regarding the return expected from the wider breadth of investor choices truly available when investing in the utility industry. As noted above, the Commission's decision to begin using the two-step DCF model for electric utilities was premised, in part, on the conclusion that electric utilities have reached a more mature stage of development and now can be valued in a similar manner as oil and natural gas pipelines. Pipeline companies to consider for inclusion in future benchmark analyses when estimating ROE for electric transmission companies may include Kinder Morgan, Boardwalk Pipeline Partners, EnLink Midstream Partners, Energy Transfer Partners, Spectra Energy Partners, TC Pipelines, and Williams Partners LP.⁵³

In addition, because utilities must compete for capital with the universe of investment opportunities available in the market place, non-regulated firms with comparable total risk may provide a useful proxy for determining the cost of equity for electric transmission investments. A risk-comparable non-utility proxy group could be identified using selection criteria that screen based on risk characteristics including, but not necessarily limited

⁵² Note: there were no Value Line electric utilities with an S&P credit rating of BB+. Although there is no utility rated below investment grade at present, such companies may have a different risk profile and, therefore, should be excluded.

⁵³ Pipeline companies listed are covered by Value Line and report greater than 50 percent of operating income from oil and natural gas transmission operations. We recognize the Commission opened a notice of inquiry in Docket No. PL17-1-000 to look at the use of master limited partnerships ("MLPs") in proxy groups for MLP rate proceedings, with regard to the issue of income tax recovery.

to, (1) credit rating (*i.e.*, requiring investment grade ratings); (2) Beta coefficient; (3) Value Line Safety Rating; (4) Value Line Financial Strength Rating; (5) dividend yield; (6) market capitalization; and (7) country of domicile.

5.2 Selection of Analyst Growth Rate Estimates

As noted above, the DCF model requires an estimate of investors' expectations regarding earnings growth. As also discussed earlier, the Commission's two-step DCF approach assigns analysts' growth estimates two-thirds weight in the final composite growth estimate. Although the Commission has noted it does not require the use of analyst growth rate estimates from IBES,⁵⁴ in practice the Commission has relied on IBES data. The sole reliance on near-term earnings growth projections reported by a single source (*i.e.*, the Thomson Reuters' IBES database) unnecessarily limits the breadth of market data used in the model.

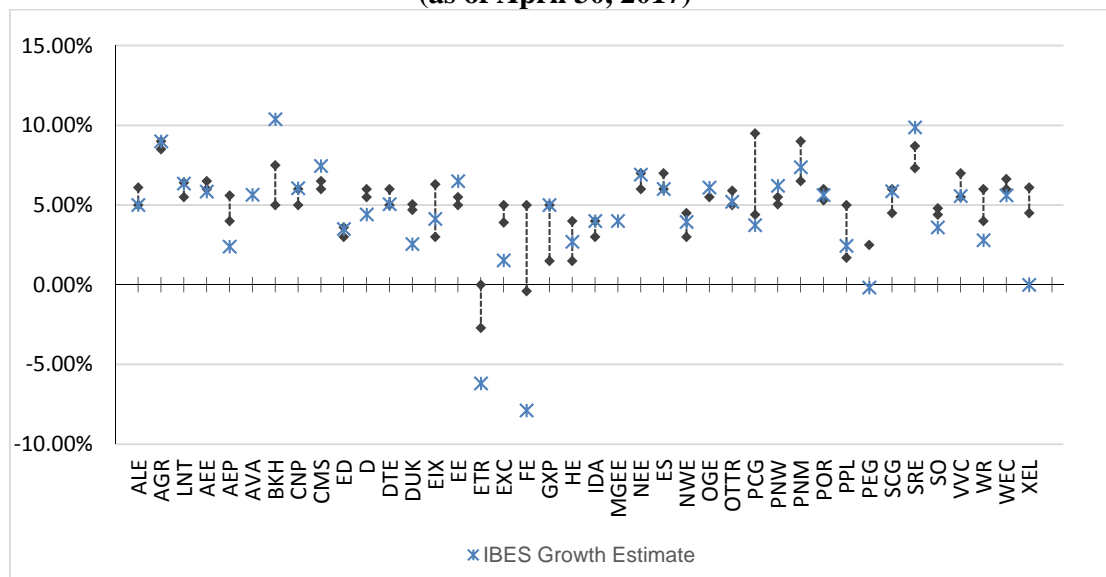
Investors have access to many credible sources of growth rate estimates, and different investors will have different growth assumptions. Institutional and other large investors often employ analysts (sometimes referred to as "buy side" analysts) who may develop their own growth estimates rather than relying entirely on reported consensus estimates.

Consequently, a single data provider may not adequately capture the growth rate expectations associated with the marginal investor driving stock valuations at any given time. In the current market environment, for example, relatively high industry valuations may reflect above-average earnings growth rate assumptions by some investors.⁵⁵ Reported growth rate projections from a single source, whether IBES or any other provider, may not capture those expectations. While they presumably represent averages from multiple sources, consensus growth estimates from different data providers may vary widely for a given company, depending on the identity, number, and reporting frequency of the underlying contributors. To illustrate, Chart 6 compares IBES' reported EPS growth rate projections to the range of growth rates reported by other widely used data sources including Bloomberg, Zacks, and Value Line.

⁵⁴ See Opinion No. 531 at P 90. The Commission did not mandate the use of IBES growth rates, but did say they should be from a consistent source. "[W]hile we reaffirm that there may be more than one valid source of growth rate estimates, in order to ensure that growth rate estimates are internally consistent in an ROE analysis we find it inappropriate to use estimates from different sources for different proxy group companies."

⁵⁵ Current electric utility P/E ratios are above their long-term historical average levels and are elevated relative to the overall market.

Chart 6: EPS Growth Projections—IBES vs. Zacks, Value Line, and Bloomberg
(as of April 30, 2017)⁵⁶



As Chart 6 points out, published growth rate projections vary for the same company, sometimes significantly so. Because restricting growth rate estimates to a single source, such as IBES, fails to account for the range of growth rate assumptions likely used by investors, that practice also may produce ranges of results that do not capture investors' return requirements fully.

5.2.1 Potential Analyst Growth Rate Modification—Use Growth Rate Projections from Multiple Providers

Because the DCF model is used to estimate investors' required ROE, it is important that the inputs to the model reflect the assumptions made by investors. Investors use data from a variety of data sources to develop their return expectations, and a wide range of growth estimates may be reflected in stock prices. Relying on growth rate data from multiple credible sources and calculating high and low two-step DCF estimates using the highest and lowest growth rate estimates to set the zone of reasonableness, regardless of whether those estimates came from the same investor service company, would provide a range of ROE estimates that reflects the range of assumptions relied on by individual market participants.⁵⁷ Including additional sources of published growth rate projection data would be consistent with the Efficient Market Hypothesis, which suggests market prices reflect all publicly available information. Considering a range of high and low results would be similar to the approach previously used by the Commission when it relied on the one-step DCF model. Doing so also would help to address concerns that parties themselves have raised regarding IBES estimates.

⁵⁶ IBES growth rate estimates reported by Yahoo!Finance. Note, Value Line growth rates are reported quarterly.

⁵⁷ To be clear, we do not recommend the Commission average the results, as this would not reflect the full range of investor expectations. Rather, the DCF should be performed for each company using investor service data separately. The lowest DCF result would set the bottom of the range (subject to a low-end threshold screen), and the highest DCF result would set the high end of the range.

5.3 Long-Term Growth Rate Estimate and Its Weighting

The blended growth rate used in the Commission's two-step DCF methodology assigns one-third weight to long-term projections of GDP growth, which gives the GDP growth estimate a significant influence on the end result. There is, however, a lack of evidence to indicate that investors' growth expectations for electric utilities have begun to converge with the economy.

As the Commission has noted, long-term projections are "inherently more difficult to make, and thus less reliable."⁵⁸ Even if investors have started to assume electric utilities' growth will begin to converge to GDP growth in the foreseeable future, it is not clear that the economic forecasts relied on by the Commission (from SSA, EIA and Global Insights) accurately reflect what investors expect in perpetuity.

The long-term GDP projections from sources such as those used by the Commission generally represent growth assumptions over a fixed period of time and reflect assumptions regarding a range of uncertain future conditions such as tax and trade policies, central bank monetary policies, worker productivity growth, workforce participation, and many other factors.⁵⁹ Rather than assume current policies and economic conditions will remain in place forever, a reasonable approach is to rely on historical average nominal growth observed over an approximately 90-year period—including a number of economic cycles, monetary policy conditions, and fiscal policy conditions—as a benchmark for expected long-term future growth. As a point of reference, the 4.39 percent GDP growth projection used by the Commission in Opinion No. 531 is 174 basis points below the long-term historical nominal GDP growth of 6.13 percent reported by the U.S. Bureau of Economic Analysis.⁶⁰

Table 3 provides another perspective, comparing GDP projections consistent with the Commission's prescribed approach (averaging together SSA, EIA, and Global Insights estimates) to the long-term growth rate implied by state-level authorized ROEs and contemporaneous electric utility dividend yields.⁶¹

⁵⁸ Opinion No. 531 at P 21, citing Opinion 414-A.

⁵⁹ For example, EIA's "reference case" forecasts assume factors, such as current laws and regulations, are unchanged throughout the forecast period (*see* Annual Energy Outlook 2017 with projections to 2050, at 6.)

⁶⁰ *See* Bureau of Economic Analysis, "Current-Dollar and 'Real' Gross Domestic Product," May 26, 2017 release. Nominal GDP grew from \$104.60 billion in 1929 to \$18.57 trillion in 2016, reflecting a geometric average growth rate of 6.13 percent annually.

⁶¹ Note, this analysis is representative only. The specific dividend yields of the companies used as proxies in the individual rate cases will vary.

Table 3: Growth Rates Implied by Recent State-Authorized ROEs⁶²

Year	Average of Recent State-Allowed ROEs	Average Electric Utility Dividend Yield	Implied Growth Rate
2017 YTD	9.64%	3.07%	6.47%
2016	9.60%	3.17%	6.33%
2015	9.60%	3.55%	5.94%
2014	9.75%	3.51%	6.13%
2013	9.81%	3.83%	5.87%
2012	10.01%	3.91%	5.98%
2011	10.19%	4.17%	5.89%
2010	10.29%	4.46%	5.71%
2009	10.52%	4.69%	5.70%
2008	10.37%	3.64%	6.61%
2007	10.31%	2.90%	7.30%
Average:	10.01%	3.72%	6.18%

The implied growth rates shown in Table 3 are generally consistent with the assumption that over time, GDP growth reverts to its long-term mean (*i.e.*, the 6.13 percent long-term growth rate noted above). Over the same 2007 to 2017 period, long-term growth rates calculated using the approach adopted by the Commission would have ranged from approximately 4.30 percent to 4.70 percent, averaging 4.40 percent.⁶³

Finally, electric utility P/E ratios currently are elevated relative to both their historical average level and relative to the broad market as measured by the S&P 500. If valuations are driven by investors' expectations that electric utility growth rates are beginning to moderate and converge toward a relatively lower long-term rate of U.S. economic growth, it is not clear why their P/E ratios would be higher now than historically observed. To the extent current stock price valuations are driven by factors other than long-term GDP assumptions, the rationale for using long-term GDP projections in the two-step DCF model is undermined.

5.3.1 Potential Long-Term Growth Modification 1—Lower Weight Given to GDP Growth, or Discontinue Use

The Commission's use of GDP growth in the two-step DCF model does not adequately reflect the continuing growth opportunities for electric companies.⁶⁴ The industry is undergoing significant transformation, and public utilities are making significant investments to make the energy grid smarter, cleaner, stronger, more dynamic, and more secure and to integrate a rapidly changing mix of energy resources.⁶⁵ Investors may see

⁶² Source: SNL Financial. Dividend yield based on the market capitalization weighted SNL electric utility index. Consistent with the half-growth form of the constant growth DCF model used by the Commission, the implied growth rate is calculated as $(\text{ROE} - \text{Yield}) / (.5 \times \text{Yield} + 1)$.

⁶³ Based on a review of long-term growth rates referenced in the Commission's electric, oil, and natural gas transmission rate case orders.

⁶⁴ This paper does not explore the relationship between other Commission jurisdictional entities and GDP growth.

⁶⁵ See, *e.g.*, *From growth to modernization: The changing capital focus of the U.S. utility sector*, Deloitte, June 2016.

potential growth paths for utilities that differ from GDP indicators, and as such, they may give little or no weight to the long-term GDP growth rate. Therefore, it would be reasonable to reduce the weight given to GDP growth in the Commission's blended growth rate calculation (*e.g.* from one-third to one-fifth) or to remove GDP growth from the application of the DCF analysis altogether (while still considering other adjustments discussed in this paper).

Moreover, if investors believe that the public utility industry is in the mature phase of its lifecycle, it should already be reflected in the reported growth rate expectations for public utilities. Accordingly, there is no need to adjust investors' earnings growth rate expectations toward macroeconomic estimates of long-term GDP growth.

To the degree there is inherent uncertainty associated with the long-term GDP growth estimate, caution should be used when assigning the weight given to GDP forecasts.

5.3.2 *Potential Long-Term Growth Modification 2—Adopt a Revised GDP Growth Calculation*

The economic forecasts of nominal GDP growth relied on by the Commission may not be congruent with the long-term growth expectations reflected in utility stock market prices. Because the DCF methodology places investors' expectations of future growth at the center of its assumptions, utilizing an unrepresentative growth assumption would lead to distorted ROE estimates. An alternate approach is to assume that, over time, real GDP growth is mean-reverting. Morningstar's *Ibbotson SBBI Valuation Yearbook*, for example, describes a long-term GDP estimate for use as a long-term DCF growth rate that adds a market-based measure of inflation to the historical average real GDP growth rate. Morningstar's approach assumes real GDP will converge toward its historical average growth rate, while forward-looking inflation is estimated using the spread between nominal and inflation-protected U.S. Treasury securities.⁶⁶ As of April 2017, Morningstar's method produces a long-term nominal GDP estimate of 5.27 percent, based on a historical real GDP growth of 3.22 percent and a projected long-term inflation rate of 2.05 percent.⁶⁷

5.4 Low-end Threshold Test

As noted in Opinion No. 531, the Commission precedent has been to exclude low-end results “whose cost of equity estimates fail tests of reasonableness and economic logic.”⁶⁸ To exclude ROE estimates that “are sufficiently low that an investor would consider the stock to yield essentially the same return as debt,” the Commission historically has applied a low-end threshold of approximately 100 basis points above utility bond yields.⁶⁹ The Commission has noted the low-end test is a “flexible test.”⁷⁰

The Commission's general approach of using the cost of debt to establish a minimum threshold for estimates of the required ROE is logical, as equity investors require a risk premium above the cost of debt to compensate them for the residual risks associated with owning common stock. Debt holders are entitled to contractually obligated payments, have protections provided by debt covenants and other restrictions, and have priority claim on assets in the event of insolvency. Equity holders are not entitled to the same protections and, therefore, are exposed to incremental (sometimes referred to as “residual”) business and financial risks.

⁶⁶ See *Ibbotson SBBI 2013 Valuation Yearbook*, Morningstar, Inc., at 50-52.

⁶⁷ Geometric average U.S. GDP growth from 1929-2016 as reported by the U.S. Bureau of Economic Analysis; projected inflation calculated as the 30-day average difference between nominal and inflation-protected 30-year Treasury yields as of April 28, 2017.

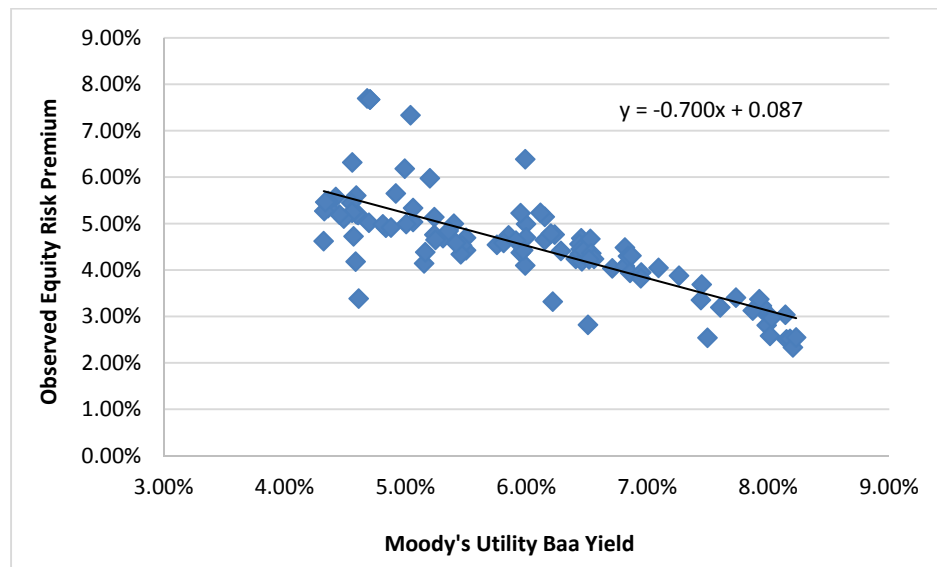
⁶⁸ Opinion No. 531 at P 119.

⁶⁹ *Id.* at P 122.

⁷⁰ *Id.*

The required equity risk premium, however, changes over time. Prior research has shown, for example, the equity risk premium to be inversely related to the change in the level of interest rates.⁷¹ That is, as interest rates decline, the required risk premium increases (and, as interest rates increase, the required risk premium declines). As shown in Chart 7a, there is an inverse relationship between interest rates and the equity risk premium implied by Commission-authorized ROEs; since 2007, the equity risk premium increased approximately 70 basis points for every 100-basis point decline in Baa utility bond yields.⁷²

Chart 7a: Inverse Relationship Between Equity Risk Premium and Baa Utility Bonds Yields—Commission-Authorized ROEs

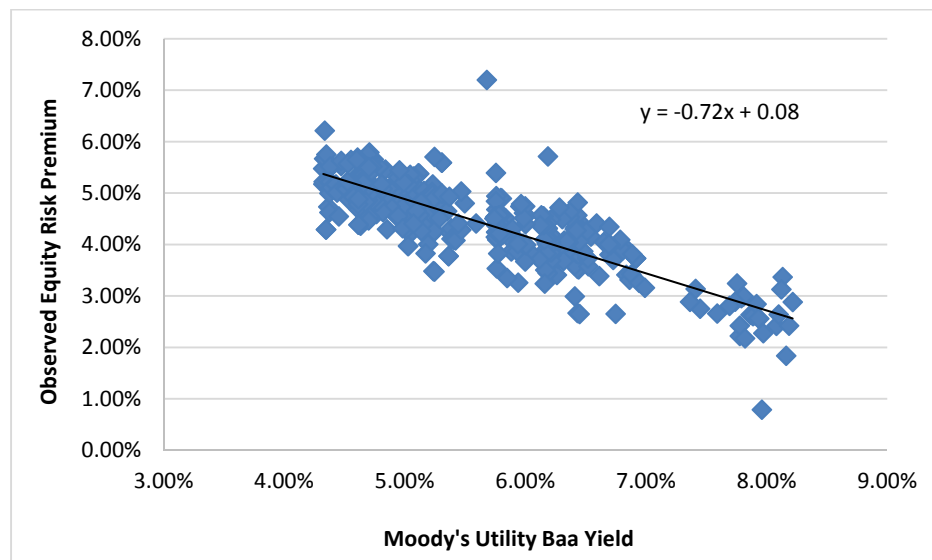


Similarly, the equity risk premium implied by state-level authorized ROEs increased by approximately 72 basis points for every 100 basis point decline in Baa utility bond yields.⁷³

⁷¹ See, e.g., Robert S. Harris and Felicia C. Marston, “Estimating Shareholder Risk Premia Using Analysts’ Growth Forecasts,” *Financial Management*, Summer 1992, at 63-70; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, “The Risk Premium Approach to Measuring a Utility’s Cost of Equity,” *Financial Management*, Spring 1985, at 33-45; and Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, “An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry,” *Financial Management*, Autumn 1995, at 89-95.

⁷² 6-month average Baa-rated utility bond yields. Commission-authorized base ROEs; data from general review of Commission orders available at: <https://elibrary.ferc.gov/idmws/search/fercgensearch.asp>.

⁷³ 6-month average Baa-rated utility bond yields. Authorized ROE data from Regulatory Research Associates.

Chart 7b: Inverse Relationship Between Equity Risk Premium and Baa Utility Bonds Yields—State-Authorized ROEs

The Commission has used a risk premium generally close to 100 basis points since at least 2006, when it found results 97 to 126 basis points above the average yield for public utility debt were too low to be credible.⁷⁴ Given the relatively large changes in the capital market environment over that period, including unprecedented changes in monetary policy, a premium near 100 basis points no longer provides a reasonable low-end threshold check and should be increased. The cost of equity is a forward-looking concept, and the Commission's low-end tests should also be forward-looking.

5.4.1 Potential Low-End Test Modification 1—Use a Dynamic Threshold That Reflects Changes in Interest Rates

There is a well-established inverse relationship between interest rates and the equity risk premium. Recognizing and accounting for that relationship would improve the low-end test. Assuming the equity risk premium increases approximately 70 basis points for every 100-basis point decline in utility bond yields (see Chart 7a), the nearly 200 basis point decline in the six-month average Moody's Baa utility bond yield since 2006 suggests the risk premium should currently be approximately 240 basis points.

5.4.2 Potential Low-End Test Modification 2—Consider Using Published Bond Yield Forecasts

In response to extraordinary financial market dislocation in 2008, the Federal Reserve: (1) lowered the Federal Funds rate from 5.25 percent in September 2007 to near zero by December 2008; and (2) purchased approximately \$4 trillion of U.S. agency debt and mortgage-backed securities with the specific intent of putting "downward pressure" on long-term interest rates.⁷⁵ As of the end of 2016, the Federal Reserve held approximately 36 percent of the supply of U.S. government Treasury securities with maturities over 10 years.⁷⁶ In December 2015, the Federal Reserve raised the Federal Funds rate for the first time in nine years

⁷⁴ See *Kern River Gas Transmission Company*, Opinion No. 486, 117 FERC ¶ 61,077 at P 135 (2006), *order on reh'g*, Opinion No. 486-A, 123 FERC ¶ 61,056 (2008), *order on reh'g*, Opinion No. 486-B, 126 FERC ¶ 61,034 (2009).

⁷⁵ See <http://www.federalreserve.gov/monetarypolicy/openmarket.htm>. See also: Federal Reserve Board Schedule H.4.1.

⁷⁶ Federal Reserve Bank of New York, *Domestic Open Market Operations During 2016*, April 2017 at 25.

and began the process of rate “normalization.” More recently the Federal Reserve has begun addressing the “unwinding” of the balance sheet, although the ultimate path and timing of that process remain uncertain.⁷⁷

As the Federal Reserve continues to move forward with interest rate normalization, investors expect rates to continue to increase from their historically low levels. As of June 2017, consensus projections provided by *Blue Chip Financial Forecasts* show corporate Baa debt yields are expected to increase from 4.7 percent in Q2 2017 to 5.6 percent in Q3 2018.⁷⁸ Corporate Baa debt yields are expected to further increase to 6.3 percent by 2020.⁷⁹ Applying the Commission’s approximately 100 basis point premium to published consensus bond yield forecasts would address investors’ expectations for changing capital market conditions. Using *Blue Chip Financial Forecasts’* projected Baa debt yields, the low-end threshold would currently be in the range of 6.6 percent to 7.3 percent.

⁷⁷ Minutes of the Federal Open Market Committee, March 14-15, 2017. The FOMC minutes indicate committee participants anticipate a change in reinvestment policy later this year, which would be a significant first step in unwinding the additions made to the Federal Reserve’s balance sheet as part of QE.

⁷⁸ See *Blue Chip Financial Forecast*, Vol. 36 No. 6, June 1, 2017, at 2.

⁷⁹ See *id* at 14.

6: THE COMMISSION SHOULD ALSO CONSIDER BENCHMARKING AGAINST ALTERNATIVE MODELS TO HELP ENSURE THAT AUTHORIZED RETURNS ARE JUST AND REASONABLE

The following section provides a high-level overview of several common ROE models, which can be used as credible benchmarks for determining the cost of equity for Commission-regulated electric utilities. Regardless of the models employed, informed judgment—not just mechanical application of a methodology—should be applied to determine the applicability of individual model results.

All ROE estimation methods, including the DCF approach, are subject to limiting assumptions that may become more or less consistent with market conditions as those conditions change. Any ROE model may be affected by data inputs that fail to reflect investors' true expectations. For that reason, academics and practitioners tend to rely on multiple methods when valuing investments.⁸⁰ The results of each model provide useful information that should be used to inform the determination of the market required ROE.

The models discussed below include the CAPM, Risk Premium and Expected Earnings analyses that the Commission has recently considered when determining where within the zone of reasonableness established by the two-step DCF model to set the allowed ROE. In addition, a more general form of the multi-stage DCF model is discussed. The multi-stage DCF model offers an alternative to the two-step DCF method, which would allow for additional flexibility regarding input assumptions.

6.1 The Bond Yield Plus Risk Premium Model

The Bond Yield Plus Risk Premium model, or “Risk Premium” model, is based on the basic financial principle of risk and return, *i.e.*, that investors require greater returns for bearing greater risk. The Risk Premium approach recognizes that common equity capital has greater investment risk than debt capital, as common equity shareholders are behind debt holders in any claim on an entity's assets and earnings. The Risk Premium approach specifically recognizes that equity investors require a premium to take on the additional risks associated with equity ownership.

Recall that the cost of equity cannot be directly determined or observed. However, a forward-looking estimate of the cost of equity can be derived based on directly observed bond yields and an estimated Equity Risk Premium over those bond yields. According to Risk Premium theory, the cost of equity equals the expected cost rate for long-term debt capital, plus a risk premium as compensation for residual equity risk.

The traditional Risk Premium formula can be expressed as:

Equation [4]—Traditional Risk Premium Model

$$\text{Cost of Equity} = \text{Bond Yield} + \text{Equity Risk Premium}$$

⁸⁰ See, e.g., Eugene Brigham and Michael Ehrhardt, *Financial Management: Theory and Practice*, 12th Ed. (Mason, OH: South-Western Cengage Learning, 2008), at 346.

A reasonable approach to calculating the risk premium for electric utilities is to use authorized ROEs as the historical measure of the cost of equity.⁸¹ The Commission's past authorized equity returns are an appropriate estimate of the historical ex-ante cost of equity because they reflect the input and analysis of expert witnesses, as well as the Commission's reasoned judgment regarding the forward-looking cost of equity. The Risk Premium model results shown in Charts 1a and 1b (Section 4) use this approach and are consistent with actual authorized ROEs.^{82,83}

Academic research has demonstrated that the Equity Risk Premium is inversely related to the level of interest rates; i.e., as interest rates fall, the Equity Risk Premium increases (as discussed in Section 5). Therefore, given the dynamic nature of interest rates, it is not reasonable to rely on a long-term historical average Equity Risk Premium. This is particularly relevant given the low level of current U.S. Treasury yields.

One approach to estimating the forward-looking Equity Risk Premium, therefore, is to perform a regression analysis using the observed Equity Risk Premium over time as the dependent variable and rates on long-term bonds as the independent variable. By applying the regression coefficients to current and expected bond yields, a forward-looking ROE is developed. Using sufficient historical data allows the estimated Equity Risk Premium to reflect market conditions over various economic cycles, with the understanding that, looking forward, investors also will face varying economic and capital market cycles.

Some of the benefits of the Risk Premium model include:

- The model is not dependent on the assumptions required for the DCF model enumerated earlier, including that current market conditions and company policies will persist in perpetuity.
- The bond yield component of the model directly reflects changes in the interest rate environment.
- Trends in the model results tend to be smooth over time, avoiding sharp swings in results that can be associated with the DCF model. As discussed, reducing the uncertainty and volatility of expected future returns is of paramount importance for attracting capital to an essentially irreversible investment in assets with multi-year development cycles and long recovery lives.
- When applied using the Commission's past authorized ROEs as the measure of the cost of equity, the Risk Premium model also provides a measure of consistency in the rate-setting paradigm.

The primary challenge with the implementation of the model is determining a forward-looking Equity Risk Premium, which changes over time.

6.2 Capital Asset Pricing Model

The CAPM analysis is a risk premium approach that estimates the cost of equity for a given security as a function of a risk-free return plus a risk premium (to compensate investors for the non-diversifiable or "systematic" risk of that security). As shown in Equation [5], the CAPM is defined by four components, each of which theoretically must be a forward-looking estimate:

⁸¹ The model reflects valuation techniques relied on in practice, and is referenced in both academic and industry practitioner literature. *See, e.g.,* CFA Level I Program Curriculum, Volume 4, at 52. *See also* Morin, Roger A., *New Regulatory Finance*, Public Utilities Report, Inc., 2006, at 123-124.

⁸² The bond yield component of the model based on then-prevailing level of Moody's Baa-rated public utility long-term debt yields.

⁸³ See Appendix C for detailed data on the historical Risk Premium analysis results.

Equation [5]—Capital Asset Pricing Model

$$k_e = r_f + \beta (r_m - r_f)$$

<i>Where:</i>	k_e	=	<i>The required market ROE for a security</i>
	β	=	<i>The Beta coefficient of the security</i>
	r_f	=	<i>The risk-free rate of return</i>
	r_m	=	<i>The required return on the market as a whole</i>

In Equation [5], the term $(r_m - r_f)$ represents the Market Risk Premium (“MRP”).⁸⁴ According to the theory underlying the CAPM, since unsystematic risk can be diversified away by adding securities to their investment portfolio, investors should be concerned only with systematic or non-diversifiable risk. Non-diversifiable risk is measured by the Beta coefficient, which is defined as:

Equation [6]—Beta Coefficient

$$\beta_j = \frac{\sigma_j}{\sigma_m} \rho_{j,m}$$

<i>Where:</i>	σ_j	=	<i>The standard deviation of returns for a company</i>
	σ_m	=	<i>The standard deviation of returns for the broad market</i>
	$\rho_{j,m}$	=	<i>The correlation of returns between company “j” and the broad market</i>

Where σ_j is the standard deviation of returns for company “j”; σ_m is the standard deviation of returns for the broad market (as measured, for example, by the S&P 500 Index), and $\rho_{j,m}$ is the correlation of returns between company j and the broad market. The Beta coefficient, therefore, represents both relative volatility (*i.e.*, the standard deviation) of returns and the correlation in returns between the subject company and the overall market. Intuitively, higher Beta coefficients indicate that the subject company’s returns have been relatively volatile, exaggerating returns on the overall market. If a company has a Beta coefficient of 1.00, it is as risky as the market. The CAPM results in Charts 1a and 1b (section 4) use this approach.⁸⁵

A central theme of the CAPM is that rational investors make investment decisions reflecting an inherent aversion to taking on additional risk without being compensated by additional returns. In the context of the CAPM, risk is defined as the uncertainty, or variability, of returns. The systematic portion of risk is that which can be attributed to the market as a whole, while non-systematic risk is attributable to the idiosyncratic nature of the subject company itself. As noted, systematic risk is measured by the Beta coefficient within the CAPM structure. Because the CAPM assumes that all other risk, *i.e.*, all unsystematic or diversifiable risk, can be eliminated through diversification, only systematic risk is reflected in the cost of equity.

Some of the benefits of the CAPM approach include:

⁸⁴ The Market Risk Premium is defined as the incremental return of the market over the risk-free rate.

⁸⁵ These results are derived using the 30-day average of the 30-year U.S. Treasury bond yield as the risk-free rate, Beta coefficients reported by Value Line, and a market required rate of return based on a market capitalization-weighted constant growth DCF analysis of the companies in the S&P 500 using consensus growth rates reported by Bloomberg. CAPM results using this methodology have generally been in line with average authorized electric ROEs over the past 10-years. See Appendix B for historical CAPM results.

- The model is a widely taught and commonly used approach to estimate the cost of capital.⁸⁶ Research shows that investors' investment decisions are consistent with use of the CAPM to compute the cost of equity.⁸⁷
- The model is not dependent on the assumptions required for the DCF model enumerated earlier, including that current market conditions and company policies will persist in perpetuity.
- The model is premised on the risk/reward relationship that is fundamental to finance and investment theory and, therefore, addresses the *Hope* principle that the allowed return should be commensurate with the relative risk of the investment.
- The model directly incorporates market return data not included in the DCF model, including interest rate levels (through the risk-free rate) and overall market return expectations (through the MRP).

A challenge with implementing the CAPM, however, is that all three inputs (the risk-free rate, the Beta coefficient, and the MRP) vary over time and are sensitive to variations in input assumptions. Model inputs often are the subject of differences in reasoned judgment between analysts in regulatory proceedings. For example, calculation of the Beta coefficient is derived from observable stock price data, but it requires individual judgment regarding the return intervals (*e.g.*, daily, weekly, or monthly returns), measurement period (*e.g.*, one, two or five years), and the benchmark market index to use (*e.g.*, the S&P 500 or the NYSE Index). To the extent there are differences in the assumptions used to estimate the models' inputs, the results can vary significantly. In the context of estimating the appropriate return on the original cost of assets for ratemaking purposes, it is therefore reasonable to gauge whether the assumptions used produce results in line with observed returns on common equity over time.

It is also worth noting that the implied required returns based on the CAPM approach for the overall market have been consistent with the actual earned returns on book equity for the market (*see* Chart 4 above), which averaged 13.24 percent and ranged between approximately 11.5 percent and 15.3 percent over the past 10 years.⁸⁸

6.3 The Expected Earnings Method

The Expected Earnings method calculates the projected returns on book value for comparable electric utilities based on analysts' published projections of electric utility companies' earnings and book equity. One benefit of the Expected Earnings method is that the expected values are directly observable rather than inferred using a mix of market-based pricing data and secondary assumptions about investor expectations (*e.g.*, growth rates).

Another benefit is that the model provides a perspective on the expected return on book value available to comparable companies. For example, the dividend yield, a principal component of the DCF analysis, is a market-derived parameter. Because the DCF model calculates the discount rate that equates the future stream of cash flows to the current market price, it calculates the required return on the market value of the utility's stock (rather than the book value of equity). Similarly, the CAPM calculates a required return on market price (*e.g.*, risk is based on movements in stock prices, and required risk compensation is based on expected returns on a market index). In practice, those returns are applied to the book value of the utility's equity to determine the revenue requirement. The market value, except under very rare circumstances, is not equal to

⁸⁶ *See, e.g.*, Ibbotson, *SBBI 2013 Valuation Yearbook*, at 43; Shannon P. Pratt, Roger J. Grabowski, *Cost of Capital: Applications and Examples*, 4th ed. (John Wiley & Sons, Inc., 2010), at 79; Eugene Brigham and Michael Ehrhardt, *Financial Management: Theory and Practice*, 12th ed. (Mason, OH: South-Western Cengage Learning, 2008), at 346.

⁸⁷ *See* J. B. Berk and J. H. Binsbergen, "How Do Investors Compute the Discount Rate? They Use the CAPM," *Financial Analysts Journal* 73, No. 2, 2017, pg. 25-32.

⁸⁸ Based on rolling five-year average earned ROE.

the book value. Given this mismatch, it is useful to consider a direct measure of the expected return on the book value, versus market value, of electric utility stocks. The approach, therefore, is consistent with the *Hope* and *Bluefield* standards, in that it provides a useful benchmark in assessing whether a proposed return to be applied to a utility's book equity is commensurate with the expected returns available to other investments with comparable risks.

The model also provides a useful perspective because its results are independent from swings in market data. Models such as the DCF and CAPM, in contrast, can be limited by their reliance on a number of assumptions related to investor behavior (*e.g.*, prices reflect DCF-based intrinsic valuations) and efficiency (price volatility is an accurate measure of investors' perceptions of systematic risk).

Although the Expected Earnings approach is a useful method and benchmark, it is important to recognize that the model has limitations. For example, fewer data sources provide forward-looking book value estimates than earnings growth estimates (used in the DCF model) or Beta coefficients (used in the CAPM). In addition, over-reliance on the model could introduce an element of circularity between analysts' expectations and Commission-authorized returns that would become disconnected from market pricing signals.

The Expected Earnings analysis results shown in Charts 1a and 1b are based on Value Line's three-to-five year projections of return on common equity and shares outstanding. Because Value Line calculates the expected earned ROE based on common shares outstanding at the end of the period, the returns are adjusted to reflect growth in common shares. The semi-annual mean results of the Expected Earnings analysis have generally been consistent with average authorized Commission ROEs over the past 10 years.⁸⁹

6.4 The Multi-Stage DCF Model

The two-step DCF method relied on by the Commission uses the constant growth DCF model, but assumes a blended growth rate based on near-term and long-term growth estimates. As previously stated, the general form of the DCF model presented in Equation [1] can be estimated only if one makes simplifying assumptions. A less-restrictive version of the growth assumptions leading to Equation [2] allows for growth to change over time. For example, one might assume a two-stage growth model as follows:

Equation [7]—Two-Stage Growth DCF Model

$$P = \frac{D_0(1 + g_a)}{(1 + k)} + \frac{D_0(1 + g_a)^2}{(1 + k)^2} + \dots + \frac{D_0(1 + g_a)^T}{(1 + k)^T} + \frac{\left[\frac{D_0(1 + g_a)^T(1 + g_b)}{(k - g_b)} \right]}{(1 + k)^T}$$

Where:	P	=	The current stock price
	D_0	=	The current dividend
	k	=	The discount rate, or required ROE
	g_a	=	Expected first-stage growth in dividends
	g_b	=	Expected terminal growth in dividends
	T	=	The number of years the dividends are expected to grow at g_a

The bracketed term in Equation [7] represents the expected price of the shares at time T based on a constant growth of dividends at rate g_b after time T in perpetuity. Note that, whereas dividends in Equation [7] are

⁸⁹ See Appendix D for historical results.

expected to grow at variable rates, the required ROE k does not change through time. A value for k can be solved from Equation [7] through an iterative calculation process. Also, note that the two-stage growth model in Equation [7] is illustrative only; additional growth stages can be added.

In a sense, the Commission's two-step approach is designed to approximate the two-stage growth model presented in Equation [7]. A drawback of using Equation [7] as a substitute for the Commission two-step approach is that the math becomes a little more complicated, although this problem is easily surmounted by use of a simple spreadsheet. An advantage of using Equation [7] is that one can explicitly specify the two stages of growth by the growth rates and by the length of time the initial growth rate prevails. Such explicit consideration of inputs may be more appropriate under certain market conditions, and may mitigate the concern with specific GDP estimates and the weight given to them.

In addition, using Equation [7] as a starting point, one can consider different approaches to estimation of the expected price of the shares at time T . For example, if one estimates the future price using P/E ratios, Equation [7] becomes:

Equation [8]

$$P = \frac{D_0(1 + g_a)}{(1 + k)} + \frac{D_0(1 + g_a)^2}{(1 + k)^2} + \dots + \frac{D_0(1 + g_a)^T}{(1 + k)^T} + \frac{\left[\frac{P}{E} E_0 (1 + g_a)^T\right]}{(1 + k)^T}$$

<i>Where:</i>	P	=	<i>The current stock price</i>
	D_0	=	<i>The current dividend</i>
	E_0	=	<i>The current earnings per share (EPS)</i>
	k	=	<i>The discount rate, or required ROE</i>
	g_a	=	<i>Expected first-stage growth in dividends</i>
	T	=	<i>The number of years the dividends are expected to grow at g_a</i>

The use of different terminal value assumptions, for example, by reference to trading multiples like the P/E ratio, may produce ROE estimates more consistent with observable market conditions.

An important benefit of the multi-stage DCF model is that it specifically addresses certain limiting assumptions of the constant growth DCF model. For example, it has the ability to recognize that dividend payout ratios may decrease during periods of increasing capital expenditures. Another advantage of the multi-stage DCF model is that internal assumptions of the model, such as the implied price-to-earnings growth ratio, can be checked for reasonableness against observable market data.⁹⁰

6.5 Summary of Benefits of Alternative ROE Models and Recommendation

There is no question that equity analysts and investors use multiple methods to develop their return requirements. The CAPM, Risk Premium, Expected Earnings approaches, and the multi-stage form of the DCF model provide useful measures of required return that reflect the types of analysis used in practice. Data for the models can be obtained from widely accessible data sources and can be implemented without undue complexity.

⁹⁰ The price-to-earnings growth ratio (sometimes referred to as the "PEG ratio") is calculated by dividing the P/E ratio by the expected growth rate. The PEG ratio is a commonly referenced financial valuation metric that recognizes price is a function of both current earnings and growth.

In Opinion No. 531, the Commission found it necessary to consider alternative ROE benchmarks in establishing the just and reasonable ROE. Regardless of the models employed, informed judgment—not just mechanical application of a methodology—should be applied to determine the reasonableness and applicability of individual model results in the context of the capital market environment using observable benchmarks, such as the returns allowed by state commissions.

In addition to the alternative ROE methods discussed earlier, there are a number of extensions to the models that could be explored and potentially used (such as the multi-factor form of the CAPM, the empirical form of the CAPM, the build-up method of Risk Premium analysis, or the adjusted present value form of the DCF approach). Extensions to the standard forms of the ROE models may allow some of the underlying assumptions to be relaxed, and the inputs to be adapted to varying market conditions. Research into additional alternative methods may be warranted.

7: CONCLUSION AND SUMMARY OF RECOMMENDATIONS

Transmission is integral to our nation's energy infrastructure, providing value to customers by delivering reliable, affordable, and increasingly clean energy needed to power their homes, their businesses, and their communities. Maintaining, expanding, and enhancing the transmission system requires ongoing investment, and it is imperative that the Commission foster this investment by providing stable, predictable, and adequate returns to the investors and owners of the transmission infrastructure.

Despite the Commission's valued efforts in Opinion No. 531 to provide stable, predictable, and adequate returns for transmission investment, shortcomings in the Commission's prevailing two-step DCF method for determining the allowed ROE for electric transmission companies is leading to estimates below other widely accepted alternative estimation models and market indicators. This, in turn, undermines investment in transmission infrastructure and investor confidence, and it constrains access to external sources of capital.

This paper recommends the following modifications to temper, but not eliminate, existing shortcomings in the current method of employing the two-step DCF approach. The Commission should:

- Broaden the proxy group by modifying existing screening criteria and expanding the universe of companies eligible for inclusion.
- Consider additional sources of published analyst growth rate estimates when determining the zone of reasonableness.
- Reduce the weight currently given to the GDP growth rate in the application of the two-step DCF method, *i.e.* from 1/3 to 1/5, and incorporate an inflation-adjusted long-term GDP estimate such as Morningstar's approach in the *Ibbotson SBBI Valuation Yearbook*; in the alternative, remove GDP from the application of the DCF model altogether.
- Re-examine the thresholds used to determine which DCF results do not pass tests of economic logic, and ensure the thresholds applied appropriately account for current capital market conditions.

Changes such as broadening the group of comparison companies used as proxies, using additional estimates of both short-term and long-term growth, and updating the Commission's test for eliminating illogical low-end and high-end results would temper existing shortcomings in the current method of employing the two-step DCF approach.

Although the DCF model is theoretically sound, its assumptions are quite restrictive and rarely hold outside of the theoretical realm. These assumptions can engender unreliable results, particularly when investor expectations are not consistent with the DCF model's assumption that current market conditions will persist. Practitioners and academics recognize that financial models simply are tools to be used in the ROE estimation process and that the strict adherence to any single approach, or to the specific results of any single approach, can lead to misleading conclusions.

As such, the Commission's recent use of alternative ROE models (such as the CAPM, Risk Premium, and Expected Earning approaches) and market indicators to benchmark and check the reasonableness of the results of the DCF approach is reasonable and should be continued. This position is consistent with the *Hope and Bluefield* finding that the method employed is not controlling when determining just and reasonable rate levels. Benchmarking against additional models would help to ensure rates are set at levels supportive of the Commission's stated policy goals and meet well-established capital attraction standards. Importantly,

regardless of the models employed, informed judgment must be applied to determine the applicability of individual model results in the context of the capital market environment.

APPENDIX A—TWO-STEP DCF MODEL RESULTS (BLOOMBERG GROWTH RATES)

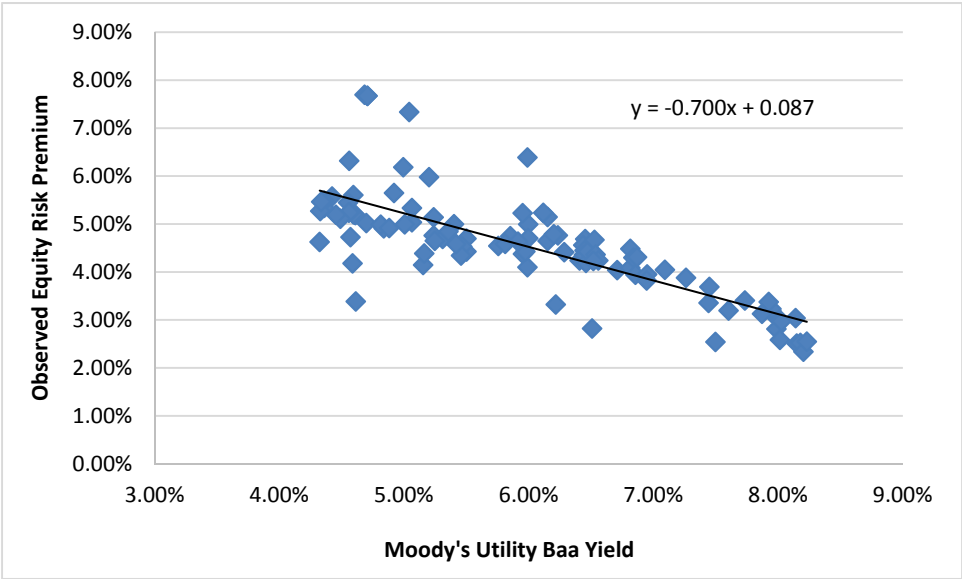
TICKER	Dec-07	Jun-08	Dec-08	Jun-09	Dec-09	Jun-10	Dec-10	Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Jun-15	Dec-15	Jun-16	Dec-16	Apr-17
AEE	12.19%	11.08%	13.04%	11.22%	10.23%	6.26%	5.14%	4.94%	3.99%	3.73%	3.71%	8.96%	8.76%	10.53%	10.22%	10.14%	10.31%	9.13%	8.99%	8.88%
AEP	9.73%	9.23%	9.80%	10.79%	9.44%	8.79%	8.95%	9.71%	8.95%	9.29%	8.93%	8.57%	9.06%	8.84%	9.19%	8.62%	8.97%	8.62%	8.66%	8.09%
ALE	10.46%	10.99%	11.19%	12.99%	11.97%	10.94%	9.86%	9.56%	9.74%	9.74%	9.85%	9.56%	N/A	N/A	N/A	9.42%	9.30%	9.33%	9.14%	8.86%
AGR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.17%	11.92%
AVA	8.71%	10.39%	10.75%	11.95%	12.90%	10.84%	9.47%	9.77%	9.41%	9.39%	9.21%	9.13%	8.68%	9.05%	N/A	N/A	8.86%	8.34%	8.82%	9.05%
BKH	9.23%	9.39%	10.86%	12.49%	11.27%	10.65%	10.30%	9.59%	10.35%	10.03%	9.89%	9.05%	N/A	8.96%	9.15%	6.11%	8.13%	8.86%	7.63%	9.66%
CMS	6.74%	7.98%	9.36%	10.24%	9.24%	10.49%	11.16%	9.81%	9.84%	9.71%	9.60%	9.35%	9.34%	9.32%	9.18%	8.80%	8.90%	8.61%	8.46%	8.79%
CNP	10.33%	10.11%	13.79%	13.25%	12.35%	9.83%	11.77%	10.02%	9.59%	9.25%	9.16%	9.29%	8.36%	9.20%	9.53%	10.50%	10.69%	10.48%	9.52%	9.65%
D	11.84%	10.86%	11.28%	10.94%	8.84%	8.41%	9.29%	8.45%	8.90%	9.67%	9.63%	9.67%	9.10%	8.97%	9.40%	9.22%	9.27%	9.70%	9.38%	9.15%
DTE	9.33%	10.20%	11.05%	11.73%	10.27%	9.36%	9.47%	9.41%	9.63%	9.18%	9.00%	8.41%	8.43%	8.75%	8.77%	8.44%	8.87%	8.79%	8.12%	8.88%
DUK	9.97%	9.95%	10.14%	10.93%	10.31%	8.13%	9.79%	10.01%	9.86%	9.23%	9.26%	8.95%	8.74%	8.97%	9.02%	8.93%	8.64%	8.94%	8.51%	9.25%
ED	9.35%	9.12%	9.90%	10.20%	10.42%	9.75%	9.43%	8.59%	8.22%	7.84%	7.73%	7.45%	6.22%	8.49%	7.86%	7.66%	7.38%	7.44%	7.30%	7.34%
EE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.61%	8.43%	9.92%	N/A	9.24%	9.19%	9.16%	N/A	N/A	N/A	N/A	8.45%
EIX	9.43%	10.31%	10.38%	9.58%	8.51%	6.01%	5.97%	6.80%	5.58%	4.26%	8.42%	7.54%	7.25%	7.53%	7.03%	8.44%	7.37%	8.19%	8.20%	7.53%
ES	10.18%	9.37%	9.55%	10.38%	10.87%	10.60%	9.54%	10.08%	9.74%	8.45%	9.79%	10.12%	9.73%	9.36%	9.35%	9.15%	9.38%	9.38%	9.11%	8.81%
ETR	12.45%	12.54%	11.38%	11.61%	8.22%	8.19%	7.52%	7.07%	5.99%	7.79%	7.69%	7.26%	5.31%	5.76%	6.95%	9.72%	5.58%	6.06%	2.86%	4.40%
EXC	9.91%	9.44%	9.29%	8.51%	7.38%	5.29%	5.55%	6.79%	6.70%	5.62%	6.14%	5.51%	4.21%	8.28%	8.71%	9.85%	8.96%	8.45%	7.39%	8.13%
FE	10.49%	9.48%	11.00%	11.87%	8.58%	9.71%	9.60%	9.26%	8.30%	6.57%	9.12%	10.07%	9.16%	9.31%	4.16%	5.84%	4.83%	4.74%	5.00%	6.26%
HE	8.00%	8.61%	8.29%	10.67%	15.97%	13.82%	17.97%	12.65%	12.52%	10.53%	10.04%	10.02%	11.78%	9.21%	8.70%	8.04%	8.50%	8.17%	8.25%	7.99%
IDA	8.52%	9.41%	9.11%	9.74%	9.08%	8.19%	8.07%	7.83%	7.30%	7.77%	7.58%	7.42%	7.49%	7.36%	7.32%	7.22%	7.30%	7.00%	6.24%	6.23%
LNT	8.17%	9.43%	10.42%	10.74%	10.42%	12.21%	9.41%	9.99%	9.88%	9.70%	9.93%	9.78%	9.23%	8.58%	8.80%	9.08%	9.11%	9.67%	9.49%	9.03%
MGEE	N/A	N/A	N/A	N/A	9.00%	9.17%	8.77%	7.90%	7.18%	7.58%	7.29%	7.11%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NWE	N/A	N/A	N/A	13.77%	12.67%	11.81%	10.94%	10.84%	10.22%	10.43%	9.47%	9.08%	9.76%	10.99%	9.47%	8.37%	8.48%	8.28%	8.08%	7.06%
OGE	7.54%	7.84%	8.52%	10.68%	10.23%	8.83%	9.38%	9.26%	9.50%	8.69%	7.76%	7.91%	7.21%	8.05%	8.50%	8.62%	9.09%	8.15%	8.99%	8.77%
OTTR	8.07%	9.54%	11.62%	15.14%	14.38%	15.05%	10.84%	16.84%	17.37%	16.89%	16.41%	9.75%	N/A	N/A	11.11%	N/A	N/A	N/A	8.36%	8.75%
PCG	10.26%	10.45%	10.68%	10.63%	10.58%	10.77%	10.03%	9.76%	8.35%	8.46%	8.45%	9.05%	7.75%	10.43%	10.45%	8.93%	7.69%	7.88%	7.81%	8.98%
PEG	13.25%	12.03%	8.82%	8.95%	8.64%	6.64%	6.66%	7.87%	8.14%	5.71%	5.97%	5.18%	6.30%	8.94%	7.87%	8.81%	8.00%	8.14%	6.92%	6.92%
PNM	11.59%	19.15%	9.48%	12.20%	22.78%	13.28%	12.31%	11.50%	11.03%	7.95%	8.31%	8.90%	8.46%	8.93%	7.60%	7.70%	7.83%	7.57%	8.98%	8.94%
PNW	9.60%	8.13%	11.31%	12.14%	12.68%	11.57%	11.03%	9.32%	10.58%	10.17%	8.19%	8.42%	8.50%	8.61%	8.55%	8.76%	8.64%	8.15%	8.36%	8.20%
POR	11.76%	9.94%	10.20%	11.09%	10.59%	10.10%	10.37%	8.99%	9.33%	9.13%	8.19%	9.52%	8.91%	8.35%	9.22%	8.39%	8.03%	9.02%	8.67%	8.00%
PPL	12.30%	14.23%	13.64%	13.54%	12.41%	9.33%	9.82%	9.23%	15.20%	0.87%	10.27%	7.97%	10.11%	10.79%	9.26%	8.01%	8.13%	9.07%	5.62%	7.01%
SCG	9.23%	9.63%	10.07%	10.79%	10.58%	9.40%	9.55%	9.63%	9.43%	8.93%	9.03%	8.30%	9.81%	9.08%	9.69%	9.44%	9.15%	8.94%	8.94%	8.96%
SO	9.68%	9.93%	9.91%	10.65%	10.08%	10.46%	9.83%	10.00%	10.16%	9.59%	9.39%	9.16%	9.39%	8.76%	8.88%	8.96%	9.15%	8.89%	8.74%	9.04%
SRE	8.27%	9.44%	9.13%	9.22%	8.73%	9.12%	10.34%	9.39%	10.59%	10.49%	9.75%	9.07%	9.12%	8.91%	9.04%	9.48%	12.43%	9.29%	10.08%	9.41%
VVC	8.29%	9.55%	10.59%	13.51%	10.54%	10.62%	9.92%	10.46%	10.35%	9.70%	10.41%	9.12%	9.04%	8.29%	8.38%	8.66%	8.59%	8.28%	8.33%	8.30%
WEC	8.67%	9.87%	10.86%	10.56%	10.52%	10.42%	10.48%	9.54%	9.20%	8.00%	7.89%	8.05%	8.58%	8.43%	8.95%	7.81%	9.27%	8.64%	9.07%	9.46%
XEL	9.85%	10.45%	9.60%	10.65%	10.33%	10.44%	9.83%	9.39%	8.87%	8.94%	8.76%	8.50%	8.84%	8.85%	8.59%	8.74%	8.32%	8.92%	8.82%	8.94%
Zone of Reasonableness Summary																				
High Result	13.25%	14.23%	13.79%	15.14%	15.97%	15.05%	12.31%	16.84%	17.37%	16.89%	16.41%	10.12%	11.78%	10.99%	11.11%	10.50%	12.43%	10.48%	11.17%	11.92%
High Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Low Result	7.54%	7.84%	8.82%	8.95%	7.38%	8.13%	7.52%	7.07%	6.70%	6.57%	5.97%	7.11%	6.30%	7.36%	6.95%	5.84%	7.30%	6.06%	5.62%	6.23%
Low Company	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midpoint	6.93%	7.36%	7.54%	8.03%	7.78%	7.73%	6.61%	7.97%	8.02%	7.82%	7.46%	5.74%	6.03%	6.12%	6.02%	5.45%	6.58%	5.51%	5.60%	6.05%
Median	9.70%	9.75%	10.42%	10.93%	10.37%	10.42%	9.82%	9.58%	9.61%	9.23%	9.12%	9.05%	8.91%	8.94%	8.98%	8.75%	8.86%	8.63%	8.66%	8.81%
Low-End Screen	7.43%	7.69%	8.77%	8.78%	7.33%	7.16%	6.76%	6.92%	6.21%	6.03%	5.68%	5.72%	6.24%	5.89%	5.70%	5.65%	6.41%	5.94%	5.40%	5.63%

APPENDIX B—CAPITAL ASSET PRICING MODEL RESULTS

TICKER	Beta, as of:																			
	Dec-07	Jun-08	Dec-08	Jun-09	Dec-09	Jun-10	Dec-10	Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Jun-15	Dec-15	Jun-16	Dec-16	Apr-17
AEE	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.75	0.75	0.75	0.75	0.75	0.65	0.70
AEP	0.95	0.85	0.75	0.75	0.70	0.70	0.70	0.70	0.70	0.70	0.65	0.65	0.70	0.65	0.70	0.70	0.70	0.70	0.65	0.65
ALE	0.95	0.90	0.75	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.80	0.80	0.80	0.75	0.75	0.80
AGR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AVA	1.00	0.95	0.85	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.80	0.80	0.80	0.80	0.75	0.70	0.70
BKH	1.10	0.90	0.85	0.80	0.80	0.80	0.80	0.80	0.85	0.85	0.80	0.80	0.85	0.90	0.90	0.95	0.95	0.90	0.90	0.85
CMS	1.35	1.05	0.95	0.80	0.80	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.70	0.75	0.70	0.75	0.70	0.65	0.65
CNP	0.95	0.95	0.90	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.75	0.80	0.80	0.75	0.75	0.80	0.85	0.85	0.85	0.85
D	0.75	0.80	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.65	0.70	0.70	0.70	0.70	0.70	0.70	0.65	0.70
DTE	0.80	0.80	0.70	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.80	0.75	0.75	0.75	0.75	0.70	0.65	0.65
DUK	NMF	NMF	0.60	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.60	0.60	0.65	0.60	0.60	0.60	0.65	0.60	0.60	0.60
ED	0.75	0.75	0.65	0.65	0.65	0.65	0.65	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.55	0.55	0.55
EE	0.80	0.90	0.95	0.80	0.75	0.75	0.75	0.75	0.75	0.75	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.70	0.75
EIX	1.05	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.75	0.75	0.75	0.80	0.75	0.75	0.70	0.70	0.65	0.60
ES	0.80	0.75	0.75	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.75	0.75	0.75	0.70	0.70
ETR	0.85	0.85	0.75	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.65	0.65
EXC	0.90	0.85	0.90	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.75	0.70	0.70	0.70	0.70	0.65	0.65	0.70
FE	0.85	0.80	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.75	0.75	0.75	0.70	0.70	0.70	0.70	0.70	0.65	0.65
HE	0.70	0.70	0.75	0.60	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.85	0.80	0.80	0.80	0.75	0.70	0.70
IDA	1.00	0.90	0.85	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.80	0.80	0.80	0.80	0.80	0.75	0.75
LNT	0.80	0.80	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.70	0.70	0.75	0.75	0.80	0.80	0.80	0.75	0.70	0.70
MGEE	0.95	0.95	0.70	0.65	0.65	0.65	0.65	0.60	0.60	0.60	0.60	0.60	0.65	0.70	0.70	0.75	0.75	0.70	0.70	0.70
NWE	N/A	NMF	NMF	NMF	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.65
OGE	0.85	0.90	0.75	0.75	0.75	0.75	0.75	0.75	0.80	0.80	0.75	0.75	0.85	0.85	0.90	0.90	0.95	0.95	0.90	0.95
OTTR	0.95	0.95	0.90	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.95	0.90	0.90	0.90	0.85	0.80	0.85	0.85
PCG	0.95	0.80	0.85	0.60	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.50	0.55	0.60	0.65	0.65	0.65	0.70	0.65	0.65
PEG	0.95	0.90	0.85	0.80	0.80	0.80	0.80	0.75	0.80	0.80	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.70	0.70
PNM	0.95	0.85	0.90	0.85	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.85	0.85	0.85	0.80	0.75	0.70
PNW	1.00	0.80	0.75	0.70	0.75	0.75	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.70	0.70	0.75	0.75	0.70	0.70
POR	NMF	0.85	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.80	0.80	0.80	0.80	0.80	0.70	0.70
PPL	0.90	0.90	0.80	0.70	0.70	0.70	0.70	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.60	0.65	0.70	0.70	0.70	0.70
SCG	0.85	0.85	0.70	0.70	0.65	0.65	0.70	0.65	0.70	0.70	0.65	0.65	0.70	0.70	0.75	0.75	0.75	0.70	0.70	0.65
SO	0.70	0.70	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.60	0.55	0.60	0.60	0.55	0.55	0.55
SRE	1.00	0.90	0.90	0.90	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.75	0.80	0.80	0.85	0.80	0.80
VVC	0.90	0.90	0.85	0.75	0.75	0.70	0.70	0.70	0.70	0.75	0.70	0.70	0.70	0.75	0.80	0.80	0.75	0.75	0.75	0.75
WEC	0.85	0.80	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.60	0.60	0.65	0.65	0.65	0.70	0.70	0.65	0.60	0.60
XEL	1.05	0.75	0.75	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.60	0.65	0.65	0.70	0.65	0.65	0.65	0.60	0.60
Proxy Group:																				
Mean Beta	0.91	0.85	0.78	0.73	0.73	0.73	0.73	0.72	0.73	0.73	0.71	0.71	0.73	0.74	0.74	0.75	0.75	0.73	0.70	0.70
Median Beta	0.90	0.85	0.75	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.75	0.75	0.75	0.75	0.73	0.70	0.70
High Beta	1.35	1.05	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.95	0.95	0.90	0.95
Low Beta	0.70	0.70	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.50	0.55	0.60	0.55	0.60	0.60	0.55	0.55	0.55
Market:																				
Risk-Free Rate	4.49%	4.66%	3.02%	4.48%	4.44%	4.12%	4.37%	4.24%	2.97%	2.73%	2.86%	3.34%	3.87%	3.40%	2.87%	3.07%	2.97%	2.50%	3.08%	2.96%
Market Return	14.36%	15.06%	14.03%	12.32%	11.85%	13.50%	13.65%	12.77%	13.07%	12.94%	12.98%	13.75%	13.81%	13.49%	13.42%	13.28%	13.56%	13.13%	12.84%	13.33%
MRP	9.87%	10.39%	11.01%	7.84%	7.41%	9.38%	9.28%	8.53%	10.10%	10.21%	10.12%	10.41%	9.94%	10.08%	10.56%	10.22%	10.59%	10.63%	9.75%	10.37%
CAPM ROE Result:																				
Mean	13.46%	13.51%	11.66%	10.23%	9.87%	10.96%	11.15%	10.40%	10.32%	10.16%	10.05%	10.70%	11.08%	10.84%	10.64%	10.68%	10.92%	10.27%	9.88%	10.21%
Median	13.37%	13.50%	11.28%	9.97%	9.63%	10.69%	10.86%	10.21%	10.04%	9.88%	9.95%	10.63%	10.83%	10.97%	10.78%	10.73%	10.92%	10.21%	9.91%	10.22%
Midpoint	14.61%	13.76%	11.28%	10.36%	10.00%	11.16%	11.33%	10.64%	10.54%	10.39%	10.45%	10.89%	11.33%	11.22%	10.52%	10.98%	11.18%	10.48%	10.15%	10.74%

Note: Market return based on market capitalization weighted DCF of S&P 500 using analyst growth rate projections from Bloomberg

APPENDIX C—BOND YIELD PLUS RISK PREMIUM RESULTS



Bond Yield Plus Risk Premium Using FERC Electric Authorized ROEs and Baa Bond Yields																				
	Dec-07	Jun-08	Dec-08	Jun-09	Dec-09	Jun-10	Dec-10	Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Jun-15	Dec-15	Jun-16	Dec-16	Apr-17
Regression Slope	-0.700																			
Regressoin Constant	0.087																			
Baa yield (6-month)	6.38%	6.50%	7.11%	8.01%	7.04%	6.20%	5.93%	5.90%	5.57%	5.08%	4.88%	4.63%	5.01%	5.11%	4.75%	4.61%	5.07%	5.31%	4.49%	4.47%
Equity Risk Premium	4.26%	4.17%	3.75%	3.12%	3.80%	4.39%	4.58%	4.60%	4.83%	5.17%	5.31%	5.49%	5.22%	5.15%	5.41%	5.50%	5.18%	5.01%	5.59%	5.60%
ROE Estimate	10.64%	10.68%	10.86%	11.13%	10.84%	10.59%	10.51%	10.50%	10.40%	10.25%	10.19%	10.12%	10.23%	10.26%	10.15%	10.11%	10.25%	10.32%	10.07%	10.07%

APPENDIX D—EXPECTED EARNINGS ANALYSIS RESULTS

TICKER	Dec-07	Jun-08	Dec-08	Jun-09	Dec-09	Jun-10	Dec-10	Jun-11	Dec-11	Jun-12	Dec-12	Jun-13	Dec-13	Jun-14	Dec-14	Jun-15	Dec-15	Jun-16	Dec-16	Apr-17
AEE	9.17%	9.71%	10.72%	8.20%	8.18%	6.62%	7.14%	7.12%	7.12%	7.10%	7.11%	8.67%	8.67%	9.72%	9.72%	10.26%	10.72%	9.66%	9.66%	10.20%
AEP	12.94%	12.41%	10.86%	10.79%	10.80%	10.28%	10.79%	10.80%	10.79%	10.25%	9.72%	10.24%	10.75%	10.21%	10.21%	10.73%	10.22%	9.69%	10.72%	11.22%
ALE	10.84%	9.93%	8.83%	9.33%	9.33%	8.13%	9.17%	9.70%	9.77%	10.25%	10.30%	9.77%	9.36%	9.20%	9.27%	9.18%	9.19%	8.67%	9.18%	9.20%
AGR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.52%
AVA	8.71%	8.70%	8.70%	8.16%	8.70%	9.18%	9.20%	9.17%	9.16%	9.18%	8.65%	8.64%	8.64%	9.16%	8.65%	9.16%	9.14%	9.16%	8.65%	8.12%
BKH	9.72%	9.74%	7.63%	8.63%	9.69%	8.13%	7.70%	8.13%	7.60%	8.63%	8.11%	9.18%	9.19%	9.70%	9.19%	8.67%	9.71%	11.01%	11.02%	10.97%
CMS	12.81%	12.42%	12.42%	11.35%	10.81%	11.88%	12.87%	12.89%	12.90%	12.88%	12.87%	13.41%	13.43%	13.91%	13.97%	13.93%	13.93%	13.96%	13.98%	13.97%
CNP	21.46%	17.71%	18.31%	18.28%	17.22%	16.14%	14.62%	11.77%	11.76%	11.73%	12.84%	13.31%	14.89%	13.17%	15.25%	12.21%	13.43%	15.75%	15.73%	17.37%
D	15.82%	15.86%	15.83%	15.70%	16.24%	15.03%	15.01%	14.47%	14.46%	14.99%	14.95%	16.59%	15.66%	15.65%	15.23%	18.18%	18.16%	18.82%	19.44%	18.81%
DTE	9.05%	9.15%	9.14%	9.70%	10.25%	9.23%	9.20%	9.16%	9.19%	9.70%	9.77%	9.27%	9.79%	10.29%	9.80%	10.31%	10.31%	10.25%	10.79%	10.78%
DUK	8.11%	8.12%	8.11%	8.08%	8.07%	8.09%	8.09%	8.61%	8.62%	9.14%	8.10%	8.09%	8.11%	8.11%	8.11%	8.11%	8.09%	8.09%	8.60%	8.59%
ED	8.70%	9.16%	8.64%	9.17%	9.69%	9.63%	9.70%	9.68%	9.68%	9.68%	9.17%	9.16%	9.16%	8.63%	9.15%	9.15%	9.15%	8.64%	8.65%	8.65%
EE	10.38%	9.37%	9.90%	9.80%	9.87%	9.31%	9.88%	11.23%	11.75%	11.69%	10.71%	10.67%	10.74%	10.19%	10.18%	9.19%	9.71%	8.65%	9.19%	9.69%
EIX	10.87%	11.97%	11.97%	11.33%	11.90%	9.22%	8.70%	8.18%	8.17%	9.21%	9.19%	11.35%	11.33%	11.33%	11.34%	11.82%	11.84%	11.79%	11.79%	11.25%
ES	10.90%	10.05%	9.59%	8.92%	9.80%	9.28%	10.33%	10.34%	10.86%	9.71%	9.70%	9.69%	9.69%	9.69%	9.70%	10.22%	9.70%	9.68%	9.69%	10.21%
ETR	14.56%	15.84%	14.53%	14.60%	14.98%	13.82%	11.78%	11.79%	10.72%	9.60%	9.59%	9.61%	9.66%	10.20%	10.71%	9.13%	9.11%	11.23%	9.64%	10.14%
EXC	25.16%	26.13%	25.51%	24.33%	19.70%	15.93%	14.24%	14.69%	15.19%	12.13%	12.64%	9.72%	8.14%	9.19%	9.79%	9.27%	9.80%	10.33%	9.81%	9.77%
FE	13.99%	16.16%	15.61%	14.44%	14.93%	12.84%	11.19%	10.18%	10.19%	10.69%	10.16%	8.60%	9.19%	8.18%	8.69%	8.69%	9.22%	9.24%	8.81%	8.77%
HE	11.12%	10.64%	11.19%	10.66%	10.67%	11.28%	10.74%	10.89%	10.82%	9.70%	10.53%	9.50%	8.40%	9.76%	10.28%	9.75%	9.72%	9.20%	9.21%	9.17%
IDA	7.20%	7.67%	7.66%	7.76%	7.77%	8.75%	8.75%	8.72%	8.72%	8.22%	8.68%	8.69%	8.69%	8.16%	8.66%	8.65%	8.65%	9.18%	9.18%	9.17%
LNT	10.81%	10.36%	10.82%	10.77%	10.23%	11.76%	12.28%	12.25%	11.72%	10.67%	11.22%	11.29%	11.78%	11.76%	12.24%	11.68%	11.64%	12.66%	12.66%	13.18%
MGEE	14.17%	12.22%	12.22%	12.07%	12.08%	12.23%	12.23%	12.16%	12.09%	10.78%	11.28%	11.52%	12.27%	13.41%	13.93%	13.41%	13.09%	13.32%	13.34%	12.87%
NWE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.22%	9.56%	9.71%	9.67%	9.67%	10.21%	10.20%	10.21%	10.21%	9.67%
OGE	12.28%	11.97%	12.02%	12.04%	11.97%	12.00%	12.98%	12.46%	12.45%	11.93%	11.56%	11.37%	12.31%	12.40%	12.38%	11.25%	11.22%	12.22%	11.71%	12.22%
OTTR	10.84%	10.31%	9.22%	8.77%	9.26%	9.73%	7.75%	9.28%	7.25%	10.31%	10.88%	11.21%	11.87%	12.85%	12.86%	12.84%	12.84%	10.85%	10.36%	9.90%
PCG	11.36%	11.81%	11.87%	13.08%	12.51%	12.47%	12.47%	11.92%	11.92%	10.76%	10.28%	9.19%	8.68%	8.68%	8.68%	9.74%	10.88%	10.32%	11.30%	10.29%
PEG	15.26%	15.23%	17.74%	16.65%	16.11%	12.97%	12.99%	12.90%	12.89%	11.28%	11.25%	10.20%	10.75%	10.75%	10.75%	10.74%	11.28%	11.26%	11.19%	11.76%
PNM	7.68%	5.52%	4.53%	5.09%	5.61%	6.11%	6.11%	6.68%	6.68%	9.19%	9.19%	8.67%	9.19%	9.66%	9.66%	9.67%	9.67%	9.64%	9.64%	9.59%
PNW	8.60%	8.11%	8.14%	9.22%	9.30%	9.28%	9.27%	9.27%	9.28%	9.23%	9.24%	10.21%	10.23%	9.74%	9.74%	10.26%	10.19%	10.20%	10.21%	10.21%
POR	8.75%	9.34%	9.43%	9.26%	8.71%	8.81%	8.82%	8.66%	9.19%	9.18%	9.16%	8.14%	8.27%	9.19%	9.35%	9.20%	9.71%	9.19%	9.17%	9.67%
PPL	24.44%	22.99%	21.80%	23.10%	20.39%	15.87%	12.10%	12.68%	12.69%	11.59%	12.09%	11.41%	10.80%	10.71%	10.71%	10.24%	11.83%	15.53%	13.83%	14.53%
SCG	11.23%	10.87%	10.96%	10.89%	10.93%	10.28%	10.43%	9.91%	9.43%	9.95%	9.97%	9.90%	9.89%	10.37%	10.39%	9.76%	10.30%	10.28%	10.27%	10.28%
SO	13.37%	14.48%	14.47%	14.42%	14.38%	13.94%	13.44%	13.44%	13.45%	12.95%	12.90%	12.85%	12.34%	12.82%	12.83%	13.73%	13.75%	12.68%	11.20%	11.20%
SRE	12.55%	13.97%	13.98%	12.53%	12.56%	11.46%	10.27%	11.37%	10.85%	11.30%	11.80%	10.76%	11.27%	11.79%	11.80%	12.85%	12.86%	13.92%	14.17%	13.02%
VVC	10.71%	10.65%	11.80%	10.34%	11.29%	10.77%	10.82%	10.77%	11.27%	12.27%	11.26%	11.64%	11.88%	14.24%	14.25%	14.70%	15.21%	12.84%	13.36%	12.83%
WEC	11.82%	12.38%	12.86%	12.34%	11.83%	12.86%	13.35%	14.18%	14.16%	14.16%	13.73%	14.22%	15.65%	15.59%	15.63%	16.06%	11.20%	11.20%	11.20%	11.19%
XEL	10.73%	11.27%	10.74%	10.76%	10.76%	10.30%	10.32%	10.27%	10.26%	10.29%	10.30%	10.27%	10.25%	10.11%	10.24%	10.22%	10.21%	10.71%	11.22%	10.70%
Proxy Group:																				
Mean	12.18%	12.06%	11.94%	11.73%	11.61%	10.96%	10.71%	10.74%	10.66%	10.58%	10.53%	10.46%	10.57%	10.78%	10.92%	10.91%	11.00%	11.11%	10.93%	10.92%
Median	10.90%	10.87%	10.96%	10.77%	10.80%	10.30%	10.43%	10.77%	10.79%	10.29%	10.29%	10.05%	10.06%	10.19%	10.23%	10.22%	10.28%	10.32%	10.36%	10.28%
Low																				
High	7.20%	5.52%	4.53%	5.09%	5.61%	6.11%	6.11%	6.68%	6.68%	7.10%	7.11%	8.09%	8.11%	8.11%	8.11%	8.11%	8.09%	8.09%	5.52%	5.04%
Midpoint	25.16%	26.13%	25.51%	24.33%	20.39%	16.14%	15.01%	14.69%	15.19%	14.99%	14.95%	16.59%	15.66%	15.65%	15.63%	18.18%	18.16%	18.82%	19.44%	18.81%
Zone of Reasonableness Summary																				
Mean	11.22%	11.41%	11.71%	11.61%	11.28%	11.24%	10.84%	10.86%	10.66%	10.58%	10.53%	10.46%	10.57%	10.78%	10.92%	10.70%	10.79%	10.89%	10.69%	10.87%
Median	10.87%	10.76%	11.49%	10.89%	10.78%	10.77%	10.58%	10.79%	10.79%	10.29%	10.29%	10.05%	10.06%	10.19%	10.23%	10.22%	10.26%	10.32%	10.32%	10.28%

Attachment B

Suedeem G. Kelly, Jenner & Block and Edison Electric Institute

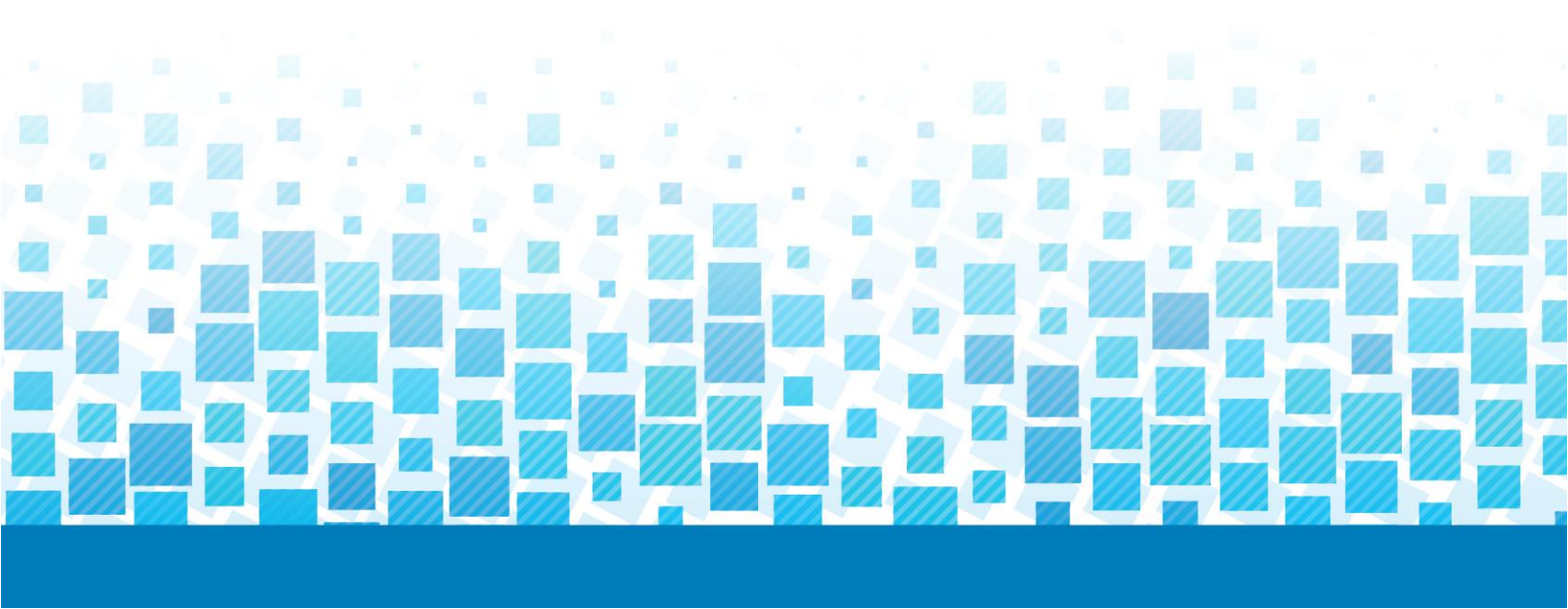
To Ensure That Its Policies Support the Continued Development of Reliable and Resilient Transmission Infrastructure, FERC Should Discontinue Its Practice of Allowing Pancaked Complaints

August 2018



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Executive Summary

Building transmission infrastructure is a 50-plus year commitment. Accordingly, the predictability, adequacy, and stability of the return to investors provided by the return on equity (“ROE”) on transmission investments are key to attracting and sustaining the transmission infrastructure investments necessary to maintain the reliability and resilience of the nation’s energy infrastructure and to deliver increasingly clean energy to consumers. In recent years, the Federal Energy Regulatory Commission (“Commission” or “FERC”) has received an increasing number of complaints seeking to substantially reduce the ROE component of transmission rates. Many of these complaints have been filed against the same transmission owners, challenging the same ROE already under examination in earlier-filed complaints. These subsequent complaints are commonly referred to as “pancaked complaints.”

Section 206 of the Federal Power Act (“FPA”)¹ mandates a threshold that FERC find that an existing rate is unjust and unreasonable before setting a new rate. By setting complaints for hearing concurrently, without first ensuring that they meet the section 206 threshold, FERC has created a policy that is not supported by the law, is inconsistent with the intent of Congress, is not workable in practice, and undermines regulatory expectations for a stable and predictable ROE. Certainty and stability are necessary for a capital-intensive sector with long-lived investment such as the electric transmission industry.

Currently, FERC’s practice is to set an ROE complaint for hearing based merely on the presentation of a new Discounted Cash Flow (“DCF”)² analysis that produces a lower number than the rate on file. This threshold is too low and invites frequent initial and pancaked complaints. This policy undermines industry and investor confidence in FERC’s ability to establish predictable and stable returns for investment in long-lived transmission assets. This result is inconsistent with the goal of providing stable, predictable, and adequate returns for transmission investment,³ and inconsistent with the direction of the Supreme Court in *Hope* and *Bluefield* that returns be “sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical

¹ 16 U.S.C. § 824e. FPA section 206 requires that “[a]ny complaint or motion of the Commission to initiate a proceeding [] shall state the change or changes to be made [] and the reasons for any proposed change or changes therein.”

² The Commission applies the “constant growth” DCF model to a “proxy group” of companies to develop a zone of reasonable ROEs that can be used to estimate the ROE for the specific utility in question. See *generally* Opinion No. 531, 147 FERC ¶ 61,234. 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.” *Id.* at 62,437 at P 14. The model is applied to a proxy group, made up of a group of utilities with comparable risk, to generate a range of ROEs. This reasonable range of ROEs is called the “zone of reasonableness,” within which a just and reasonable ROE may be determined by the Commission. Dividend yields, interest rates, and analyst growth projections are just a few of the key data elements used in defining both the proxy group and the zone of reasonableness. These can and do vary from day to day. Thus, because the DCF model depends on this variable data, its results will also vary from day to day. For further information on how the DCF methodology is applied by the Commission, see *generally*, ScottMadden & Edison Electric Institute., *Transmission Investment: Revisiting the Federal Energy Regulatory Commission’s Two-Step DCF Methodology for Calculating Allowed Returns on Equity* at 1, 38 (Dec. 2017), <http://www.eei.org/issuesandpolicy/transmission/Documents/ROE%20White%20Paper.pdf> (“Transmission Investment”).

³ See, e.g., Transcript of the 1006th Commission Meeting of the Federal Energy Regulatory Commission, (June 19, 2014), <https://www.ferc.gov/CalendarFiles/20140703074240-transcript.pdf>; see also *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234, at P 2 (2014) (“Opinion No. 531”), *aff’d and modified*, Opinion No. 531-A, 149 FERC ¶ 61,032 (2014) (“Opinion No. 531-A”), *reh’g denied*, Opinion No. 531-B, 150 FERC ¶ 61,165 (2015) (“Opinion No. 531-B”) (Coakley); *vacated and remanded on other grounds sub nom. Emera Maine v. FERC*, 854 F.3d 9 (D.C. Cir. 2017) (“Emera”).

management, to maintain and support its credit and enable it to raise capital necessary for the proper discharge of its public duties.”⁴

To ensure that its policies support the continued development of reliable and resilient transmission infrastructure, FERC should require complainants to meet their burden of proof prior to setting complaints for hearing. This will help minimize the practice of pancaking complaints which will establish a more stable regulatory environment that supports transmission investment and reduces uncertainty by addressing the legal and procedural problems inherent in its recent practices.

Introduction

Stable and Predictable Returns Are Important for Transmission Investment

Electric transmission infrastructure serves as the backbone of the energy grid, and the electric transmission industry is one of the nation’s most capital-intensive industries.⁵ Transmission infrastructure enables access to cost-effective energy supply, including renewable energy; creates the opportunity for efficient dispatch and sharing of energy resources to reduce the delivered cost of power to customers; and enables wholesale market competition. New transmission investments are also poised to utilize advanced technologies and monitoring systems, enhancing efficiency, flexibility, and reliability. In short, transmission is a cost-effective, enabling delivery system that supports and furthers many public policy goals.

The ROE is a critical component of transmission rates regulated by FERC, providing a return to investors in the transmission grid that compensates them for the risks inherent in building, owning, and operating transmission projects.⁶ Consistent with long-standing Supreme Court precedent established in *Hope* and *Bluefield*, FERC is required to set a return on shareholder investment at a level that is “commensurate with returns on investments in other enterprises having corresponding risks,”⁷ and that is “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 raise capital necessary for the proper discharge of its public duties.”⁸

Building transmission infrastructure is a 50-plus year commitment. Accordingly, the predictability, adequacy, and stability of the return to investors provided by the ROE are key to attracting and sustaining transmission infrastructure investment.⁹ FERC has recognized the critical importance of predictability and stability of ROEs. When FERC voted to approve Opinion No. 531, which was intended to address the first in a series of still pending complaints, the Commissioners stated their desire that the decision would establish procedures that provide a much more stable and predictable

⁴ *FPC v. Hope Nat. Gas. Co.*, 320 U.S. 591, 603 (1944) (“*Hope*”); *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm’n of W. Va.*, 262 U.S. 679, 693 (1923) (“*Bluefield*”).

⁵ Transmission Investment, at 5.

⁶ *Id.* at 6.

⁷ *Hope*, 320 U.S. at 603.

⁸ *Bluefield*, 262 U.S. at 693.

⁹ Transmission Investment, *supra* note 2, at 2.

outcome.¹⁰ However, despite this welcome recognition of the importance of stable ROEs, FERC's current practice of allowing pancaked complaints under a low evidentiary bar has, as explained below, served to promote instability and unpredictability by encouraging protracted (and, to date, seemingly endless) litigation.

FERC's Current Practices Undercut Predictability and Stability

Since 2011, FERC has received an increasing number of complaints filed under FPA section 206 challenging the ROEs of several transmission owners. Notably, many of these complaints have been pancaked complaints, which, as discussed above, are complaints filed while a previous complaint against the same transmission owner is still pending. These pancaked complaints are often filed shortly after the expiration of the 15-month refund period established in an earlier and still-pending complaint. Since the 15-month refund period can begin as early as the date a new complaint is filed, this serves to lengthen the time that the transmission owner's existing ROE is subject to refund beyond the initial 15 months provided under the statute.

FERC has uniformly set pancaked complaints for trial-type hearings, even though they are duplicative of earlier, still-pending complaints.¹¹ FERC reasons that, because these complaints are accompanied by a new DCF analysis, which merely uses more recent inputs than used in the prior complaint, they are based on "new, more current data" and are not "duplicative proceedings."¹² FERC also rejected arguments that its approach contravenes the intent of Congress to limit refund exposure when it added refund provisions to FPA section 206, claiming that Congress intended only to "achieve symmetry" between FPA section 206 and FPA section 205¹³ (which allows utilities to file new rates at any time).¹⁴

In addition, FERC applies a low evidentiary threshold for proceeding with ROE complaints and for establishing trial-type hearings to review the justness and reasonableness of existing ROEs. FERC's orders generically find that each complaint "raises material issues of fact that cannot be resolved based upon the record before [it]."¹⁵ Importantly, these orders do not conclude that the existing ROE is unjust and unreasonable, nor do they identify any particular questions of fact raised by the complaint or explain what evidence provided by the complainant justify establishing full trial-type hearings to examine the ROE.¹⁶ Thus, FERC has set a low bar (bordering on no bar) to what constitutes the *prima facie* threshold for setting an ROE complaint for hearing.

¹⁰ See *supra* n. 4.

¹¹ A significant amount of resources are expended when a complaint is set for hearing for the transmission owner, the complainants, and the Commission. Costs such as fees for expert witnesses, drafting of multiple filings and travel expenses to hearings diminishes, if not negates, the cost savings to customers of a potential reduced ROE. In addition, pancaked ROE complaints crowd the Commission's docket and the work of its Administrative Law Judges, taking away resources from other critical issues within the Commission's jurisdiction.

¹² See, e.g., *Belmont Mun. Light Dep't v. Cent. Me. Power Co.*, 156 FERC ¶ 61,198, at PP 39-40 (2016), *reh'g denied*, 162 FERC ¶ 61,035, at PP 8-12 (2018); see also *ENE (Env't Ne.) v. Bangor Hydro-Elec.c Co.*, 147 FERC ¶ 61,235, 62,478 at P 27 (2014); *Att'y Gen. of Mass. v. Bangor Hydro-Electric Co.*, 149 FERC ¶ 61,156, 62,478, at P 28 (2014).

¹³ 16 U.S.C. § 824d.

¹⁴ See, e.g., *Belmont*, Initial Order, 156 FERC ¶ 61,198 at P 40.

¹⁵ See, e.g., *Coakley v. Bangor Hydro-Elec. Co.*, 139 FERC ¶ 61,090, 61,555, at P 24 (2012); *ENE (Env't Ne.)*, 147 FERC ¶ 61,235, 62,478, at P 26; *Bangor Hydro-Electric Co.*, 149 FERC ¶ 61,156, 62,478, at P 25; *Belmont*, Initial Order, 156 FERC ¶ 61,198, at P 37.

¹⁶ In some more recent orders, the Commission has suggested that it is applying a *prima facie* threshold based on evidence that the two-step DCF analysis adopted in Opinion No. 531 demonstrates a potentially significant decline in the utility's ROE since the previous ROE was established using the single-step DCF. These orders do not explain, however, why the potential decline

The result of these practices has been overlapping hearings, protracted litigation, and uncertainty that necessarily undercuts the predictability and stability of ROEs. For example, since 2011, four complaints have been filed challenging the ROE of transmission owners in the ISO New England, Inc. (“ISO-NE”) region.¹⁷ Only the first of those complaints has proceeded to a final decision by FERC (Opinion No. 531), and that decision was remanded by the United States Court of Appeals for the District of Columbia Circuit in *Emera Maine v. FERC* and remains pending.¹⁸ As a result, after seven years of litigation, four ROE complaints remain pending concerning the ROE of the ISO-NE transmission owners, each at a different stage in the proceeding. Transmission owners in the Midcontinent Independent Transmission System Operator, Inc. (“MISO”) region and elsewhere have faced similar duplicative ROE litigation.¹⁹

The instability and unpredictability around ROEs that this sequence of events has created for investors are obvious. As explained below, however, FERC is not obligated to continue down its current path. FERC can take steps to reduce uncertainty by addressing the legal and procedural problems inherent in its recent practices and by establishing a more stable regulatory environment that supports investment in robust and resilient transmission infrastructure.

estimated by the two-step DCF renders the existing ROE unjust and unreasonable. See *E. Tex. Elec. Coop., Inc. v. Pub. Serv. Co. of Okla.*, 161 FERC ¶ 61,178, at P 29 (2017); *E. Tex. Elec. Coop., Inc. v. Sw. Elec. Power Co.*, 161 FERC ¶ 61,222, at P 30 (2017). The Commission has not included this language in all recent orders, however. See, e.g., *Am. Mun. Power, Inc. v. Appalachian Power Co.*, 161 FERC ¶ 61,192 (2017).

¹⁷ See, e.g., *Bangor Hydro-Electric Co.*, 139 FERC ¶ 61,090, 61,555, at P 24 (establishing hearing and settlement judge procedures on the first complaint challenging ISO-NE transmission owners’ ROE); *ENE (Env’t Ne.)*, 147 FERC ¶ 61,235 (2014) (second complaint); *Bangor Hydro-Elec. Co.*, 149 FERC ¶ 61,156 (third complaint); *Belmont*, Initial Order, 156 FERC ¶ 61,198 (fourth complaint).

¹⁸ *Emera*, 854 F.3d 9.

¹⁹ See, e.g., *Ass’n of Businesses Advocating Tariff Equity Coalition of MISO Transmission Customers v. Midcontinent Indep. Sys. Operator, Inc.*, 149 FERC ¶ 61,049, 61,302, at P 5 (2014) (granting hearing on initial complaint challenging ROE provided for MISO transmission owners), *clarification granted by* 156 FERC ¶ 61,606 (2016); *Ark. Elec. Coop. Corp. v. ALLETE, Inc.*, 151 FERC ¶ 61,219, 62,426, at P 49 (2015) (granting hearing on successive complaint, noting that “the Commission has previously allowed successive complaints when presented with a new analysis”), *on reh’g* 156 FERC ¶ 61,061 at PP 30-37 (2016) (rejecting rehearing on these grounds); see also *Del. Div. of the Pub. Advocate v. Balt. Gas & Elec. Co.*, 150 FERC ¶ 61,081, 61,542, at P 19 (2015) (permitting successive complaint challenging the ROE of PJM transmission owners); *N.Y. Ass’n of Public Power v. Niagara Mohawk Power Corp.*, 148 FERC ¶ 61,176, 61,983-84, at P 25 (2014) (same with respect to NYISO transmission owners); *Golden Spread Elec. Coop., Inc. v. Sw. Pub. Serv. Co.*, 147 FERC ¶ 61,239, 62,496, at P 26 (2014) (allowing successive complaints where party provided “a new DCF analysis with new, more current data in support of a proposed lower ROE”).

FERC Should Reconsider Its Current Approach and Should Decline to Entertain Successive Pancaked ROE Complaints Going Forward, Recognizing That Doing So Contravenes the Federal Power Act and Is Contrary to Sound Administrative Procedure

The experience of FERC and the industry over the past several years demonstrates the legal, policy, and administrative problems underlying FERC's consistent practice of setting every pancaked complaint for trial-type hearing procedures. These problems provide a substantial record upon which FERC can reconsider its current approach, and instead establish a policy of declining to entertain such successive complaints. While FERC has followed this flawed approach for many years, it is not obligated to continue this error, especially considering the problems discussed herein.²⁰

Allowing Pancaked Complaints Evades the Explicit Limits on Refund Exposure Adopted by Congress

FPA section 206 explicitly and deliberately limits a utility's refund exposure in a complaint case to a maximum of 15 months.²¹ By setting successive pancaked complaints regarding the same ROE for hearing, FERC contravenes this plain statutory language and the legislative intent behind FPA section 206 and allows complainants to evade, effectively, the 15-month statutory limit on refunds.

When Congress amended the FPA in the Regulatory Fairness Act ("RFA") to provide FERC with refund authority under FPA section 206, Congress considered—and explicitly rejected—the idea that refund liability should be indeterminate. While the original legislation proposed potentially unlimited refund exposure,²² Congress heard testimony regarding the rate uncertainty that would result and ultimately amended the legislation to "limit[] the time period during which refund liability can accrue" by providing that, "[i]n general, refunds may only be ordered for amounts paid in excess of lawful rates during the period within 15 months of the refund effective date."²³ Congress also intended for that limited refund window to speed the resolution of FPA section 206 cases. The legislative history reflects a concern that such proceedings were taking too long to resolve, and that Congress intended to establish a

²⁰ See, e.g., *W. Deptford Energy, LLC v. FERC*, 766 F.3d 10, 17 (D.C. Cir. 2014), citing *Alcoa, Inc. v. FERC*, 564 F.3d 1342, 1347 (D.C. Cir. 2009) (explaining that the Commission is permitted to reassess its position and depart from prior precedent so long as it "provide[s] a reasoned analysis indicating the prior policies are being deliberately changed, not casually ignored").

²¹ 16 U.S.C. § 824e(b) ("At the conclusion of any proceeding under this section, the Commission may order refunds of any amounts paid, for the period subsequent to the refund effective date through a date 15 months after such refund effective date, in excess of those which would have been paid under the just and reasonable rate").

²² 133 Cong. Rec. 18,693 (1987) (statements of Rep. Terry L. Bruce and Rep. Edward J. Markey) (discussing refunds without reference to a time-period limitation) ("Our bill makes a one paragraph addition to section 206 of the Federal Power Act. That paragraph directs FERC to set a refund effective date for section 206 rate decrease complaints. If, after completing its investigation and proceedings, FERC decides that a wholesale electric rate is too high, the decrease can go into effect from the time the purchasing utility sought relief: the refund effective date.").

²³ *Regulatory Fairness Act: Hearing on S. 1567 and H.R. 2858 Before the S. Comm. on Energy & Nat. Res.*, 100th Cong. 74-76, 85-87, 91-92, 99-100, 107-08, 115-17, 138, 295-97 (1987) (witness statements urging modification of the legislation to avoid the uncertainty of an indeterminate refund period); S. Rep. No. 100-491, at 6 (1988), as reprinted in 1988 U.S.C.C.A.N. 2684, 2688 ("While giving FERC the discretionary authority to grant refunds, the Committee amendment in several respects limits the time period during which refund liability can accrue. In general, refunds may only be ordered for amounts paid in excess of lawful rates during the period within 15 months of the refund effective date.").

structure under which parties would have the incentive to resolve them within the 15-month refund window.²⁴

To date, FERC has not reconciled the decision of Congress to limit refund exposure and to establish a refund structure that would speed resolution of complaints with its current practices. FERC has maintained that subsequent complaints challenging the same ROE are separate proceedings, requiring a new refund period, because they are based on “new, more current data” (in the form of an updated DCF analysis) and thus, present a “different issue” than the previous complaint.²⁵ Congress recognized that the determination of just and reasonable electricity rates is subject to inputs that can change frequently, like the inputs to the DCF, and did not suggest that the 15-month refund limitation should only apply to rates that are not susceptible to such changes (which is the logical corollary of FERC’s reasoning).²⁶ FERC’s practice of setting pancaked complaints for hearing, effectively extending the period within which the same ROE is subject to refund, runs contrary to the incentive structure Congress sought to establish by limiting refunds to 15 months.

FERC Seeks an Inappropriate “Symmetry” Between FPA Sections 205 and 206

As noted above, FERC reasons that it must allow duplicative ROE complaint litigation because Congress intended, in the RFA, to “add symmetry” between the rights of utilities under FPA section 205 to file for rate increases and rights of complainants under FPA section 206 to file for rate decreases.²⁷ But Congress explicitly established different procedures and different burdens of proof that must be met when a utility files new rates (FPA section 205) versus when FERC, on its own motion or in response to a complaint, seeks to impose a change to existing rates (FPA section 206).²⁸

Specifically, under FPA section 205, the utility has a statutory right to file new rates at any time that it chooses, and FERC is in the “passive and reactive role” of determining whether the new rates are just and reasonable.²⁹ By contrast, under FPA section 206, FERC may require a change to existing rates on file on its own motion or in response to a complaint, but only after following the more stringent “two-step procedure” of (1) finding that the existing rate is unjust and unreasonable, before (2) fixing a new just and reasonable rate.³⁰ This two-step procedure, the courts have noted, provides “a form of ‘statutory protection’ to a utility.”³¹

²⁴ See, e.g., S. Rep. No. 100-491 at 3, 1988 U.S.C.C.A.N. at 2685 (“Section 205 proceedings on average require one year for resolution” while “[r]esolution of section 206 proceedings requirements two years on average.”); see also *id.* at 6, 1988 U.S.C.C.A.N. at 2688 (explaining the Senate Committee’s expectation that, absent dilatory behavior, the 15-month refund period would be sufficient to protect customers).

²⁵ *Belmont*, Order on Rehearing, 162 FERC ¶ 61,035 at P 10; see also *Ark. Elec. Coop. Corp.*, 156 FERC ¶ 61,061, at P 33 (2016); *ENE v. Bangor Hydro-Elec. Co.*, 151 FERC ¶ 61,125, at P 28 (2015); *ENE (Env’t Ne.)*, 147 FERC ¶ 61,235, 62,478 at P 27.

²⁶ Statements on Introduced Bills and Joint Resolutions, 133 Cong. Rec. 21,739-40 (1987) (statement of Sen. Bumpers).

²⁷ See *supra* n.16.

²⁸ See e.g. *City of Winfield v. FERC*, 744 F.2d 871, 874-76 (D.C. Cir. 1984); *City of Anaheim v. FERC*, 558 F.3d 521, 524-25 (D.C. Cir. 2009).

²⁹ See e.g. *NRG Power Mktg., LLC v. FERC*, 862 F.3d 108, 114 (D.C. Cir. 2017), citing *Advanced Energy Mgmt. Alliance v. FERC*, 860 F.3d 656, 662 (D.C. Cir. 2017).

³⁰ See, e.g., *Emera*, 854 F.3d at 24; *FirstEnergy Serv. Co. v. FERC*, 758 F.3d 346 (D.C. Cir. 2014).

³¹ See *Emera*, 854 F.3d at 24 (citing cases).

Given this deliberate choice by Congress to establish different procedures in FPA sections 205 and 206, and the statutory protections provided to utilities in both sections, FERC's prior explanation that it must entertain pancaked complaints to achieve symmetry between the two statutes is not reasonable or supportable. The legislative history upon which FERC relies states only that Congress intended, by *generally providing for refunds* under FPA section 206, to give some of the same protections to complainants that are provided to utilities under FPA section 205. FERC unreasonably converts Congress's general goal of providing refunds into a mandate for symmetry between sections 205 and 206 that does not exist, was specifically rejected, and ignores the explicit method Congress chose to implement its goal of providing refund protection. In short, FERC has stretched the intent of Congress by failing to reconcile its justification for allowing pancaked complaints with the legislative history behind the adoption of the *15-month limit on refunds* explicitly included in the statute. It has also ignored the critical differences in procedures and burdens of proof between FPA sections 205 and 206.

FERC's "New, More Recent Data" Rationale Lacks Any Reasonable Limits and Is Not a Sound Administrative Process

In the context of ROE litigation, FERC's rationale that successive pancaked complaints challenging the same ROE are separate and not duplicative merely because they rely on "new, more current data" fails to set any reasonable limit on the ability of complainants to extend the 15-month refund period continually. The DCF analysis used to establish a just and reasonable ROE relies on inputs that naturally vary from day-to-day (including dividend yields, interest rates, analyst growth projections, etc.).³² As a result, under FERC's current approach, complainants can produce a "new" DCF analysis with "new" data that reaches a different result (i.e., recommended ROE) in nearly every case. FERC has neither reasonably accounted for this reality nor offered a reasoned explanation of how its approach guards against duplicative complaints intended simply to extend the statutory refund period beyond 15 months.³³

Moreover, pancaked complaints challenge *the same ROE* that was challenged in an earlier complaint, even though that ROE itself is still subject to litigation and may change based on the outcome of that litigation.³⁴ This has clearly been the case in several pancaked complaints. As explained in *Emera*, before FERC may set aside an existing rate, it must establish that the rate is not just and reasonable. Yet, given the time required for FERC to reach a decision on a complaint, it is unlikely that the existing rate for purposes of a subsequent complaint (that is, the resulting rate from the initial complaint) will be known. As a result, there is no subsequent rate to challenge.³⁵ In short, FERC has no authority to supplant the rate that ultimately derives from the first complaint with the rate that derives from the

³² Transmission Investment, *supra* n.2, at 17.

³³ See e.g. *FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 782 (2016) (the Commission's obligation to engage in reasoned decision-making requires that it "examine the relevant [considerations] and articulate a satisfactory explanation for its action[,] including a rational connection between the facts found and the choice made" (citations omitted) (alterations in original)).

³⁴ For example, on December 27, 2012, in *ENE (Environment Northeast) v. Bangor Hydro-Electric Co.*, FERC Docket No. EL13-33-000, complainants challenged the ROE of transmission-owning utilities in New England, even though that same ROE was already subject to a separate earlier complaint, *Coakley v. Bangor Hydro-Electric*, FERC Docket No. EL11-66-000. See also, e.g., Motion of MISO Transmission Owners to Dismiss Complaint, FERC Docket No. EL15-45-000 (Sept. 29, 2017).

³⁵ Motion of MISO Transmission Owners to Dismiss Complaint at 12, FERC Docket No. EL15-45-000 (Sept. 29, 2017) ("[I]t is one thing to allege (albeit incorrectly) that a single DCF alone may be used to prove an existing rate to be unlawful; it is quite different to claim that this same evidence can support supplanting a rate that *has not yet been identified but which will be the existing rate for section 206 purposes* when the Commission must reach a decision on the merits of a subsequent complaint." (emphasis in original)).

second complaint because, under section 206, FERC has no authority to change a rate that has not first been shown to be unjust and unreasonable.

In any event, setting for hearing numerous, separate pancaked complaints that challenge the same ROE without the complainant first having made a sufficient *prima facie* case is an unsound and increasingly unworkable administrative practice. First and foremost, this practice has created significant uncertainty for transmission owners and has subjected transmission owners to several years in which their allowed ROE is unstable and subject to change, including nearly seven years in ISO-NE alone. Not only does this contravene the intent of Congress to limit such periods of uncertainty, it also creates a serious problem of delay that FERC has sufficient authority and discretion—and indeed the obligation—to address.³⁶

The practice of granting multiple pancaked complaints that challenge the same ROE and placing them in overlapping hearing procedures is administratively burdensome and needlessly complex for FERC, its Staff, and the parties, particularly given the “moving target” that results. For example, as noted above, current practices have resulted in scenarios in which a second complaint proceeds to hearing challenging the same ROE that remains under investigation in an earlier unresolved complaint proceeding. Indeed, as many as four complaints challenging a utility’s ROE have been pending at a single time. That result is just one of several unintended, administratively unworkable scenarios that results from FERC’s current practices.

To Improve Regulatory Stability and Support Continued Transmission Investment, FERC Must Establish a Reasonable and Transparent Evidentiary Threshold for Entertaining ROE Complaints That Aligns with the Statutory Burden of Proof Under FPA Section 206

FERC’s recent approach to ROE complaints—in which it reflexively sets for hearing any ROE complaint that includes any DCF analysis producing a lower rate than the one already on file – has established an extremely low bar for initiating ROE litigation. When FERC sets ROE complaints for hearing under current practices, it does so without determining that the existing ROE is unjust and unreasonable. While FERC has made mention of a *prima facie* threshold in some orders issued since *Emera*, it does not articulate what factors contributed to its conclusion that a *prima facie* showing had been made or why further investigation of the existing ROE is warranted.³⁷

The lack of clear thresholds for establishing a *prima facie* case, coupled with the practice of generically establishing hearing procedures in response to every ROE complaint, sets an exceedingly low evidentiary bar to obtaining a full trial-type hearing. It also inappropriately and prematurely shifts the burden to respondent utilities. Respondent utilities have the burden to make an affirmative defense “[o]nce the complainants...have presented a *prima facie* case for relief.”³⁸ FERC’s current practices, and the low bar they have set, do not follow this long-standing principle. When combined with dynamic

³⁶ Richard J. Pierce, Jr., et al., *Administrative Law Handbook* § 5.9 (3d ed. 1999).

³⁷ See supra n.18; see also, e.g., *Joint Cal. Complainants v. Pac. Gas & Elec. Co.*, 163 FERC ¶ 61,112 (2018); *Okla. Mun. Power Auth. v. Okla. Gas & Elec. Co.*, 163 FERC ¶ 61,114 at P 34 (2018).

³⁸ *Minn. Power & Light*, 23 FERC ¶ 61,393, 61,835 (1983).

financial markets and the single-issue nature of ROE complaints, this low bar to obtaining a hearing has contributed to the increase in pancaked complaints.

FERC should consider reforms to its processes and approaches to remedy these problems, which have contributed to the rise in ROE litigation and the unpredictability and instability in returns for long-lived transmission assets that could threaten continued investment if not stemmed.

FERC's Permissive Approach and Low Evidentiary Bar Inappropriately and Prematurely Shift the Burden of Proof to Utilities to Show That Their Existing ROE Remains Just and Reasonable

In the recent *Emera Maine* decision, the D.C. Circuit reemphasized, in the context of ROE complaint litigation, the allocation of the burden of proof under FPA section 206. FPA section 206 mandates a “two-step” procedure, under which FERC first must find that a utility’s existing rate is unjust and unreasonable *before* it can act to impose a new just and reasonable rate on that utility. A party filing a complaint under FPA section 206 seeking to lower a utility’s rate thus has the burden to demonstrate to FERC that the existing rate is unjust and unreasonable;³⁹ only after that burden is met can FERC proceed to set a new rate.⁴⁰

FERC’s consistent practice of setting every ROE complaint (including pancaked complaints) for trial-type hearing procedures without finding that the complainant has made a *prima facie* case that the existing ROE is unjust and unreasonable improperly shifts the burden of proof away from complainants and to the transmission owner(s). As FERC itself has explained in numerous orders, “[t]he party with the burden of proof bears the burden of production, or the need to provide sufficient evidence to establish a *prima facie* case.”⁴¹ FERC has not applied that burden appropriately in recent ROE complaints; instead it has reflexively set each complaint for hearing to determine whether the rate is unjust and unreasonable and what the new just and reasonable rate should be, without requiring a sufficiently robust demonstration that a *prima facie* case has been made in the first place. This unlawfully shifts the burden to the transmission owner to show at hearing that its existing rates are not unjust and unreasonable.

FERC’s recent orders continue to shift the burden to transmission owners, contrary to FPA section 206’s requirement that complainants carry the burden. For example, in applying the well-worn principle that not every rate within the zone of reasonableness is *per se* just and reasonable, FERC recently explained that “the fact that [an] ROE falls within the zone of reasonableness does not necessary indicate that the[] existing ROE is *just and reasonable*.”⁴² This explanation gets it backward—the first question that FERC must answer under FPA section 206 is whether the existing rate has been shown to be *unjust and unreasonable*. This responsibility belongs to the complainants, not the responding utility.

³⁹ See e.g. *FirstEnergy*, 758 F.3d at 353.

⁴⁰ See e.g. *Emera*, 854 F.3d at 24-25.

⁴¹ *Puget Sound Energy, Inc. v. All Jurisdictional Sellers of Energy*, Opinion No. 537, 151 FERC ¶ 61,173, at P 98 (2015), *on reh’g*, 153 FERC ¶ 61,386 (2015), *rev’d*, 157 FERC ¶ 61,026 (2016); see also *Emera*, 854 F.3d at 21 (“The burden of demonstrating that the existing ROE is unlawful is on FERC or the complainant, not the utility; *NextEra Energy Res. LLC v. ISO New England, Inc.*, 156 FERC ¶ 61,150 at P 16 (2016) (citing 16 U.S.C. § 824e(b)).

⁴² *Belmont*, Order on Rehearing, 162 FERC ¶ 61,035 at P 6 (emphasis added).

To correct these problems, FERC should establish more appropriate thresholds for when a *prima facie* case has been made demonstrating that hearing procedures are warranted.

FERC Should Reform Its Approach with the Goal of Disciplining Future ROE Complaints and Ensuring That the Burden of Proof is Properly Applied

To ensure that the burden of establishing a *prima facie* case stays with complainants as the FPA requires,⁴³ FERC should transparently articulate and apply a more rigorous *prima facie* case requirement to future ROE complaints. To ensure that it is applying the burden of proof in a manner consistent with the Court's reasoning in *Emera*, FERC must evaluate the evidence provided in the initial complaint and determine whether complainants have, at a minimum, put forth a properly constructed DCF that does not require corrections.⁴⁴

In addition, FERC should consider publicly articulating a clear threshold that complainants must meet in order to establish a *prima facie* case that an existing ROE warrants additional examination through hearing or other procedures. FERC is not required to initiate an investigation in response to every complaint.⁴⁵ To determine whether an ROE complaint is worthy of investigation, FERC can exercise its discretion and expert judgement to consider a number of factors, including:

- Whether, and where, the rate produced by the complainant's DCF falls within the zone of reasonableness. As the *Emera* decision reiterates, the zone of reasonableness "typically results in a broad range of potentially reasonable ROEs," and where the existing ROE falls within that zone, it is not enough for complainants under FPA section 206 to show that a new DCF methodology would produce a lower rate.⁴⁶ That the zone produces a "broad range of potentially reasonable ROEs"⁴⁷ makes it a reasonable screening tool for determining whether a section 206 ROE complaint has made a sufficient *prima facie* case to warrant a hearing. FERC should require that in cases where the effective ROE is within the zone of reasonableness under the methodology used by FERC, the complainant must meet an evidentiary standard beyond simply demonstrating a newly calculated ROE is below the effective ROE. Rather, it must show that under the unique circumstances of the case, the effective ROE may result in an unjust and unreasonable rate. This approach would recognize the natural variability in the inputs to the DCF and support regulatory certainty and stability, allowing FERC to act when an ROE may not be just and reasonable.⁴⁸
- The magnitude of the change in ROE likely to result. FERC can consider whether undertaking the time and expense of protracted hearing procedures and the unpredictability and instability

⁴³ 16 U.S.C. § 824e; see also Administrative Procedure Act, 5 U.S.C. § 556(d) ("the proponent of a rule or order has the burden of proof").

⁴⁴ See e.g. *Belmont Mun. Light Dep't v. Cent. Maine Power Co.*, 162 FERC ¶ 63,026 at P 73 (2018), citing *Emera*, 854 F.3d at 21.

⁴⁵ *Am. Gas Ass'n v. FERC*, 912 F.2d 1496, 1504 (D.C. Cir. 1990); see also *Heckler v. Chaney*, 470 U.S. 821, 831 (1985) ("[A]n agency's decision not to prosecute or enforce, whether through civil or criminal process, is a decision generally committed to an agency's absolute discretion.").

⁴⁶ *Emera*, 854 F.3d at 19, 26.

⁴⁷ *Id.* at 19.

⁴⁸ See e.g. *ISO New England, Inc.*, 161 FERC 61,031 at P 8 (2017), citing *Emera*, 854 F.3d at 26 (noting the explanation in *Emera* that the zone of reasonableness "creates a broad range of a broad range of potentially lawful ROEs" and that "the fact that NETOs' existing ROE did not equal the ROE that the Commission would have set using the current DCF inputs did not indicate that their existing ROE fell outside the statutory zone of reasonableness").

that results – will produce meaningful changes in the level of the existing ROE. FERC could define a threshold minimum for an overall change in revenue requirement that complainants must demonstrate is likely before it will find that a *prima facie* case has been made justifying further procedures to examine an existing ROE.

- How recently the existing ROE was established. FERC should consider how much time has passed since an existing ROE was established and should set forth a pragmatic time-based threshold within which it will not entertain a new ROE complaint absent extraordinary and compelling circumstances. Doing so would reasonably account for both the importance of rate stability to ensuring overall just and reasonable rates and supporting the development of needed infrastructure, and the fact that data in the record underlying a recently established ROE are unlikely to have been rendered out of date or irrelevant in the ordinary course of events. FERC also could preserve for itself the ability to change course if, for example, the economic dynamics change abruptly in a short period of time and cause a significant departure from a recently-established ROE.

In addition, like all other agencies, FERC has substantial discretion to order its own proceedings and design procedures sufficient to carry out its responsibilities.⁴⁹ FERC should utilize this discretion and should design and implement new approaches to address ROE complaints that foster greater regulatory certainty and reduce the current situation of extended unpredictability and instability of ROEs. FERC's procedures can be streamlined and made more certain while respecting the rights of complainants to bring FPA section 206 challenges. In particular, FERC should consider:

- Adopting a practice of determining up front, based on the filed complaint and the answer and comments/protests submitted in response, whether the existing ROE has been shown to be unjust and unreasonable. FERC is not obligated to conduct a full trial-type hearing to make such a determination and has often used “paper hearing” procedures, even in cases more complex than ROE complaints.⁵⁰ Making a determination of whether the existing ROE is unjust and unreasonable *before* establishing additional procedures aimed at finding a just and reasonable ROE (as it does today) not only would provide greater certainty and stability, it is also the most straightforward way to respond to the court's finding in *Emera* that FERC's current practices are inconsistent with the “first requirement” of FPA section 206 (i.e., that FERC find the existing base ROE unlawful *before* setting a new ROE).⁵¹
- In addition, or in the alternative, utilizing shorter and more focused procedures for resolving ROE complaints, with the goal of resolving those complaints with the 15-month refund period. While the ROE is a critical component of overall rates for transmission service, it is also a single issue that should not require extensive discovery or lengthy and protracted full trial-type hearings to resolve. FERC has utilized specially designed and narrowly tailored procedures in other, more complex contexts.⁵²

⁴⁹ *Vt. Yankee Nuclear Power Co. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 543 (1978), citing *FCC v. Shreiber*, 381 U.S. 279, 290 (1965).

⁵⁰ See, e.g., *PJM Interconnection, L.L.C.*, 130 FERC ¶ 61,052 (2010) (establishing paper hearing procedures to resolve multi-billion-dollar transmission cost allocation dispute on remand).

⁵¹ *Emera*, 854 F.3d at 22.

⁵² See, e.g., *Midwest Indep. Transmission Sys. Operator, Inc.*, 107 FERC ¶ 61,191 (2004) (establishing time-limited Administrative Law Judge procedures to resolve disputes regarding the integration of grandfathered agreements into the MISO market).

Conclusion

FERC's recent practice of setting virtually all ROE complaints for hearing has resulted in nearly seven years (and counting) of rate uncertainty for transmission-owning utilities and their investors. Numerous complaints have been filed, and few have been resolved. This situation threatens to erode the confidence of investors in FERC-regulated transmission assets, which threatens the ability of utilities to cost-effectively access capital needed to maintain and expand a robust, reliable, and resilient transmission grid.

Recent events, including the *Emera* decision, have revealed significant legal and administrative procedure problems with FERC's current approach to addressing ROE complaints, especially successive "pancaked" ROE complaints. FERC is not bound to continue to follow this flawed precedent. In light of the legal and administrative challenges that have been created by the current process, FERC should reconsider its approach and restore certainty for investors and transmission-owning utilities going forward. To accomplish these goals, FERC should revisit its practice of allowing pancaked complaints, concluding that they are contrary to the language and intent of section 206 of the FPA and are unworkable in practice. In addition, FERC should adopt a more rigorous and transparent standard for determining whether prima facie showing has been made prior to establishing hearing procedures on an ROE complaint.

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