

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

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

**INITIAL COMMENTS OF
THE NEW ENGLAND TRANSMISSION OWNERS**

I. INTRODUCTION AND SUMMARY

The New England Transmission Owners (“NETOs”) spent most of this decade litigating their return on equity (“ROE”) for service under the ISO New England Open Access Transmission Tariff (“ISO-NE OATT”) in four pancaked complaint proceedings.¹ The Commission’s October 16, 2018 order in those proceedings proposed an ROE methodology that implements two mandates from the Court of Appeals and revamps the Commission’s ROE policy to more accurately reflect investors’ requirements by relying on, and giving equal weight to, four financial models and establishing an evidentiary screen to dismiss some ROE complaints.² That proposal—the “Coakley Methodology”—is the background of the Commission’s *Inquiry Regarding the Commission’s Policy for Determining Return on Equity* in this proceeding.³

The NETOs endorse the Coakley Methodology and respectfully request that the Commission confirm that it stands by its reasoned analysis supporting the use of multiple

¹ The NETOs submitting these comments are Emera Maine f/k/a Bangor Hydro-Electric Company, Central Maine Power Company, New England Power Company d/b/a National Grid, Eversource Energy Service Company (on behalf of its operating company affiliates: The Connecticut Light and Power Company, NSTAR Electric Company, and Public Service Company of New Hampshire, each of which is doing business as Eversource Energy), The United Illuminating Company, Utilil Energy Systems, Inc., Fitchburg Gas and Electric Light Company, and Vermont Transco, LLC.

² See *Coakley v. Bangor Hydro-Elec. Co.*, 165 FERC ¶ 61,030 (2018) (“2018 Coakley Order”).

³ See 84 Fed. Reg. 11,769 (Mar. 28, 2019), 166 FERC ¶ 61,207 at PP 4-27 (2019) (“NOI”).

financial models in ROE determinations, as set forth in the 2018 *Coakley* Order.

Reiterating the Commission’s support for the Coakley Methodology in this inquiry will augment the Commission’s efforts to ensure that its ROE policy satisfies legal requirements for ROE decisions that the Supreme Court articulated in *Hope* and *Bluefield*,⁴ and advance the Commission’s policy goals, including predictability in decision making and consistency with investor requirements. This inquiry thus provides the Commission an opportunity to advance its goals and objectives while improving the regulatory climate so that utilities can invest in infrastructure that improves reliability and reduces overall costs for customers.

The Coakley Methodology, in addition to serving the Commission’s policy objectives, has advantages in its implementation because it produces more accurate results than sole reliance on a single model and minimizes the dangers of model risk. Its advantages thus flow from the Commission’s recognition in the 2018 *Coakley* Order that it “must look to how investors analyze and compare their investment opportunities.”⁵ The NETOs’ expert witnesses, Mr. Adrien McKenzie and Mr. John Quackenbush, both of whom have extensive experience with ROE policy at the Commission and state commissions and a deep understanding of investors’ requirements, each identify numerous advantages of the Coakley Methodology in their affidavits analyzing the topic areas and questions that the Commission highlighted in the Notice of Inquiry.

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

⁵ 2018 *Coakley* Order at P 33.

While some of the questions the Commission asked in the Notice are broader than the scope of the 2018 *Coakley* Order, the advantages and overall goals of the Coakley Methodology—developing a balanced, reasoned approach that ensures predictability and consistency with investor requirements—provide a guidepost for evaluating these related issues. This should allow the Commission to resolve this *Inquiry* promptly in a manner that provides greater predictability and certainty. In short, the Commission should seek answers to its questions that do not disrupt approaches that investors expect, that are mindful of practical concerns, and that provide sufficient clarity so that it can apply its ROE policy confidently and prevent a repetitive cycle of never-ending pancaked complaints that subject investors and customers to the heavy costs of uncertainty.

The NETOs' comments below follow the order of the topics areas the Commission identified in the Notice of Inquiry. The NETOs do not address all of the specific questions that the Commission asked, but focus on the key issues underlying the need to retain the Coakley Methodology and establish a level of regulatory certainty to the returns investors can realize on needed transmission infrastructure.

II. COMMENTS

A. Role and Objectives of the Commission's Base ROE Policy

Since approximately the turn of the century, the Commission has strongly supported the need for investment in new transmission facilities after many years in which little transmission investment had occurred. In 2005, Congress enacted Section 219 of the Federal Power Act (“FPA”), directing the Commission to provide rate incentives for such investment for this very reason. In New England, substantial new

transmission has been constructed to meet reliability requirements, and this new transmission has also reduced congestion charges by several hundred million dollars per year and permitted the integration of thousands of megawatts (“MW”) of new generation. But some reliability problems requiring transmission investment still need to be addressed, and New England’s need for new transmission investment remains. In fact, this need may have increased in light of the rapid changes in the generation mix that have occurred due to enhanced concerns about environmental policies and changes in the economics of new generation technologies. New England is only at the early stages of developing renewable sources of generation to meet state environmental goals, and substantial additional transmission investment will be required to meet these goals. Other regions have comparable needs for transmission infrastructure.

The Commission’s base ROE policy has been, and should remain, to provide sufficient returns on investment to attract capital to the transmission business in light of the substantial risks associated with this business, consistent with the Supreme Court’s decisions in *Hope* and *Bluefield*. The Commission identified these risks in Opinion No. 531 as follows:

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.⁶

These risks have not diminished since the Commission issued Opinion No. 531.

For the reasons discussed in these Comments, the NETOs endorse the Coakley Methodology, with limited changes that the NETOs proposed in their paper hearing briefs in response to the 2018 *Coakley* Order. In addition to meeting the Commission's capital attraction goals and therefore ensuring satisfaction of *Hope* and *Bluefield* requirements, the Coakley Methodology serves the complementary policy objectives of predictability, consistency with investors' real-world expectations, and establishing a framework that ensures reasoned decision making. The Coakley Methodology thus provides the best vehicle to advance the objectives of the Commission's ROE policy.

Question A1: *To what extent would the ROE methodology described in the Coakley and MISO Briefing Orders impact the predictability of ROE determinations and the costs for market participants of making or intervening in such proceedings?*

The Coakley Methodology has an exceedingly helpful impact on both predictability and the costs of ROE proceedings. The NETOs have a strong interest in this issue as a result of facing four consecutive ROE complaints that have produced almost a decade of ROE uncertainty and prolonged litigation at the same time that the NETOs are undertaking substantial transmission investments.

⁶ *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 149, *order on paper hearing*, Opinion No. 531-A, 149 FERC ¶ 61,032 (2014), *order on reh'r g*, Opinion No. 531-B, 150 FERC ¶ 61,165 (2015). Although Opinion No. 531 was later vacated by the Court of Appeals for the D.C. Circuit in *Emera Maine v. FERC*, 854 F.3d 9 (D.C. Cir. 2017) ("Emera Maine"), the Court's decision did not disturb the Commission's findings on the risk of investing in electric transmission infrastructure.

The NETOs support application of the Coakley Methodology in all pending and future public utility ROE proceedings because it will stabilize the Commission’s ROE review process using a framework that is robust and predictable.⁷ This method is consistent with investor expectations,⁸ reflects the methods that investment analysts use to forecast equity returns and reduces concerns over deficiencies in any single ROE model. The Coakley Methodology also reasonably satisfies FPA Section 206 and other concerns raised by the Court of Appeals in *Emera Maine*.⁹

The NETOs urge the Commission not to create additional instability and uncertainty by abandoning or substantially modifying the Coakley Methodology in this generic proceeding or otherwise. The Commission needs to provide interested parties, including utilities and customer representatives throughout the country, with confidence that the Commission values predictability and certainty in its ROE decisions. Failure to follow through on the Coakley Methodology would create new and additional uncertainty and send a signal that the Commission’s ROE policies are unpredictable and erratic.

⁷ See Affidavit of Adrien M. McKenzie, CFA, (“McKenzie Affidavit”) at 5 (“The Coakley Methodology marks a significant and constructive step towards resolving a decade-long policy vacuum . . .”); see also *id.* at 7 (noting that the Coakley Methodology “moderates volatility”). The McKenzie Affidavit is provided as Attachment A to these Comments.

⁸ See, e.g., Affidavit of John Quackenbush, CFA (“Quackenbush Affidavit”) at 9 (explaining that the Coakley Methodology’s use of multiple models “provides useful guidance to investors” and gives investors “greater confidence that the Commission’s ROE determinations are the result of more robust decision-making based on multiple models rather than sole reliance on one model”). The Quackenbush Affidavit is provided as Attachment B to these Comments.

⁹ See, e.g., NETOs Initial Brief, Docket No. EL11-66-001, *et al.* at 3-5, 5-14, 16-19 (Jan. 11, 2019) (Sections I, I.A, and I.C) (“NETOs IB”). The NETOs suggested discrete clarifications to ensure that the Coakley Methodology is applied in a manner that further enhances its well-reasoned basis and its consistency with the Court’s mandate and the Commission’s statutory duties. *Id.*

It also is important that the Commission complete this NOI and any further generic actions that may result swiftly to avoid further uncertainty for investors in transmission. The best way to move forward is for the Commission to use this NOI to confirm its intent to apply the Coakley Methodology in all pending and future ROE proceedings. The Commission has a long history of updating its ROE policies in individual rate cases. Accordingly, no need exists for the Commission to issue a Notice of Proposed Rulemaking at the completion of this inquiry. Instead, the Commission should issue a statement terminating this proceeding in which it confirms that it intends to apply the Coakley Methodology on a uniform basis going forward.

The Coakley Methodology is detailed and precise, and can be used by interested parties to judge the justness and reasonableness of existing ROEs and also develop testimony in individual proceedings. As Mr. McKenzie explains, the Coakley Methodology “enhances clarity surrounding the Commission’s ROE policies for all stakeholders.”¹⁰ It utilizes four ROE models that the Commission has already carefully considered, and applies a framework for applying these models that is reasoned and well supported by the policies underlying *Hope* and *Bluefield*. The alternative, abandoning or substantially revising the Coakley Methodology, would signal to investors that the Commission’s ROE policy is unpredictable, which would increase investment uncertainty and increase the cost of capital.¹¹

¹⁰ McKenzie Affidavit at 4.

¹¹ *Id.* at 4-5 (describing the importance of regulatory certainty in attracting capital investments in transmission infrastructure).

Other commenters may urge the Commission to reconsider the four ROE models applied in the 2018 *Coakley* Order. The NETOs urge the Commission to reject such entreaties. The Commission has carefully addressed a large number of issues raised in connection with these models and has no reason to reconsider what it has already decided on the merits. The Coakley Methodology provides a predictable framework for determining whether existing ROEs are just and reasonable, determining whether evidentiary hearings are necessary and appropriate in individual proceedings, and for reaching timely decisions in cases that require an evidentiary record. These advantages are all especially important considerations in the context of ROE, where uncertainty itself undermines the Commission’s policy objectives. But those advantages depend on sustaining continuity and familiarity with the Coakley Methodology. If the Commission reverses course and departs from its proposed application of the four models, it will undermine the predictability that is important to attracting investment in needed transmission infrastructure.

The Coakley Methodology provides greater predictability than sole reliance on the Discounted Cash Flow (“DCF”) model under the Commission’s prior methodology. As Mr. Quackenbush explains, the Coakley Methodology “enhances investors’ ability to forecast, anticipate, and predict Commission ROE determinations compared to using only the DCF method.”¹² The use of multiple models reduces exposure to model risk; is consistent with the methodologies that investors and investment analysts use to forecast

¹² Quackenbush Affidavit at 9.

ROEs; and, by averaging results from different models, reduces the likelihood that a single decision about the proxy group will drastically affect the final result while still analyzing the range of results that investors would consider relevant. Mr. McKenzie demonstrates that “the Coakley Methodology insulates against extreme variation in the Commission’s ROE findings due to changes in the results of any single method.”¹³ In addition, including at least one method that utilizes book-value concepts provides a stabilizing influence in the event that inputs in the other models are anomalous at any one period of time. The additional cost of doing four ROE studies is not substantial and is far outweighed by the robustness of the results and the reduction of single model risk.

The NETOs reiterate their recommendation in the *Coakley* proceedings that the Commission find that, just as existing base ROEs within the quartile range are presumptively just and reasonable, existing base ROEs between the high end of this quartile range and the high end of the zone of reasonableness established by its three models be treated as presumptively unjust and unreasonable unless the presumption is rebutted by record evidence. This minor change (which did not impact the results in that case) would make the Coakley Methodology’s framework for addressing the first step of analysis under FPA Section 206 logically balanced and consistent with the Court’s holding in *Emera Maine*. The NETOs believe that this recommendation is important to satisfy the Courts that the Commission’s reasoning is sound and will enhance the benefits of the Coakley ROE methodology.

¹³ McKenzie Affidavit at 7.

Question A2: *How would using the ROE methodology described in the Coakley and MISO 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?*

The methodology described in the 2018 *Coakley* Order will enhance predictability and thereby improve investors’ ability to determine whether an existing ROE might be at risk of being changed.¹⁴ It will also allow interested parties to forecast the Commission’s ROE determinations to decide whether to intervene in Section 205 cases or file complaints under Section 206. The Coakley Methodology is objective, readily replicable using publicly available data and avoids concerns associated with sole reliance on a single model, as reflected in Opinion No. 531. The Coakley Methodology, as Mr. McKenzie concludes, is “a significant advancement” by the Commission “that provides increased confidence in the veracity of the results and greater certainty for stakeholders.”¹⁵

For the same reasons, adoption of the Coakley Methodology would facilitate settlement because it provides a precise, numeric valuation of the then-current ROE that is less likely to vary over time than a methodology that relies on a single model such as the DCF. If it adopts the Coakley Methodology, the Commission should also be in a position to issue orders in a large number of extant proceedings and remove uncertainty

¹⁴ See, e.g., Quackenbush Affidavit at 9 (noting that the “benefits of the Coakley ROE methodology will be especially relevant” for the first step of the Commission’s evaluation under FPA Section 206 because it established a rebuttable presumption that acts “as a screen to determine whether the Commission should dismiss a complaint” and that it would provide investors and other stakeholders with reasonable assurance “that spurious complaint cases would not proceed”).

¹⁵ McKenzie Affidavit at 8-9.

and litigation expense. The data used to apply the Coakley Methodology should be in the existing records in most of these proceedings because the elements of the Methodology were relevant under prior Commission policy set forth in rulings in Opinion Nos. 531 and 551 that the Court did not undermine in *Emera Maine*.

In contrast, if the Commission were to abandon or revise the Coakley Methodology, it would likely require reopening the records in a large number of cases, and potentially produce another round of long and costly evidentiary proceedings. At a minimum, moving away from the Coakley Methodology would require additional rounds of briefing. The NETOs, in particular, would face a situation where after almost a decade of litigation already, they would face a substantial delay in receiving decisions in the four pending ROE complaints. Use of any new or revised forms of the four ROE models, in particular, would substantially delay the outcome of these proceedings and create greater unpredictability. In addition, any revision to the Coakley Methodology would potentially reopen the question whether the Commission has fully complied with the Court's decision in *Emera Maine*. Finally, applying a new methodology would create the strong impression that the Commission's decisions are not reliable and predictable.

Question A3: *Currently, public utilities in different Independent System Operators (ISOs) or 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?*

The NETOs voluntarily chose to use a single ROE for their services under the ISO-NE OATT. The NETOs' ROE also varies from the ROE of other FERC-

jurisdictional transmission owners in other Regional Transmission Organizations (“RTOs”) in part due to when the underlying Section 205 or 206 cases took place. Nevertheless, addressing these timing differences by mandatory rule is not necessary to achieve the objectives of the Commission’s ROE policy. Investors, customers and utilities have decades of experience with differences among utilities’ ROEs, and forcing a change of this nature would be disruptive.¹⁶ These differences are justified because they are consistent with FPA Section 205, which gives utilities freedom to initiate rate proceedings at any time. Section 205 does not mandate rate uniformity. In fact, *Atlantic City Electric Co. v. FERC*, 290 F.3d 1 (D.C. Cir. 2002) holds that the Commission does not have the statutory authority to limit the Section 205 filing rights of public utilities. Therefore, individual utilities have the right, which they may limit voluntarily by contract, to change their ROEs at different times. In addition, the ROE applicable to one utility in an RTO might not apply to others because of differences in the risk-based proxy groups used under Commission policy.

Even if requiring this uniformity were consistent with the FPA, any potential “solution” would create significant practical problems that overwhelm any theoretical advantages of a policy of forced uniformity. Making the most recent proceeding involving a utility in an RTO applicable to other utilities would either impose rates on utilities (and their customers) without due process or would require every utility (and every customer) in an RTO to participate in every ROE proceeding involving any utility

¹⁶ See, e.g., Quackenbush Affidavit at 10 (noting that “[i]nvestors are familiar with the current landscape”).

in an RTO. This rule would also make settlement of ROE proceedings very difficult due to the difficulty of getting so many parties to reach agreement and the prospect that a single utility or customer in any RTO immediately would initiate a new ROE proceeding. Finally, pursuing this policy would be at odds with the policy objectives (predictability, cost containment, and consideration of investors' expectations) that the Commission referenced in Questions A1 and A2.

Question 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?*

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?

A4.b. Would such a “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 made an investment during that year? What procedure should be used to determine such a default ROE?

The NETOs strongly urge the Commission not to pursue a vintage approach. The Commission's longstanding practice has been to “roll in” the costs of all transmission facilities on an integrated system. It has modified this rule recently in certain limited circumstances to permit utilities to obtain transmission incentives for particular new facilities. Abandoning the Commission's “roll in” practice in favor of a vintage approach would create substantial risk, cost, complication, and uncertainty that are not worthwhile.

The proposal is not practical. Even if the Commission intended to apply this new policy only to new investments in the future, the Commission should realize that utilities make new investments in transmission facilities regularly throughout each year, including

replacements and repairs of existing assets. Accordingly, each utility would be required to have on file a new transmission ROE for every year, and the Commission would have to determine the just and reasonable ROE in every case. This would create enormous cost and uncertainty. The Commission suggests using an annual “default” ROE but establishing this default ROE would still require a new just and reasonable ROE be established each year, which would entail endless proceedings and an incredibly large burden on the Commission to review annual ROEs for every public utility. Mr. Quackenbush notes that an analogous attempt by the FCC to establish unitary returns led to “massive mega-dockets” and “a net result” that likely increased litigation.¹⁷

If the Commission applies this proposal retroactively to existing facilities, the burden on public utilities and the Commission would be even greater. In fact, it is hard to imagine how the Commission would establish ROEs on a vintage basis going back forty or fifty years or more.

This proposal would also be disruptive of existing investor expectations.¹⁸ Investors implicitly rely on the current ratemaking framework, which typically involves a single ROE for each utility (with project-specific adjustments to address incentives in limited cases) to determine whether to invest. The Commission would have to analyze carefully how this tremendous ratemaking change would impact investor expectations going forward. At a minimum, this proposal would increase investor uncertainty in two

¹⁷ See, e.g., Quackenbush Affidavit at 11-12 (explaining that investors are “comfortable” with the current method and “do not expect a vintage approach”).

¹⁸ Id. at 11-13.

ways. First, investors would not know if fixed vintage ROEs on existing investments would remain competitive as market conditions change in the future. Second, vintaging requires regularly establishing and litigating new ROEs for new investments, making it more difficult for investors to forecast the actual returns utilities will receive on their investments in companies that make these investments.

B. ROEs for different Commission-regulated industries

The NETOs take no position on the Commission’s inquiries in this topic area at this time.

C. Performance of the DCF Model

Question 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?

The Commission seeks comments on the robustness of the DCF model under differing investment conditions. The Commission already has ample evidence that the two-step DCF model can produce results which are far below the ROE level needed to satisfy the requirements of *Hope* and *Bluefield*.

It is important to recall that a company’s cost of equity cannot be directly observed. Investors, regulators, and academics instead rely on multiple models to estimate the cost of equity.¹⁹ In *New Regulatory Finance*, a key academic text on utility ratemaking, Dr. Roger Morin explains that none of these models “conclusively

¹⁹ See, e.g., Answering Testimony of Adrien M. McKenzie, CFA, Exhibit No. NET-02200 (Docket No. EL16-64-002) at 115 (“McKenzie Ans. Test. (Docket No. EL16-64-002)”) (“the cost of equity is inherently unobservable and cannot be precisely estimated”). The Certified Record in Docket No. EL16-64-002, including this admitted exhibit, is available on the eLibrary docket sheet with a file date of March 27, 2018.

determines or estimates the expected return for an individual firm. Each methodology possesses its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises *that cannot be validated empirically.*²⁰

It is impossible to quantify specifically the ways in which the assumptions in the DCF model depart from reality under differing investment conditions. As the Commission has recognized, however, the results of multiple valid financial models do provide clear evidence of circumstances where the DCF model produces inaccurate cost of equity estimates. For example, in the proceeding involving the first ROE complaint against the NETOs in Docket No. EL11-66, the Commission compared the results of the Capital Asset Pricing Model (“CAPM”), Expected Earnings, and Risk Premium analyses to the mid-point of the two-step DCF analysis and concluded that the resulting 9.39 percent DCF midpoint was too low to be a just and reasonable base ROE for the NETOs under the standards of *Hope* and *Bluefield*.²¹ The Court highlighted the importance of this finding in *Emera Maine*, stating that one aspect of Opinion No. 531 that was “particularly troublesome” was the use of the DCF zone to set the NETOs’ new ROE notwithstanding the Commission’s documented concerns with the results of the DCF model in that case.²²

²⁰ Roger A Morin, *New Regulatory Finance*, at 429 (Public Utilities Reports, Inc., 2006) (“Morin”) (emphasis added); see also 2018 Coakley Order at P 34.

²¹ Opinion No. 531 at PP 145-47.

²² *Emera Maine*, 854 F.3d at 28.

Similarly, in Docket No. EL14-12 addressing the Midcontinent Independent System Operator, Inc. (“MISO”) transmission owners’ ROE, the Commission found that the CAPM, Expected Earnings, and Risk Premium analyses “produce cost of equity estimates substantially in excess of the 9.29 percent midpoint of the zone of reasonableness produced by the DCF analysis in this case.”²³ As the Commission went on to conclude in Opinion No. 551,²⁴ this evidence showed that the DCF midpoint was not a reasonable base ROE.

The record in additional ROE complaint proceedings against the NETOs in Docket Nos. EL13-33, EL14-86, and EL16-64 also demonstrates that the DCF midpoints in those cases are far below the required base ROE for the NETOs as documented by the results of the CAPM, Expected Earnings, and Risk Premium analyses. The Commission consistently found that the methodologies used by Dr. William Avera and Mr. Adrien McKenzie to conduct the CAPM, Expected Earnings, and Risk Premium analyses in each of those cases are valid and appropriate.²⁵ Based on the results of these models, the Commission highlights the “significant evidence indicating that combining estimates from different models is more accurate than relying on a single model.”²⁶

²³ *Ass’n of Buss. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 551, 156 FERC ¶ 61,234 at P 135 (2016).

²⁴ See *id.* at PP 128, 135-36, 256.

²⁵ See, e.g., Opinion No. 531 at PP 146-47, Opinion No. 531-B at PP 108-17, Opinion No. 551 at PP 165-66, 172 (CAPM); Opinion No. 531 at PP 146-47, Opinion No. 531-B at PP 97-101, Opinion No. 551 at PP 191-92, 200 (Risk Premium); and Opinion No. 531 at PP 146-47, Opinion No. 531-B at PP 125-26, 132, Opinion No. 551 at PP 230-31, 239 (Expected Earnings). Mr. McKenzie, a colleague of Dr. Avera, used the same methodology as Dr. Avera in conducting the CAPM, Expected Earnings, and Risk Premium analyses in Docket No. EL16-64.

²⁶ 2018 Coakley Order at P 38 & n.78 (citing *In re Connect Am. Fund*, 28 FCC Rcd. 7123, 7147 (2013); *Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad*

In addition, the Commission has recognized the inherent difficulty in pinpointing the exact mechanism which causes the DCF model to misestimate the cost of equity. In Opinion No. 551 the Commission correctly concluded that “a direct causal analysis linking specific capital market conditions to particular inputs or assumptions of the DCF model is not necessary.”²⁷ There is no reason for the Commission to reverse course and now require parties to attempt the impossible task of explaining how particular inputs or assumptions of the DCF model can produce aberrant results in certain conditions. Instead, the use of the CAPM, Expected Earnings, and Risk Premium models ensures that any performance issues with the DCF can be addressed.

The use of multiple models in the Coakley Methodology is less prone to unreasonable results than relying on a lone model. Relying on multiple models avoids the fallacy of relying on a single point estimate from a single methodology to dictate an acceptable ROE or the similar fallacy of assuming that market conditions can be understood precisely enough to pre-define circumstances when relying on a single model is acceptable. The solution is reliance on multiple models, not trying to reframe the basis for solely relying on one model. As explained elsewhere in these Comments and in their briefs filed in response to the 2018 *Coakley* Order, the NETOs support the Commission’s proposal to rely on multiple models.²⁸

Industry’s Cost of Capital, STB Ex Parte No. 664 (Sub-No. 1), 2009 WL 197991, at *11 (S.T.B. Jan. 23, 2009); and the testimony of NETOs witness Dr. Avera in Docket Nos. EL13-33-002 and EL14-86-000 at Tr. 675:10-14).

²⁷ Opinion No. 551 at P 125.

²⁸ See, e.g., NETOs IB at 3-5.

In addition to the evidence of specific financial analyses in multiple ROE proceedings showing that the DCF analysis can produce unreliable results in some conditions, the Commission also should take into account the extensive expert testimony in those proceedings showing why relying on multiple financial models is superior to sole reliance on the DCF model.

As NETOs witness Mr. McKenzie has documented, the widespread acceptance of methods other than the DCF by “investment and finance professionals, as well as regulatory agencies throughout the U.S.” supports the conclusion that the use of these other methods as part of a compressive effort to estimate the cost of equity is sound “under all conditions and in all cases.”²⁹ Such an approach reflects “closer alignment with how investors inform their investment decisions.”³⁰ And the Commission recognizes that “[i]nvestors have varying preferences as to which of these or other methods they may use to inform their investment decisions.”³¹ Using cost of equity estimates based on the four different models “are a reasonable measure of investor expectations, since they are among the information that investors rely upon when making investment decisions.”³²

²⁹ Supplemental Answering Testimony of Adrien M. McKenzie, CFA, Exhibit No. NET-02400 (Docket No. EL16-64-002) at 37-38 (“McKenzie Supp. Ans. Test. (Docket No. EL16-64-002”)). The Certified Record in Docket No. EL16-64-002, including this admitted exhibit, is available on the eLibrary docket sheet with a file date of March 27, 2018.

³⁰ 2018 *Coakley* Order at P 15.

³¹ *Id.* at P 35.

³² *Id.*

Model risk is inherent in any financial model used to estimate the cost of equity and has contributed to the downward bias present in the two-step DCF results for electric utilities in recent ROE cases. As Mr. McKenzie explains in the attached affidavit, no single approach is inherently reliable as a guide to investors' required return.³³ This explanation is fully consistent with precedent where the Commission has recognized that "the DCF methodology is subject to model risk of providing unreliable outputs" in some circumstances.³⁴

The testimony of NETOs witness Mr. John D. Quackenbush, the former chair of a state utility commission with extensive experience in the investment community, also supports the Commission's conclusion that the use of multiple models can address any concerns about the reliability of the DCF model in individual cases. The 2018 *Coakley* Order cites Mr. Quackenbush's testimony that:

The Commission should not limit itself to using only the DCF model or restrict itself when applying judgment to ROE model results. Since state regulatory commissions, corporate finance professionals, and investors use multiple methods and exercise judgment when estimating the cost of equity, it is perfectly reasonable for the Commission to rely on multiple models and exercise judgment when setting the base ROE in this proceeding.³⁵

Mr. Quackenbush similarly noted the problem of "model risk" in relying on one methodology, as "[a]rbitrarily and mechanistically plugging data into a model, no matter

³³ McKenzie Affidavit at 9.

³⁴ Opinion No. 551 at P 125; *see also* Opinion No. 531 at P 145 n.286.

³⁵ 2018 *Coakley* Order at P 37 (quoting Supplemental Answering Testimony of John D. Quackenbush, CFA, Exhibit No. NET-02500 (Docket No. EL16-64-002) at 15 ("Quackenbush Supp. Ans. Test. (Docket No. EL16-64-002)"). The Certified Record in Docket No. EL16-64-002, including this admitted exhibit, is available on the eLibrary docket sheet with a file date of March 27, 2018.

how theoretically robust the model is, can result in outputs that do not reflect the real world.”³⁶ The evidence already before the Commission shows that model risk exists within any methodology, but using multiple models will provide a better, more accurate picture.³⁷

The 2018 *Coakley* Order also recognized evidence from Dr. Morin supporting the equal weighting of multiple financial models to address the potential that DCF results can be flawed:

In the absence of any hard evidence as to which method outdoes the other, all relevant evidence should be used and weighted equally, in order to minimize judgmental error, measurement error, and conceptual infirmities. A regulator should rely on the results of a variety of methods applied to a variety of comparable groups, and not on one particular method. There is no guarantee that a single DCF result is necessarily the ideal predictor of the stock price and of the cost of equity reflected in that price, just as there is no guarantee

³⁶ Quackenbush Supp. Ans. Test. (Docket No. EL16-64-002) at 20-21. *See also* Quackenbush Affidavit at 13-14.

³⁷ *See, e.g.*, McKenzie Ans. Test. (Docket No. EL16-64-002) at 139-44 (explaining the importance of using more than one financial model and stating, at 143:8-12, “the DCF model – like any model – faces model risk and is not infallible. The Commission’s reduced confidence in the central tendency of the DCF results is particularly appropriate, however, when unrepresentative capital market conditions, undermine the ability of the DCF approach to reasonably reflect investor expectations”); *id.* at 144-54 (providing analyses using, CAPM, Expected Earnings, and Risk Premium models); Testimony of William E. Avera, Ph.D., CFA, Exhibit No. NET-300 (Docket No. EL11-66-001) at 50-54, 65-70, 70-73 (Nov. 20, 2012) (“Avera Test. (Docket No. EL11-66-001)”) (providing analysis of CAPM, Expected Earnings, and Risk Premium models); *see also id.* at 45-49 (describing reasons for using models other than the DCF model and stating “I believe it is important to consider the results of other methods in evaluating a fair base ROE, in order to either corroborate or call into question the ROE result arrived at using the DCF approach. The risk premium approach, along with the results of other methods discussed subsequently in my testimony, provides useful information in determining whether a proposed base ROE is just and reasonable”).

that a single CAPM or Risk Premium result constitutes the perfect explanation of that stock price.³⁸

Recognizing the value of utilizing multiple models does not imply that the DCF model is unimportant or should be disregarded. *All models are imperfect* and they rely on simplifying assumptions as well as inputs that create risks. Therefore, calculating an ROE without the DCF is unnecessary. As Mr. McKenzie explains,

[t]he fact that real-world evidence contradicts the DCF assumptions simply illustrates what has been amply demonstrated in [the *Coakley*] proceedings—there is no perfect way to estimate the cost of equity, the DCF model’s assumptions routinely depart materially from what actually transpires in the capital markets, and reliance on multiple approaches is fully supported by the views and actions of investors, investment professionals, and other regulators.³⁹

Question 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?*

The NETOs respectfully submit that analyses of the DCF performances and proxy company earnings over the last 10 to 20 years are not necessary in evaluating forward-looking ratemaking determinations and could be a distraction from the fundamental reasons to rely on multiple financial models to evaluate ROE. The Commission has not proposed disregarding the DCF model entirely, and the NETOs do not propose that the Commission do so.

While the NETOs believe the Commission should remain mindful of the downward-biased results of the DCF demonstrated in the record evidence in recent ROE

³⁸ Morin at 429, cited in 2018 *Coakley* Order at P 36.

³⁹ Reply Affidavit of Adrien M. McKenzie, CFA, Attachment A to NETOs Reply Brief, Docket No. EL11-66-001, *et al.*, at 17 (Mar. 8, 2019) (“McKenzie RB Affidavit” and “NETOs RB”).

cases, the NETOs do not object to the continued use of the DCF model as part of the broader approach described in the 2018 *Coakley Order*.⁴⁰ Since there is no suggestion up to this point that the Commission should discard the DCF model from its ROE methodology, analyses of the performances of the DCF and proxy company earnings over the last 10 to 20 years are unnecessary.

As explained by Mr. McKenzie in the attached affidavit, “[t]he use of multiple financial models under the Coakley Methodology does not require a study of the historical accuracy of the DCF model.”⁴¹ The Commission already has more than enough evidence to confirm that the use of multiple financial models in the Coakley Methodology will account for the fact that no single model is consistently reliable, regardless of any particular set of capital conditions.

Question C3: How does the DCF methodology perform over a wide range of interest rate conditions?

- C3.a. What specific assumptions of the DCF model, if any, do not work well in low or high interest rate environments?*
- 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?*

As explained in the NETOs’ responses to Questions C1 and C2, *supra*, the Commission already has ample evidence that the two-step DCF model can produce results under certain conditions that significantly under-estimate the cost of equity for

⁴⁰ See, e.g., NETOsIB at 19.

⁴¹ McKenzie Affidavit at 9-10.

regulated entities. In addition, the Commission has previously recognized the inherent difficulty in pinpointing specific assumptions which cause the DCF model to underestimate the cost of equity and has concluded correctly that such an analysis is neither necessary nor beneficial. The Coakley Methodology is not based on any such analysis, but is instead supported by the fundamental facts that “any methodology has the potential for errors or inaccuracies” and “relying exclusively on any single methodology increases the risk that the Commission could authorize an unjust and unreasonable ROE.”⁴² By using all four models, the Commission properly reduces the risks associated with relying on only one model.⁴³

The Commission’s reference to trends in price-to-earnings ratios suggests it is considering information comparable to the data summarized in Figure 3 of the 2018 *Coakley Order*. As Mr. McKenzie explains, data on such price-to-earnings ratios provide an illustration that real-world phenomena can depart significantly from the assumptions underlying the DCF approach, “but no further study is needed or relevant.”⁴⁴ Such historical analyses, however, are not the justification for the Coakley Methodology. Instead that methodology is rooted in the extensive evidence discussed above showing that there is no perfect way to estimate the cost of equity, that the DCF model’s assumptions routinely depart materially from what actually transpires in the capital markets, and that reliance on multiple financial models addresses shortcomings with sole

⁴² 2018 *Coakley Order* at P 38.

⁴³ *Id.*

⁴⁴ McKenzie Affidavit at 12.

reliance on the DCF model in a way that is fully supported by the views and actions of investors, investment professionals, and other regulators.

D. Proxy Groups

Question D1: Should proxy groups for electric utilities, as well as natural gas and oil pipelines, consist only of companies with corresponding regulated businesses?

The Commission should not disturb its long-standing, well-developed processes for establishing proxy groups in ROE proceedings. Extensive precedent addresses how to assemble proxy groups, including the use of credit ratings to identify companies with comparable risks to the utilities' or utility's ROE at issue. As explained in the attached affidavit by financial expert Mr. McKenzie, determining investors' required rate of return is a function of risk, and the Commission has correctly found that credit ratings provide a sound, objective measure on which to evaluate investors' risk perceptions.⁴⁵

Application of this existing approach to establishing proxy groups is at the heart of the analyses incorporated into the Commission's new ROE methodology in the 2018 *Coakley Order*. These same analyses were previously accepted by the Commission in Opinion Nos. 531 and 551. Nothing in *Emera Maine* calls into question the Commission's proxy group criteria or the specific proxy group adopted by the Commission in Opinion No. 531. The Commission's existing approach to establishing proxy groups also allows for an appropriate level of flexibility. As the NETOs can attest based on their experience in litigating four ROE complaints in the past eight years, the

⁴⁵ McKenzie Affidavit at 13 ("[T]he salient criteria in establishing a meaningful proxy group to estimate investors' required return is relevant risk Credit ratings are perhaps the most objective guide to utilities' overall investment risks").

Commission's proxy group selection process is not static and allows for incremental refinements based on records in individual cases. For all these reasons, there is no imperative reason for the Commission to broadly rethink its proxy selection criteria. The Commission need not start from scratch where its proxy group policy works and allows flexibility to respond to record evidence in specific cases.⁴⁶ Indeed, changing the Commission's processes for establishing proxy groups in ROE proceedings would introduce substantial regulatory uncertainty as to the outcome of future ROE cases, undermining the Commission's goal in crafting the Coakley Methodology of creating stability that will produce a favorable environment for much-needed transmission infrastructure investment.

In particular, the Commission should not require that proxy groups consist only of companies with "corresponding regulated businesses." The focus of this question is misplaced, as the Commission's current policy proceeds from the correct overall principle that a proxy group should consist of companies that *investors* would regard as comparable in risk to the public utilities/pipeline companies subject to an ROE proceeding. This principle provides an appropriate framework that is consistent with *Hope* and *Bluefield*. The Court in *Emera Maine* recognized this, noting that "[a]n ROE 'should be commensurate with returns on investments in other enterprises having corresponding risks' and 'sufficient to assure confidence in the financial integrity of the

⁴⁶ As explained in the NETOs' response to Question D4, the NETOs do believe that the Commission's low-end results test should be updated and that the high-end results test proposed in the 2018 *Coakley* Order should be revised. Neither of these revisions would require any adjustment to the Commission's policies concerning selection of proxy groups.

enterprise, so as to maintain its credit and to attract capital.”⁴⁷ As Mr. McKenzie explains in the attached affidavit, it would be counter-productive to depart from the Commission’s established proxy group criteria to encourage subjective arguments as to the implications of company-specific business operations.⁴⁸ Such a change would undermine the clarity and transparency of the Coakley Methodology by introducing the potential for opportunistic proxy group selection based on entirely results-oriented arguments as to what constitutes “corresponding regulated businesses.”⁴⁹

The principle that a proxy group should be selected based on investor expectations has proven effective in various ROE proceedings involving the NETOs. For example, in Docket No. EL16-64, the Presiding Judge weighed the record evidence and ultimately determined that Algonquin Power & Light Company (“Algonquin”) and Emera, Inc. (“Emera”) should be included in the proxy group because of how investors viewed them. “There is ample evidence in the record to show that Algonquin and Emera would be regarded by investors as being comparably financial to the NETOs and worthy of inclusion [in the proxy group].”⁵⁰ This example illustrates why the Commission should retain this investor-based approach in evaluating the composition of a proxy group.

D1.a. For companies with a combination of regulated and unregulated businesses, should a company be required to derive a certain percentage of its revenues from the applicable regulated business in

⁴⁷ *Id.* at 20 (emphasis added) (citing *Hope*, 320 U.S. at 603 and referencing *Bluefield*, 262 U.S. at 692-93).

⁴⁸ See McKenzie Affidavit at 14-15.

⁴⁹ See *id.*

⁵⁰ *Belmont Mun. Light Dep’t v. Cent. Me. Power Co.*, Initial Decision, 162 FERC ¶ 63,026 at P 196 (2018) (“Complaint IV ID”) (internal citation omitted).

order for that company to be included in the proxy group that is used to determine an ROE for a company in that regulated business?

The Commission should also confirm that proxy groups should be selected without the addition of arbitrary thresholds concerning the percentage of revenues derived from regulated businesses. Any analyses of comparability should reflect the full range of evidence relevant to whether a particular proxy group member is comparable to the utilities or utility at issue in a case. The Commission should not adopt any such threshold and should instead continue to look to investor expectations when determining the composition of proxy groups.

Question D2: *Should risk be considered both in the proxy group selection and in the placement within the zone of reasonableness?*

The Commission’s current reliance on credit ratings in its ROE determinations provides an objective, generally accepted measure of overall risk that is consistent with *Hope* and *Bluefield*. Mr. McKenzie details the merits of relying on credit ratings as an objective measure of risk because credit ratings are the result of comprehensive analyses by independent third parties that are widely referenced by investors.⁵¹ In prior testimony, Mr. McKenzie has described how “[t]he ratings assigned to a utility by the rating agencies encompass a comprehensive evaluation of the utility’s overall business and financial risks.”⁵²

The use of credit ratings to consider risk in the proxy group selection criteria comports with the *Hope* requirement that the “return to the equity owner should be

⁵¹ See McKenzie Affidavit at 14.

⁵² McKenzie Ans. Test. (Docket No. EL16-64-002) at 171.

commensurate with returns on investments in other enterprises having corresponding risks.”⁵³ As such, credit ratings should continue to be used for gauging overall investment risk, as agencies already consider risks when making credit determinations.

The NETOs also support the aspects of the Coakley Methodology that consider a company or companies’ risks relative to the proxy group as the primary factor in the placement of the base ROE within a zone of reasonableness. This approach is consistent with the recognition that the just and reasonable return primarily is a function of risk.

D2.a. Should the Commission’s approach to proxy group selection change depending on which financial models it considers when determining the just and reasonable ROE and, if so, how?

There is no reason for the Commission to modify its proxy group selection methodology based on the financial models used. Again, it is important to recognize that the financial analyses accepted in Opinion Nos. 531 and 551 and later adopted as part of the comprehensive Coakley Methodology used the same proxy group selection criteria for all the financial models that use a proxy group (*i.e.*, the CAPM, DCF model and Expected Earnings approach). As the Commission properly recognized in the 2018 *Coakley Order*, the screens used by the Commission to select proxy groups do not vary depending upon the results of the DCF, CAPM, or Expected Earnings analyses. Accordingly, those screens may be used to develop a single group of proxy companies eligible for inclusion in the proxy group to be used for the purposes of DCF, CAPM, and Expected Earnings analyses, subject to the availability

⁵³ *Hope*, 320 U.S. at 603.

of data such as three-to-five year growth rates, betas, and earnings estimates, respectively.⁵⁴

Mr. McKenzie reinforces this conclusion, explaining that adopting the alternative financial models and associated framework established in the Coakley Methodology need not disturb established precedent regarding the evaluation of a comparable risk proxy group.⁵⁵ Although there may be limited circumstances where a proxy group member may not have the data necessary for the application of all models, these circumstances can be addressed through the exclusion of an individual proxy company from only the models for which the data issue is relevant or the proposed use of substitute data which can be evaluated by the finder of fact on a case-by-case basis.

Question D3: Should the Commission consider non-energy companies when selecting proxy groups?

- D3.a. *What non-energy industries or securities have comparable risk to public utilities and natural gas and oil pipelines, if any?*
- D3.b. *Do certain non-energy industries or securities feature fewer outliers?*

Although the Commission should not modify its long-standing and well-supported proxy group selection approach for the primary analyses used in the Coakley Methodology, the NETOs believe that the Commission can and should permit cost of equity estimates for non-utility companies of comparable risk to be used as an alternative benchmark in evaluating a just and reasonable ROE.

Investors, when evaluating the risk of investing capital in a public utility, look beyond other utilities in searching for companies with a “comparable risk.” Mr.

⁵⁴ 2018 *Coakley* Order at P 50.

⁵⁵ See McKenzie Affidavit at 13.

McKenzie emphasizes that “cost of equity estimates for non-utility companies can serve as an additional point of reference, both for the results of any specific financial model applied to utilities, and in ensuring that the end-result ROE from the Coakley Methodology” is just and reasonable.⁵⁶ In prior testimony, Mr. McKenzie provided support for this option, noting that “returns for non-regulated companies are a legitimate benchmark to gauge investors’ requirements.”⁵⁷ He continued: “Utilities must compete for capital, not just against firms in their own industry, but with other investment opportunities of comparable risk. Indeed, modern portfolio theory is built on the assumption that rational investors will hold a diverse portfolio of stocks, not just companies in a single industry.”⁵⁸

Furthermore, the use of alternative benchmark analyses with non-utility proxy groups is consistent with *Hope* and *Bluefield*. The Supreme Court recognized that the degree of risk relates to an ROE evaluation. For example, in *Bluefield* the Supreme Court refers to public utilities being entitled to rates similar to “investments in other business undertakings which are attended by corresponding risks and uncertainties.”⁵⁹ The Supreme Court in *Hope* similarly stated “[b]y that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.”⁶⁰ The Supreme Court has not limited the Commission to using

⁵⁶ McKenzie Affidavit at 18.

⁵⁷ McKenzie Ans. Test. (Docket No. EL16-64-002) at 100.

⁵⁸ *Id.* at 161 (footnote omitted).

⁵⁹ *Bluefield*, 262 U.S. at 692.

⁶⁰ *Hope*, 320 U.S. at 603.

only regulated utilities in its proxy group determinations, and the Commission need not self-impose such limits.

The key principle in identifying which non-energy companies should be included in a proxy group should be the same as noted above—whether investors regard these companies as comparable investments (in terms of investment risk) to the utilities or pipelines in an ROE proceeding. “The Commission should not pre-define industries that are comparable in risk” to transmission-owning public utilities.⁶¹ Consistent with *Hope* and *Bluefield*, the Commission should retain the flexibility to consider new proxy groups and rely on record-specific case-by-case analysis. Considering analyses based on non-utility proxy groups would depend on the record evidence developed on a case-by-case basis, and this evidence would serve as an additional benchmark, not a substitute for the Coakley Methodology. As a result, there is no need to alter the core framework of the Coakley Methodology to accommodate such an approach.

Question D4: *What, if any, are appropriate high- and low-end outlier tests?*

The issue of whether the Commission should exclude certain high-end and low-end results on the basis that they are not economically logical has been directly and thoroughly litigated in recent ROE proceedings. Accordingly, the Commission has extensive, recent real-world experience with this issue that is sufficient to resolve this question at this time. Indeed, as explained below, and as previously detailed by the

⁶¹ See McKenzie Affidavit at 18 (“reference to cost of equity estimates for a group of non-regulated companies that is demonstrated to be of comparable risk to the utility at issue can inform the Commission’s deliberations.”).

NETOs in the various ISO-NE ROE proceedings, the Commission should retain its existing policies regarding high- and low-end results tests, with only limited adjustments. More extensive changes are unjustified, and would undermine predictability and disrupt existing proceedings.

1. The Commission should retain, but update its implementation of, its approach to screening out low-end values

The Commission should retain, with limited adjustments, its current approach to excluding low-end values because this approach has been shown to appropriately identify economically illogical ROE results. Specifically, the NETOs support the Commission's existing policy of excluding from the proxy group any company's ROE that does not exceed the average yield on Baa-rated public utility bonds by a basis points threshold, which is currently set at 100 basis points.⁶² This low-end screen is logical and easy to apply objectively.

The Commission, however, has recognized that there is some flexibility in this approach, in that it has sometimes excluded or included results that exceed or fall under the 100-basis-point threshold.⁶³ The Commission should confirm that this flexibility remains part of its ROE policy. In addition, the Commission should update its policy so that the low-end exclusion threshold value is not fixed at 100 basis points but instead accounts for evolving economic realities. Such a limited change to existing policy is

⁶² See Opinion No. 531 at P 122.

⁶³ *Id.* at PP 122-23; Affidavit of Adrien F. McKenzie, CFA, Attachment A to NETOs IB, at 16:15-16 (“McKenzie IB Affidavit”).

necessary to screen out ROE estimates that are sufficiently low such that an investor would consider the stock to yield essentially the same return as debt.

As Mr. McKenzie has explained, there is an inverse relationship between equity risk premiums and bond yields, and bond yields have declined significantly since the 100-basis-point figure was chosen.⁶⁴ This decline in bond yields “implies a significant increase in the equity risk premium that investors require to accept the higher uncertainties associated with an investment in utility common stocks versus bonds,”⁶⁵ meaning the current 100-basis-point threshold “vastly understate[s] the threshold for investors’ minimum required return on utility stocks.”⁶⁶

The Commission should thus widen its low-end values screen (to more than 100 basis points) based on current market conditions and allow for further adjustments based on future changes to market conditions.

2. The Commission should not apply any high-end values screen to the two-step DCF results

The purpose of a high-end values screen is “to screen out companies whose growth rates are unsustainably high.”⁶⁷ The Commission used to do this by excluding from the proxy groups any utility with a DCF result at or above 17.7 percent and a forecast growth rate at or above 13.3 percent.⁶⁸ When the Commission adopted Opinion

⁶⁴ McKenzie IB Affidavit at 16:18-19, 17:1-8.

⁶⁵ *Id.* at 17:4-8.

⁶⁶ *Id.* at 17:8-10.

⁶⁷ Opinion No. 531-B at P 79.

⁶⁸ See, e.g., *Coakley v. Bangor Hydro-Elec. Co.*, Initial Decision, 144 FERC ¶ 63,012 at P 572 (2013) (“The Commission has repeatedly applied the same high end outlier test since

No. 531, it found that “it is unnecessary to screen the proxy group for unsustainable growth rates because the methodology assumes that the long-term growth rate for each company is equal to GDP.”⁶⁹ Thus, there is no need for a high-end screen for the two-step DCF methodology.⁷⁰

In this regard, the NETOs object to the Commission’s proposed approach in the 2018 *Coakley* Order that would exclude “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 [methodology] is applied.”⁷¹ The Commission’s proposed 150 percent threshold is arbitrary and untethered to Commission precedent. This proposal is unlike the previous high-end values screen with defined cut-offs, because the basis for those cut-offs was a concern that growth rates above those values were unsustainable.⁷² Rather than providing affirmative evidence for this novel proposal, the 2018 *Coakley* Order suggests applying it to avoid possible “unusual circumstances” in which “the two-step

2004, holding that a company’s results should be excluded from the range of reasonableness if its cost of equity estimate (i.e., its DCF result) is at or above 17.7% and its growth rate is at or above 13.3%.”) (citing *ITC Holdings Corp.*, 121 FERC ¶ 61,229 at PP 28, 42 (2007); *Potomac-Appalachian Transmission Highline LLC*, 122 FERC ¶ 61,188 at P 100 (2008), *order on reh’g*, 133 FERC ¶ 61,152 at PP 20, 40, 64 (2010); *S. Cal. Edison Co.*, 131 FERC ¶ 61,020 at P 57 (2010); *S. Cal. Edison Co.*, 139 FERC ¶ 61,042 at PP 54, 60 (2012); *RITELine*, 137 FERC ¶ 61,039 at PP 68-73 (2011); *N. Pass Transmission LLC*, 134 FERC ¶ 61,095 at PP 46, 52-54 (2011)). *See also* Opinion No. 531 at P 115 (citing *id.*).

⁶⁹ Opinion No. 531 at P 118.

⁷⁰ The NETOs do not take issue with applying the same high-end screen to the CAPM and Expected Earnings analyses.

⁷¹ 2018 *Coakley* Order at P 53.

⁷² *See, e.g.*, *S. Cal. Edison Co.*, 131 FERC ¶ 61,020 at P 57 (2010).

DCF methodology may produce unsustainably high results for a particular proxy company.”⁷³ Speculation is not a reasoned basis for departing from a proven methodology.⁷⁴

Further, as Mr. McKenzie has explained, even if cost of equity estimates of 150 percent above the median did reflect growth rates that the Commission viewed as presumptively unsustainable, that would not provide a reasoned basis for eliminating them from the proxy group because the proxy group should reflect the range of investor expectations.⁷⁵ Moreover, applying this high-end values screen to the two-step DCF method—which already contains sustainable growth assumptions—could improperly exclude from the proxy group a utility with a plausible ROE estimate solely because it is materially higher than the median. As Mr. McKenzie has explained, it would “artificially narrow the ROE zone of reasonableness by collapsing the range of ‘acceptable’ values down towards the biased median of the overall DCF results.”⁷⁶ This is unnecessary and may harm, rather than improve, the high-end values screen.

For all of these reasons, the Commission should not apply any high-end values screen to the two-step DCF results.

⁷³ 2018 *Coakley* Order at P 52 (emphasis added).

⁷⁴ See, e.g., *Horsehead Res. Dev. Co. v. Browner*, 16 F.3d 1246, 1269 (D.C. Cir. 1994) (“[pure] speculation is an inadequate replacement for the agency’s duty to undertake an examination of the relevant data and reasoned analysis”); *Nat. Res. Def. Council, Inc. v. U.S. E.P.A.*, 859 F.2d 156, 210 (D.C. Cir. 1988) (“EPA offers no more than mere speculation to support its conclusion. These are not adequate grounds upon which to sustain an agency’s action.”).

⁷⁵ McKenzie IB Affidavit at 20-22.

⁷⁶ *Id.* at 22.

3. The Commission should not adopt a “Natural Break” analysis for either high-end or low-end results

The NETOs oppose use of a “natural break” analysis to identify economically illogical ROE results on either the high-end or low-end. Such an analysis—which entails comparing the gaps between two ROE estimates throughout a proxy group and judging whether the magnitude of such gap suggests that an ROE estimate has no economic basis—is unnecessary, and is highly subjective.

First, there is no credible evidence to suggest that the natural break test identifies economically illogical ROE results. A gap between the estimated cost of equity for two adjacent, rank-ordered companies may or may not exist for many reasons. And the existence or absence of a gap between cost of equity estimates for the proxy group companies, or the magnitude of any such gap, does not necessarily indicate whether results are economically logical or illogical.⁷⁷

Second, the natural break analysis is unnecessary. The low- and high-end value approaches discussed above already screen for economically illogical ROE results to the extent necessary. For instance, the low-end values screen creates a low-end threshold of a particular number of basis points above the average bond yield because investors would consider a result that is equal to or less than this to be the same or worse than the return on debt, given the additional risks associated with equity interests.⁷⁸ So any ROE below this threshold would be economically illogical. Moreover, the Commission has

⁷⁷ *Id.* at 25:3-27:11.

⁷⁸ Opinion No. 531 at P 122.

previously found that the distribution of high-end ROE estimates is irrelevant to determining the reasonableness of those estimates.⁷⁹

Third, the Commission should not adopt the natural break test because determining the magnitude of a natural break for reasonableness purposes is arbitrary. The current practice of ranking the proxy group companies' ROE estimates numerically is a quantitative exercise to determine whether a gap is large enough to constitute a threshold between economically logical and illogical ROE estimates. It does not make sense to replace this proven, quantitative method with a highly-subjective assessment like the natural break analysis that could lead to disparate and inexplicable results.

Accordingly, the NETOs object to the use of a natural break analysis to identify illogical high- or low-end ROE estimates.

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?

As explained above, the low-end results test should not be based on a fixed value relative to the costs of debt. Instead, it should reflect the cost of debt but vary based on interest rates because, as the Commission has recognized, "equity risk premiums expand when interest rates fall, and vice versa."⁸⁰ Maintaining a static low-end threshold thus

⁷⁹ Opinion No. 531-B at P 79; *see also* McKenzie IB Affidavit at 24:10-25:2.

⁸⁰ McKenzie IB Affidavit at 16:21-17:1 (citing Opinion No. 531 at P 147; Opinion No. 551 at P 197).

ignores the inverse relationship between equity risk premiums and bond yields. As Mr. McKenzie has previously explained, since the 100-basis-point threshold was established, “bond yields have declined significantly” and as a result “using a fixed premium of 100 basis points over Baa public utility bond yields will vastly understate the threshold for investors’ minimum required return on utility stocks.”⁸¹ The opposite could be true in the future. For that reason, the Commission should adopt a flexible low-end threshold test that varies based on interest rates.

D4.b. How, if at all, should the Commission’s approach to outliers vary among different financial models?

As explained above, the Commission need not and should not apply a high-end threshold test to two-step DCF results. As to the CAPM and Expected Earnings models, the Commission’s approach to low-end and high-end results should be consistent. There is no logical or economic basis for the Commission to apply different high-end threshold tests to CAPM and Expected Earnings results.

Question D5: How, if at all, does the Commission’s use of credit ratings in ROE determinations incentivize public utilities to behave in certain ways, such as issuing more debt, and does this affect public utilities’ credit ratings?

There is no reason to conclude that the use of credit ratings as part of the Commission’s ROE policies would induce a utility’s treasury department to make different financial leverage decisions. Mr. Quackenbush addresses this issue at length, drawing on his experiences as a corporate finance professional in a treasury department

⁸¹ *Id.* at 17:4-10.

that issued securities for both regulated entities and unregulated entities, and as an investor representative engaged in meetings with the Chief Financial Officers of a wide range of North American utilities.⁸² He explains that the Commission’s use of credit ratings when determining a just and reasonable ROE “does not incentivize public utility debt issuance behavior.”⁸³ Instead, corporate treasury departments manage their debt in order to minimize the Weighted Average Cost of Capital (“WACC”). Managing debt and minimizing WACC have a stronger impact on a company’s financial decisions and financial position than taking actions that attempt to affect the company’s credit ratings because the Commission considers that rating in its determination of the company’s allowed return.⁸⁴ If a corporation operating in a conventional leverage range were to significantly increase debt leverage in an effort to influence the outcome of ROE proceedings before the Commission, that company would decrease its credit rating but its actions also would significantly increase the risk and cost of both the company’s debt and equity.⁸⁵ As illustrated by Attachment 3 to his affidavit, Mr. Quackenbush explains how the optimal debt-to-equity ratio operates in a fairly wide range, and that manipulating financial leverage to move along the curve would be futile.⁸⁶

Investors expect to earn a return that is commensurate with the inherent risk of their investment.⁸⁷ A dramatic shift in leverage would not allow investors to earn a return

⁸² Quackenbush Affidavit at 16.

⁸³ *Id.* at 15.

⁸⁴ *Id.* at 15.

⁸⁵ *Id.* at 16.

⁸⁶ *Id.* at 16.

⁸⁷ *Id.* at 15.

greater than the additional risk created by such behavior.⁸⁸ Moreover, Mr. Quackenbush explains that, if utilities operated in a perverse manner to favorably impact regulator-authorized ROEs, such actions would be visible in the form of many more below-investment grade, speculative, junk debt utilities.⁸⁹ As he notes, there is no evidence whatsoever that utilities would achieve below-investment grade status by design.⁹⁰ Attachment 3 to Mr. Quackenbush's affidavit shows that, as of the fourth quarter of 2018, there were no sub-investment grade utilities out of the 47 EEI members.⁹¹ In 2019, the only utility that did fall into the sub-investment category was due to catastrophic circumstances.⁹² In short, the type of behavior contemplated in this question would be entirely counter-productive, and does not occur.

Question D7: To what extent do credit ratings correspond to the ROE required by investors?

The Commission need not disrupt its current approach in using credit ratings in its proxy group selection. See the NETOs' responses to Questions D2 and D5.

Question D8: The Commission excludes from the proxy group companies with merger activity during the six-month study period that is significant enough to distort study inputs. Should the Commission continue using our existing merger screen?

The Commission should continue to use its existing approach to screen out companies due to major merger activity that significantly distorts the study inputs.⁹³

⁸⁸ See *id.* at 15.

⁸⁹ *Id.* at 17.

⁹⁰ See *id.* at 17.

⁹¹ *Id.* at 17.

⁹² *Id.* at 17:8-11.

⁹³ See, e.g., Opinion No. 531 at PP 92, 114; Opinion No. 551 at PP 37-43.

D8.a. If so, should the Commission revise its standards for what conduct constitutes merger and acquisition activity?

The Commission should continue to use its existing standards to determine what conduct constitutes merger and acquisition activity, which screens for major merger activity that significantly distorts the inputs of model analysis.⁹⁴

Question D9: What circumstances or factors, if any, warrant an adjustment from the midpoint/median to other points within the zone of reasonableness (e.g., lower or upper midpoint/median)?

Coakley and *Emera Maine* both identify companies' risks relative to the proxy group as the primary factor in the placement of the base ROE. This approach is consistent with the objectives of the Commission's ROE policy, and there is no reason to change this approach.

Question D10: The Commission currently uses midpoints to determine the central tendency of the zone of reasonableness when determining RTO-wide ROEs. Should the Commission adopt a policy of using medians for this purpose?

D10.a. Would the use of multiple ROE methodologies, as proposed in the Coakley Briefing Order, undercut the Commission's current rationale for using the midpoint in RTO-wide base ROE?

D10.b. Should the size of the proxy group be considered in this decision?

The Commission should not adopt a policy of using medians to determine the central tendency of the zone of reasonableness for RTO-wide ROEs. Neither the use of multiple models, nor the size of proxy groups have anything to do with the reasons that support the Commission's use of the midpoint in cases involving RTO-wide ROEs. The Commission has, for fifteen years, consistently used the midpoint of a zone of

⁹⁴ See, e.g., Opinion No. 531 at PP 92, 114; Opinion No. 551 at PP 37-43

reasonableness produced by a financial model to set the base ROE for a diverse group of utilities like the NETOs or the MISO transmission owners.⁹⁵

The Courts have upheld this approach, recognizing that, “in the context of a diverse group of companies,” the Commission “must ensure that the ROE results in a reasonable rate of return as applied to all the utilities in the group.”⁹⁶ The Commission’s obligation to ensure reasonable returns for all utilities in an RTO-wide rate case has not changed – indeed, it is fundamental to the Commission’s obligations under the Federal Power Act.

There is no reason to deviate from this approach or the Court-approved reasoning that supports it. In his Reply Affidavit submitted in response to the 2018 *Coakley* Order, Mr. McKenzie explains that the midpoint continues to be appropriate to set the base ROE for a diverse group of utilities within a zone of reasonableness produced by a larger national proxy group because the midpoint “considers the boundaries of the range, which the median ignores.”⁹⁷

The size of the proxy group does not alter the core reasoning underlying the use of the midpoint, rather than the median, for cases involving a group of utilities. Reliance on

⁹⁵ See *Midwest Indep. Transmission Sys. Operator, Inc.*, 106 FERC ¶ 61,302 at PP 9-11 (2004) (“MISO”), aff’d in relevant part sub nom. *Pub. Serv. Comm’n of Ky. v. FERC*, 397 F.3d 1004, 1010-11 (D.C. Cir. 2005); *S. Cal Edison Co.*, 131 FERC ¶ 61,020 at PP 91-92 (2010), aff’d in relevant part sub nom. *S. Cal. Edison Co. v. FERC*, 717 F.3d 177, 185-87 (D.C. Cir. 2013); Opinion No. 531 at P 26; Opinion No. 531-B at P 55; Opinion No. 551 at P 278.

⁹⁶ *S. Cal. Edison Co.*, 717 F.3d at 186. *Emera Maine* also highlighted a long line of precedent where the D.C. Circuit has “noted that the midpoint is a good ‘starting place’ for the placement of the ROE. *Emera Maine*, 854 F.3d at 27 (citing *Tenn. Gas Pipeline Co. v. FERC*, 926 F.2d 1206, 1213 (D.C. Cir. 1991)).

⁹⁷ McKenzie RB Affidavit at 137-38.

the median focuses on a single value in the middle of the results and ignores the boundaries of the results; this remains true whether the proxy group of companies facing comparable risks is small, medium or large.

The use of multiple financial models to determine an ROE does not undercut the Commission’s rationale for using the midpoint. The CAPM and Expected Earnings analyses serve the same purpose as the DCF analysis—estimating a range of reasonable returns for the utilities in question. As the Commission explained in the 2018 *Coakley* Order, the CAPM and Expected Earnings analyses, like the DCF analysis, use proxy groups to determine this range of reasonable returns.⁹⁸ The Commission uses the same screens for developing a proxy group for all three analyses.⁹⁹ As Mr. McKenzie notes, the “results of the DCF, CAPM, and Expected Earnings approaches – after excluding illogical values – provide alternative zones that reflect our best estimate of the range of required returns that span the spectrum of risks characterizing the NETOs.”¹⁰⁰ The Commission’s rationale for using the midpoint to set a base ROE within a zone of reasonableness produced by a DCF analysis applies equally to a zone of reasonableness produced by applying the CAPM and Expected Earnings analyses to the proxy group. In each case, the midpoint relies on the high- and low-end values to take into account a sufficiently wide range of results, producing an ROE that best reflects the spectrum of risks facing a diverse group of utilities. Averaging the medians of the three models

⁹⁸ 2018 *Coakley* Order at P 49.

⁹⁹ *Id.*

¹⁰⁰ McKenzie RB Affidavit at 138.

would not accomplish the goal of considering a sufficiently wide range of results and would ignore the boundaries of the results.

As the Presiding Judge in Docket No. EL16-64 correctly concluded, “for groups of utilities, the Commission picks the midpoint . . . because it *necessarily* relies on the extreme results at the low and high ends of the proxy group, without regard to the skew of the mean value or the proximity of the plurality of data points to the middle of the group.”¹⁰¹

For all these reasons, the Commission should continue to use the midpoint of the zone of reasonableness as the appropriate measure of central tendency to set the ROE for diverse groups of utilities.

E. Financial Model Choice

The NOI seeks information on investors’ use of financial models other than the DCF model, including analysis of the strengths and weaknesses of those models, and the appropriate weight for the Commission to give each of those models based on their respective characteristics.¹⁰² Below and in the Quackenbush Affidavit attached to these Comments, the NETOs respond to these inquiries.

The 2018 *Coakley* Order correctly found that using multiple financial models, and giving equal weight to the DCF, CAPM, Expected Earnings, and Risk Premium analyses, best estimates utility cost of equity and is superior to sole reliance on the use of DCF model results. As the record in the *Coakley* proceedings shows, and as Mr. Quackenbush

¹⁰¹ Complaint IV ID at P 216 (emphasis in original).

¹⁰² NOI at P 35.

explains, equity investors use each of the four models when making investment decisions.¹⁰³ While investors may also use additional models to provide further data to consider when making investment decisions, these four models have withstood the test of time and, as Mr. Quackenbush testifies, provide a balanced representative group of models that investors use in evaluating utility equity investment.¹⁰⁴

Question E1: *What models do investors use to evaluate utility equities?*

Investors use multiple models and different variations of those models when making their investment decisions. The Quackenbush Affidavit explains that investors prefer financial models that “have conceptual academic intuitive appeal as well as demonstrably useful practical results,” and that the four models set forth in the 2018 *Coakley* Order satisfy that preference.¹⁰⁵ Investors have relied on these four models for many years. The Commission’s proposal to use them as a group, Mr. Quackenbush finds, provides a balanced approach that is reflective of how investors make investment decisions. Moreover, the four models represent a diverse, thorough, and reasonably comprehensive set of models.¹⁰⁶

As the Commission correctly noted in the 2018 *Coakley* Order, “[t]here is no monopoly as to which method is used by investors,”¹⁰⁷ Mr. Quackenbush finds that using the four models captures a fair representation of the models used by investors in the

¹⁰³ Quackenbush Affidavit at 17.

¹⁰⁴ *Id.* at 17-18.

¹⁰⁵ *Id.* at 17; 2018 *Coakley* Order at PP 30-39.

¹⁰⁶ Quackenbush Affidavit at 18.

¹⁰⁷ 2018 *Coakley* Order at P 35 (quoting Morin at 429).

aggregate.¹⁰⁸ Importantly, each of the four models helps investors observe the investment landscape in a different way. As more fully explained in the Quackenbush Affidavit, by considering these four models together, the Commission is able to derive a more accurate estimate of the cost of capital that investors in the aggregate require.¹⁰⁹

Question E2: What role do current capital market conditions play in the choice of model used by investors to evaluate utility equities?

The Quackenbush Affidavit explains that prevailing capital market conditions can influence the weight that investors place on the results of particular models as well as the input assumptions used in applying financial models.¹¹⁰ However, investors do not completely reject certain models and adopt entirely new models in their analyses based on shifting capital market conditions. Rather, in Mr. Quackenbush's experience, investors view the results of a portfolio of models and exercise judgment in evaluating model results based on factors such as current and forecasted capital market conditions.¹¹¹ The 2018 *Coakley* Order's proposal to use multiple models, rather than a single financial model, results in a utility cost of equity estimate that better reflects shifting or unusual capital market conditions.

The Quackenbush Affidavit explains that anomalous capital market conditions resulting from the unprecedented central bank intervention in response to the global financial crisis led some investors to recognize that capital market conditions increased

¹⁰⁸ Quackenbush Affidavit at 18.

¹⁰⁹ *Id.* at 17-20.

¹¹⁰ *Id.* at 20.

¹¹¹ *Id.*

model risk and, consequently, de-emphasized the use of certain models, such as the DCF model.¹¹² Relying on models in addition to the DCF model as proposed in the 2018 *Coakley* Order mitigates the model risk from capital market conditions that may affect one model more than others.¹¹³ For example, the Quackenbush Affidavit explains that investors view the Expected Earnings approach as being less susceptible to model risk caused by shifting capital market conditions.¹¹⁴ Averaging the results of four models used by investors in making their investment decisions takes the effect of shifting capital market conditions on financial models into account.

Questions E3 and E6 address whether some models are better than others:

E3. *Are any models thought to be superior or inferior to others? If so, why?*

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?*

No financial model is inherently superior or inferior to other models. Each model has strengths and weaknesses and there is no single best model that exclusively results in a more accurate cost of equity in *all* market conditions. All models are imperfect and are susceptible to model risk and measurement error.¹¹⁵ For this reason, the Quackenbush Affidavit explains that investors prefer to rely on multiple models when evaluating equities.¹¹⁶ For similar reasons, Mr. Quackenbush supports the Commission’s proposal in

¹¹² *Id.*

¹¹³ *Id.* at 21.

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 21-22.

¹¹⁶ *Id.* at 22.

the 2018 *Coakley* Order to combine the results of the DCF, CAPM, Expected Earnings, and Risk Premium analyses while continuing to examine the particular circumstances of each case. In the absence of a well-founded reason to deviate from this approach based on particular circumstances in a case, equal weighting of the model results by the Commission is appropriate.¹¹⁷

Equally weighting the models is particularly appropriate in the context of the Commission's review of FPA Section 206 complaints pursuant to step one of the FPA Section 206 analysis. The 2018 *Coakley* Order proposes that the Commission identify a quartile range of presumptively just and reasonable ROEs as a screen to determine whether the Commission should dismiss a complaint for failing to demonstrate that the existing ROE has become unjust and unreasonable under the first prong of FPA Section 206. In this screening analysis, giving equal weight to each of the models is appropriate and would establish a bright line standard for a complainant to meet when filing an FPA Section 206 complaint. What weight the Commission should ultimately give to a particular model only should be assessed under step two of the FPA Section 206 analysis, if at all, based on the case-specific facts and circumstances.¹¹⁸ To provide greater predictability, the Commission should continue to treat equal weighting as the appropriate default standard unless and until record evidence in a particular case establishes a well-founded, compelling reason to deviate from that approach.

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 23.

Questions E4, E5 and E7 ask about the relationships among the multiple models:

- E4. *How are alternative models redundant or complementary with each other and/or the DCF model?*
- E5. *To what extent do alternative models avoid any deficiencies of the DCF model and/or operate better in diverse capital market conditions?*
- E7. *If the Commission were to consider multiple models, how should it weigh them?*

All four of the models proposed in the 2018 *Coakley* Order are simplified versions of “reality,” but each simplifies reality in a different way. Mr. Quackenbush, thus, explains that the models are complementary and operate more effectively as a group because the basis of each model is different. Each model provides an investor with a unique view to rely on when evaluating an equity investment. These differences (or diversity) among the various models provide useful information to investors to use in their investment decision-making.¹¹⁹

Out of the four models proposed in the 2018 *Coakley* Order, the Expected Earnings approach, is the most distinct model (and consequently the most complementary to the other models) in that it is an accounting-based model while the other three models are market-based models. Despite being an accounting-based model, as Mr. Quackenbush explains, the Expected Earnings approach reflects investor valuation approaches. Investors place significant weight on book value and the accounting principles that determine earnings relative to book value, which is a focus of the Expected Earnings approach and is not considered in the other models.¹²⁰ Moreover, Mr.

¹¹⁹ *Id.* at 22-23.

¹²⁰ *Id.* at 24-29.

Quackenbush explains that utilizing the Expected Earnings approach with the other models potentially mitigates the Commission’s concerns regarding model risk and anomalous capital market conditions as the Expected Earnings approach is less susceptible to shifting capital market conditions and assumptions built into the market-based models.¹²¹

Question E8: *To what extent is it reasonable for the Commission to use a simplified version of a model that does not reflect all the variables that investors consider?*

As noted above, all financial models, including the four models used by the Commission in the 2018 *Coakley* Order, are “simplified” versions of reality and, thus, the Commission should not attempt to simplify the models any further. As Mr. Quackenbush explains, these four models appropriately balance simplicity and reality given the current state of finance.¹²²

Questions E9 and E10 both concern state ROEs:

E9. How, if at all, should the Commission consider state ROEs?

E9.a. How and why do state ROEs vary by state?

E9.b. How are certain state ROEs more or less comparable to Commission ROEs?

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?

The NETOs support the Commission’s proposed use of the four models described in the 2018 *Coakley* Order. As the Quackenbush Affidavit points out, together, the four

¹²¹ *Id.* at 29.

¹²² *Id.* at 30.

models are a balanced representative group of models used by investors when making investment decisions.¹²³ The NETOs recognize that this proposal does not specifically utilize state ROEs as an input to set the composite zone of reasonableness or weight it with the financial models in establishing a new just and reasonable ROE.¹²⁴ However, consistent with Opinion Nos. 531 and 551, the Commission should consider state ROEs if doing so helps the Commission reach a result that “accurately reflects the [ROE] necessary to meet the *Hope* and *Bluefield* capital attraction standards.”¹²⁵

In Opinion Nos. 531 and 551, the Commission found that record evidence of state ROEs supported an upward adjustment of the base ROE for the NETOs and MISO transmission owners.¹²⁶ In reaching this finding in both cases, the Commission appropriately concluded that “interstate transmission is riskier than state-level distribution”¹²⁷ and “Commission-regulated electric transmission entails risks that are ‘at least as great’ as those faced by investors in integrated electric utilities.”¹²⁸ Given the Commission’s findings that transmission investment is more risky than distribution and the relevant risk is “at least as great” as investment in integrated electric utilities, state ROEs are probative evidence on whether the results of applying the Commission’s ROE methodology will satisfy the *Hope* and *Bluefield* capital attraction standards. *Emera*

¹²³ *Id.* at 17-18.

¹²⁴ 2018 *Coakley* Order at P 35 n.72.

¹²⁵ Opinion No. 531 at P 145; *see also* Quackenbush Affidavit at 31 (“State-authorized ROEs may serve to corroborate the results of the four methods used in the Coakley ROE Methodology.”).

¹²⁶ Opinion No. 531 at P 148; Opinion No. 551 at P 250.

¹²⁷ Opinion No. 531-B at P 84.

¹²⁸ Opinion No. 551 at P 250.

Maine did not undermine these conclusions. Therefore, the Commission should consider evidence on state ROEs in evaluating the results of the four financial models set forth in the 2018 *Coakley* Order.

With regard to considering evidence of state ROEs for utilities that are (a) distribution and transmission companies, or (b) distribution, generation, and transmission companies, the Commission should follow the reasoning it articulated in Opinion Nos. 531 and 551. Investment in state-jurisdictional distribution infrastructure should be treated as less risky than investment in interstate transmission infrastructure; this accords with the Commission's finding in Opinion No. 531 that "interstate transmission is riskier than state-level distribution."¹²⁹ Because vertically integrated utilities possess assets that are arguably both more risky than transmission (generation) and less risky than transmission (distribution), the Quackenbush Affidavit concludes that the risks associated with investment in vertically integrated utilities corresponds closely with the level of risk associated with transmission investment.¹³⁰ Mr. Quackenbush's conclusion is consistent with the Commission's finding in Opinion No. 551 that "Commission-regulated electric transmission entails risks that are 'at least as great' as those faced by investors in integrated electric utilities."¹³¹

Based on the foregoing, evidence of state ROEs for distribution and transmission only utilities being approximately equal to or higher than the resulting ROE for

¹²⁹ Opinion No. 531-B at P 84.

¹³⁰ Quackenbush Affidavit at 31-33.

¹³¹ Opinion No. 551 at P 250.

transmission investment would support a finding that the mechanical application of the Commission's ROE methodology may be insufficient to satisfy the *Hope* and *Bluefield* capital attraction standards. Similarly, if vertically integrated utility state ROEs are higher than the ROE resulting from application of the Coakley Methodology, the resulting transmission ROE may be inadequate to satisfy *Hope* and *Bluefield*.

Question E11: *To what extent, if any, should the Commission exercise judgment in using financial models to set ROEs under various capital market conditions?*

The Commission struck the appropriate balance in mechanically applying the proposed ROE methodology and applying its discretion in the 2018 *Coakley* Order. On the one hand, having an ROE methodology that is uniformly applied each time the Commission evaluates utility cost of capital provides transparency and enhanced regulatory certainty for utilities, investors, customers and other interested parties, and aids in avoiding arbitrary and capricious decision-making that could violate the Administrative Procedure Act. On the other hand, the mechanical application of any ROE methodology may not always lead to equitable results or results that comply with *Hope* and *Bluefield*. Thus, the NETOs recognize that some flexibility is necessary.¹³²

The approach the Commission laid out in the 2018 *Coakley* Order balances predictability and flexibility. The Commission also designed the methodology so that it is not applied in an overly mechanical manner and thus allows flexibility to consider

¹³² Quackenbush Affidavit at 33.

evidence that may indicate that a deviation from the proposed framework may be necessary in certain limited circumstances.¹³³

F. Mismatch between Market-based ROE determinations and Book-Value Rate Base

The NOI noted that the market-to-book ratios of companies reflected in the Commission's proxy groups generally have been "substantially in excess of one" for the last three decades.¹³⁴ The Commission seeks comment on whether "the mismatch between market-based ROE determinations and book-value rate base . . . is a problem."¹³⁵ If so, the Commission seeks information on how it should address this issue.¹³⁶

The NETOs do not agree that there is a "mismatch" between market-based ROE determinations and book-value rate base.¹³⁷ A market-to-book ratio in excess of one does not imply a "mismatch" between market-based ROE determinations and book value rate base. As further discussed below, market-to-book ratios should not affect a regulator's determination regarding the allowed ROE on the book value of a utility's investment in rate base.

Hope and *Bluefield* hold that investors should be allowed a return on their invested capital that is equal to the return they can achieve on similar risk investments. In the case

¹³³ For example, the Commission allows parties an opportunity to overcome the presumption that ROEs within the appropriate quartile range are just and reasonable. *See 2018 Coakley Order* at PP 16, 29. The NETOs suggest clarifications that would further enhance the balance that the Commission established for applying this presumption. *See infra* Section II.G.

¹³⁴ NOI at P 36.

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ *See Quackenbush Affidavit at 35-36.*

of the DCF model and CAPM, the required return is measured by estimating the expected return on a stock investment of similar risk, which is an alternative investment opportunity. No adjustment for market-to-book ratios is required because the DCF and CAPM measure required return that can be directly applied to rate base, and investors understand how the results apply under cost-of-service ratemaking. Moreover, market-to-book ratios are not an issue for the Risk Premium or Expected Earnings analyses because they reflect return on rate base and book value, respectively.

By authorizing an ROE based on the market required return, the Commission satisfies the *Hope* and *Bluefield* standards and leaves the market to adjust stock prices to reflect a myriad of company and market issues. The Commission should not second guess the market and seek to determine an ROE that targets a specific level of return on the market value of a company's stock, or that is intended to adjust the market value of stock. The rationality, advisability or efficiency of market pricing is not in the Commission's purview.

Question F1: *Does the mismatch between market-based ROE determinations and a book value rate base support current market values? Is this mismatch a problem?*

As articulated in the McKenzie Affidavit, the assertion that a market-to-book ratio exceeding one is problematic confuses the theory underlying the DCF and other market-based models with the practical realities of real-world capital markets and ignores the regulatory standards underlying a just and reasonable ROE.¹³⁸ Traditional regulatory ratemaking principles generally rely on the historical cost of a utility's investment, as

¹³⁸ McKenzie Affidavit at 20, 25-26.

reflected in its accounting records, as the generally accepted basis to compute the return component of rates. As Mr. McKenzie explains in his affidavit, recognition that there is no single approach to estimating the cost of equity that is inherently reliable does not alter this fundamental premise in any way.¹³⁹ Nor does it call into question the relevance of market-based methods to estimate the cost of equity, or otherwise imply a “mismatch” between the results of financial models and the traditional rate base construct. In short, there is no “mismatch” problem.

Other authoritative sources also contradict any assertion that market-to-book ratios should have any role in a regulator’s analysis to set ROE. For example, James C. Bonbright found focusing on market-to-book ratios to be unwarranted and outside the purview of regulators:

In the first place, commissioners cannot forecast, except within wide limits, the effect their rate orders will have on the market prices of the stocks of the companies they regulate. In the second place, whatever the initial market prices may be, they are sure to change not only with the changing prospects for earnings, but with the changing outlook of an inherently volatile stock market. In short, market prices are beyond the control, though not beyond the influence, of rate regulation. Moreover, even if a commission did possess the power of control, any attempt to exercise it . . . would result in harmful, uneconomic shifts in public utility rate levels.¹⁴⁰

Stewart C. Myers, a well-known financial researcher, also observed the disconnect between regulation and resulting market-to-book ratios, stating:

[A] straightforward application of the cost of capital to a book value rate base does not automatically imply that the market and book

¹³⁹ *Id.* at 19.

¹⁴⁰ James C. Bonbright, Albert L. Danielsen & David R. Kamerschen, *Principles of Public Utility Rates* 334 (Pub. Util. Reports, Inc., 1988).

values will be equal. This is an obvious but important point. If straightforward approaches did imply equality of market and book values, then there would be no need to estimate the cost of capital.¹⁴¹

Charles F. Phillips, a well-regarded economist, also recognized the divergence of theoretical models and real-world considerations pertaining to issues on market-to-book ratios in his treatise on *The Regulation of Public Utilities*:

Many question the assumption that market price should equal book value, believing that the earnings of utilities should be sufficiently high to achieve market-to-book ratios which are consistent with those prevailing for stocks of unregulated companies.¹⁴²

Mr. McKenzie also examined the historical market-to-book ratios of companies in the S&P 500 Index and found that the majority of stocks sell substantially above book value, with stock prices per share averaging almost three times book value per share.¹⁴³ In fact, Mr. McKenzie found that the average market-to-book ratio for utilities is among the lowest of the industry groups at 2.08, well below the 2.80 market-to-book ratio for the historical average of the S&P 500 Index.¹⁴⁴

As the Quackenbush Affidavit indicates, investors “are fully aware of the market-to-book ratios of investment opportunities” and are also aware of “how conventional public utility cost of service ratemaking works and the historical precedent that support it.”¹⁴⁵ In fact, as Mr. McKenzie explains, the critical assumption underlying the

¹⁴¹ Stewart C. Myers, *The Application of Finance Theory to Public Utility Rate Cases*, Bell J. Econ. & Mgmt. Science 58-59 (Spring 1972).

¹⁴² Charles F. Phillips, *The Regulation of Public Utilities-Theory and Practice* 395 (Pub. Util. Reports, Inc. 1993).

¹⁴³ McKenzie Affidavit at 23.

¹⁴⁴ *Id.* at 24.

¹⁴⁵ Quackenbush Affidavit at 35.

investors' evaluation is that the utility itself will continue to earn its return on book value to infinity and this assumption is built into the market price of the utility stock. Importantly, the Commission does not set the returns that investors earn in the capital markets nor does it regulate stock market prices. Rather, regulators establish the allowed ROE on the book value of a utility's investment in rate base.

As the McKenzie Affidavit explains, it is well accepted that policies designed to obtain a targeted relationship between the stock price and the book value of a utility's stock (*e.g.*, market-to-book ratio of 1.0) are fundamentally misguided. Implicit in the notion of a "mismatch" is the incorrect assumption that the Commission should set ROEs to achieve some theoretical relationship between book and market values. If the Commission imposed this theoretical relationship into its ROE policy, it would turn the evaluation of investors' required return on its head. Instead of looking to market-based measures or expectations of earned returns, the Commission would elevate a theoretical premise based on the strict assumptions of the DCF model to preeminence.

In *New Regulatory Finance*, Dr. Morin disapproves of regulators making adjustments or "corrections" based on market-to-book ratios:

[Market-to-book] ratios are determined by the marketplace, and utilities cannot be expected to compete for and attract capital in an environment where industrials are commanding [market-to-book] ratios well in excess of 1.0 while regulation reduces their [market-to-book] ratios toward 1.0. Moreover, if regulators were to currently set rates so as to produce a [market-to-book] of 1.0 . . . the inevitable consequence would be to inflict severe capital losses on shareholders. Investors have not committed capital to utilities with the expectation of incurring capital losses from a misguided regulatory process.

* * *

It is obvious that regulators, through their rate case decisions, and investors do not subscribe to the notion that utilities that have market prices above book value are over-earning. . . .

* * *

In short, economic principles do not support the notion that the market value of utility shares should necessarily equal book value. A basic economic principle holds that, in the long-run, market value should equal asset replacement cost in a given industry. In the presence of inflation and absent significant technological advances, replacement cost exceeds original cost book value of assets.

Consequently, it is quite reasonable for the market value of utility shares to exceed their book value and there is no reason to conclude that market value should equal book value when one recognizes that regulation is intended to emulate competition.¹⁴⁶

As the Commission correctly found in Opinion No. 531-B, “[i]f, all else being equal, the regulator sets a utility’s ROE so that the utility does not have the opportunity to earn a return on its book value comparable to the amount that investors expect that other utilities of comparable risk will earn on their book equity, the utility will not be able to provide investors the return they require to invest in that utility.”¹⁴⁷ The Commission must not make any adjustment to ROE on the basis of market-to-book ratios. Any such adjustment “would severely undermine the financial strength of utilities and their ability to compete for the capital that is necessary to meet established policy goals supporting greater investment in transmission infrastructure”¹⁴⁸ and may be contrary to the capital attraction standards set forth in *Hope* and *Bluefield*.

¹⁴⁶ Morin at 377-78.

¹⁴⁷ Opinion No. 531-B at P 129.

¹⁴⁸ McKenzie Affidavit at 26.

Question F2: *Why have most or all utility market-to-book ratios consistently exceeded one?*

As Mr. Quackenbush explains in his affidavit, there are many factors that may lead investors to value utility stock at levels different than book value.¹⁴⁹ However, as discussed herein, the fact that utility market-to-book ratios generally exceed one is not relevant to achieving the Commission's ROE policy objectives.¹⁵⁰ Attempting to identify or determine these factors would only distract from the Commission's efforts to achieve those objectives.

Question F3: *How should the ROE level be set relative to the cost of equity?*

In accordance with long-standing Commission precedent, the Commission should continue to set the base ROE for utilities at the estimated cost of equity without regard to market-to-book ratios.¹⁵¹ The NETOs support the Coakley Methodology as an appropriate methodology to set base ROE, which correctly does not make any adjustments based on market-to-book ratios.

Questions F4 and F5 ask whether the Commission should revise its ROE methods to account for market value and book value issues:

- F4. *Should the Commission revise our use of these models to account for the mismatch between market-based ROE determinations and book-value rate base? If so, how? For example, should the Commission adjust the dividend yield used in the DCF model to represent a yield on book value rather than a yield on stock price?*

¹⁴⁹ Quackenbush Affidavit at 36.

¹⁵⁰ See *supra* § II.F (Comments to Question F1).

¹⁵¹ *Orange & Rockland Utils., Inc.*, 44 FERC ¶ 61,253 at 61,951-52 (1988).

F5. Should the Commission consider adjusting ROEs to account for market-to-book ratios above or below one? Would doing so introduce circularity into Commission ROEs by setting the ROE at whatever level of earnings the market expected, rather than making an independent assessment of the appropriate ROE?

The Commission should not revise its use of the models to account for any deviation in the market-to-book ratio from one, or any perceived “mismatch” that is inherent to public utility cost-of-service regulation as discussed above. Moreover, as discussed above, utility market-to-book ratios are not an issue for the Risk Premium and Expected Earnings analyses, which reflect returns on rate base and book value, respectively. Dr. Morin’s conclusions as set forth in *New Regulatory Finance* merit repeating:

[U]tilities cannot be expected to compete for and attract capital in an environment where industrials are commanding [market-to-book] ratios well in excess of 1.0 while regulation reduces their [market-to-book] ratios toward 1.0. Moreover, if regulators were to currently set rates so as to produce a [market-to-book ratio] of 1.0 . . . the inevitable consequence would be to inflict severe capital losses on shareholders. Investors have not committed capital to utilities with the expectation of incurring capital losses from a misguided regulatory process.¹⁵²

The reason for not making a market-to-book ratio adjustment is not because of circularity concerns, but rather, because such an adjustment is unnecessary.¹⁵³

¹⁵² Morin at 377.

¹⁵³ Quackenbush Affidavit at 37.

G. First Prong of ROE Determination

Question G1: *How should the Commission determine if existing ROEs are just and reasonable?*

Under FPA Section 206, the Commission must first conclude whether an ROE is unjust and unreasonable prior to determining a new just and reasonable rate.¹⁵⁴ The proper question to ask in considering the first step of an FPA Section 206 analysis is how the Commission should determine if an existing ROE is unjust and unreasonable. That determination must take into account the directives of the *Emera Maine* Court on what is required to satisfy Section 206. The Court found that the FPA, by requiring the Commission demonstrate that an existing rate is unlawful before ordering a new rate under Section 206, provides a form of “statutory protection” to public utilities.¹⁵⁵ The Court also held that the Commission cannot rely solely on a finding that a single ROE is just and reasonable to conclude that other ROEs are unjust and unreasonable, emphasizing that “the zone of reasonableness creates a broad range of potentially lawful ROEs.”¹⁵⁶

The Commission should use the approach set forth in the 2018 *Coakley* Order to determine whether an existing ROE is unjust and unreasonable under step one of a Section 206 inquiry.¹⁵⁷ The proposed Coakley Methodology is consistent with both the

¹⁵⁴ 16 U.S.C. § 824e(a).

¹⁵⁵ *Emera Maine*, 854 F.3d at 24.

¹⁵⁶ *Id.* at 26.

¹⁵⁷ In their comments on Question G2, the NETOs do identify certain clarifications the Commission should provide as to how the Coakley Methodology will be applied consistent with FPA Section 206.

statutory requirements of Section 206 and the Court’s holding in *Emera Maine*. It affords utilities the “statutory protection” that the Court mandated to ensure that the Commission will not exercise its FPA Section 206 authority unless it satisfies the “condition precedent” of showing that the existing rate falls outside of “a broad range of potentially lawful ROEs.” This approach also provides the requisite connection between the “record evidence” that undermined the reliability of the DCF analysis and the Commission’s “placement of the base ROE.”¹⁵⁸ This new framework will allow the Commission to achieve a “careful balance that attracts sufficient transmission investment but doesn’t impose undue burdens on consumers.”¹⁵⁹

The Commission’s proposed approach for the first step of the FPA Section 206 analysis would use the DCF, CAPM, and Expected Earnings models to establish a quartile range of presumptively just and reasonable ROEs for utilities with low, average, and high risk profiles. If a utility’s base ROE falls within this range, the complaint will be dismissed “unless that presumption is sufficiently rebutted.”¹⁶⁰ The Commission’s goal is to provide a strong, predictable signal to prevent unnecessary and costly proceedings which leave ROEs uncertain for extended periods of time.

¹⁵⁸ *Emera Maine*, 854 F.3d at 27-28.

¹⁵⁹ FERC, 1048th Open Meeting, Tr. at 90:7-9 (Nov. 15, 2018) (Chairman Chatterjee); *see also Bluefield*, 262 U.S. 693 (“The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties.”).

¹⁶⁰ 2018 *Coakley* Order at P 26.

This approach directly cures the flaws in Opinion No. 531 of incorrectly relying on the “assumption that all ROEs other than the one that FERC identifies” are unlawful.¹⁶¹ By relying on “a range of presumptively just and reasonable ROEs” in the first step of its analysis, the Coakley Methodology allows the Commission to undertake the first step of the Section 206 analysis in a manner that complies with the statute and satisfies the findings of the *Emera Maine* Court.

Question G2: *Is the quartile approach that the Commission proposed in the Coakley and MISO Briefing Orders appropriate? If not, how should the Commission revise this methodology?*

The Coakley Methodology’s use of a quartile range to screen for presumptively just and reasonable ROEs is an appropriate approach that will consistently and fairly apply the Court’s holding in *Emera Maine*, provided the Commission makes some minor clarifications. As noted *supra*, the *Emera Maine* Court highlighted the importance of a range of potentially just and reasonable ROEs.¹⁶² Under the Commission’s Coakley Methodology, the specific quartile to be used would correspond with the risk profile of the utilities or utility at issue. As the Commission explained, “it typically would be unjust and unreasonable for an average-risk utility to receive an ROE that is closer to the ROE that would be just and reasonable for a utility of above- or below-average risk.”¹⁶³

While the NETOs are generally supportive of the Commission’s proposed quartile methodology, the NETOs request that the Commission provide certain clarifications

¹⁶¹ *Emera Maine*, 854 F.3d at 26.

¹⁶² *Id.*

¹⁶³ 2018 *Coakley* Order at P 16.

necessary to ensure that the Coakley Methodology is consistent with the FPA, the *Emera Maine* opinion, and prior precedent.

First, the Commission should clarify that the range of presumptively just and reasonable ROEs (*i.e.*, the applicable quartile range) is distinct from the statutory zone of reasonableness. That is, the smaller, single quartile range (within the full zone of reasonableness) that the Commission will use to establish a presumption of whether an existing ROE is just and reasonable is solely a screening tool to allow the Commission to evaluate an existing base ROE in step one of its FPA Section 206 inquiry. Any conflation of the new quartile range of presumptively just and reasonable ROEs with the broader statutory zone of reasonableness would prohibit ROEs outside the narrower presumptive range. Such an interpretation would contravene the FPA’s allowance for the Commission’s “discretion regarding the methodology by which it determines whether a rate is just and reasonable,”¹⁶⁴ and would be inconsistent with the Supreme Court’s understanding of the existence of a “substantial spread” in the zone of reasonableness.¹⁶⁵ The NETOs do not believe that the Commission intended to conflate its new quartile range of presumptively just and reasonable ROEs with the statutory zone of reasonableness, and respectfully request that the Commission clarify this point.

Next, the NETOs urge that the Commission clarify that the new quartile range of presumptively just and reasonable ROEs is not applicable during step two of an FPA

¹⁶⁴ *S. Cal. Edison Co.*, 717 F.3d at 182.

¹⁶⁵ See *FPC v. Conway Corp.*, 426 U.S. 271, 278 (1976), citing *Mont.-Dakota Utils. Co. v. Nw. Pub. Serv. Co.*, 341 U.S. 246, 251 (1951).

Section 206 inquiry and will not act as a cap on a public utility’s total ROE, including any ROE incentives. Instead, consistent with Order No. 679, a public utility’s total ROE, including any ROE incentives, cannot be capped below the high end of the broader zone of reasonableness.¹⁶⁶ This clarification will preserve the consistency of the Commission’s prior reasoning with respect to base ROEs and incentive ROEs. It is also necessary to permit the Commission to “make ‘pragmatic adjustments’ to a utility’s ROE.”¹⁶⁷ Otherwise, permitting the quartile, a narrow range of presumptively just and reasonable ROEs, to serve as an upper limit to step two of the FPA Section 206 inquiry would limit the Commission’s discretion and significantly reduce the size of the ROE incentives that transmission owners would be able to employ under FPA Section 219. Curtailing the Commission’s discretion as to the size of ROE incentives would arbitrarily reverse decisions justifying the incentives. It would also undermine Congress’s intent in enacting Section 219 of the FPA to encourage the Commission to award these incentives.¹⁶⁸

The Commission also should clarify that an FPA Section 206 ROE complaint will not be granted automatically where a public utility’s existing base ROE falls between the high end of the narrower quartile range established for FPA Section 206 step one

¹⁶⁶ *Promoting Transmission Inv. Through Pricing Reform*, Order No. 679, FERC Stats. & Regs. ¶ 31,222 at P 93 (2006) (“Order No. 679”) (“[B]ecause the approved ROE, including the impact of an incentive, will be within the zone of reasonableness, we consider this provision consistent with section 205.”), *order on reh’g*, Order No. 679-A, FERC Stats. & Regs. ¶ 31,236, *order on reh’g*, 119 FERC ¶ 61,062 (2007).

¹⁶⁷ *Emera Maine*, 854 F.3d at 27 (quoting *FPC v. Nat. Gas Pipeline Co.*, 315 U.S. 575, 586 (1942)).

¹⁶⁸ 16 U.S.C. § 824s.

purposes and the high end of the wider statutory zone of reasonableness. Rather, there should be a rebuttable presumption that such ROEs may not be just and reasonable. This rebuttable presumption would not be sufficient by itself to support an automatic ruling that grants a Section 206 complaint; instead it would have the effect of shifting the burden of proof so that utilities (*i.e.*, respondents to a complaint) would be required to identify specific circumstances or other evidence demonstrating that an existing base ROE above the quartile range remains just and reasonable in order to rebut this presumption, or that the quartile range is incorrectly identified. The NETOs believe that, as a matter of statutory construction, unless the Commission uses this second rebuttable presumption, its reasoning and approach, especially with respect to the justness and reasonableness of incentive ROEs, may not be consistent throughout its approach and therefore may be at risk on appeal.

Finally, the Commission should clarify that clear and convincing evidence in a complaint itself will be necessary to overcome the Coakley Methodology's presumption that base ROEs within the quartile are not unjust and unreasonable.¹⁶⁹ If the presumption is too easily overcome, the Commission could mistakenly permit the step two inquiry to

¹⁶⁹ The Commission has a long and on-going history of utilizing the clear and convincing evidence standard in appropriate cases. *See, e.g.*, *Seaway Crude Pipeline Co. LLC*, Opinion No. 546, 154 FERC ¶ 61,070 at P 92 (2016) (continuing practice of applying the clear and convincing evidence standard in the second prong of the Commission's test for allowing an acquisition premium); *El Paso Elec. Co.*, 11 FERC ¶ 61,168, at 61,355-57 (1980) (requiring clear and convincing evidence of severe financial difficulty as a condition for allowing a utility to include CWIP in rate base and citing FPC Order No. 555, 56 F.P.C. 2939, 2946 (1976), to support this requirement).

proceed without satisfying step one of FPA Section 206.¹⁷⁰ Thus, if the presumption is too easily overcome, the Coakley Methodology would fail to “provide[] a form of ‘statutory protection’ to a utility” that is necessary under Section 206 of the FPA.¹⁷¹

The Commission’s application of the clear and convincing evidence standard as the standard that a complainant would need to satisfy to overcome the presumption that a base ROE within the quartile range remains just and reasonable will provide greater certainty to investors that the Commission’s new approach will achieve more predictable results. Uncertainty increases the cost of capital, ultimately harming customers by driving up rates and/or diminishing investments in needed infrastructure.

If the burden to overcome the presumption is too light, or is routinely left for evidentiary hearing, then the lengthy ROE complaint proceedings that have created uncertainty for both investors and customers could continue unabated. The ill effect could be the submission of additional pancaked ROE complaints that are set for hearing on the question of whether the complaint has overcome the Commission’s rebuttable presumption. In clarifying the heavy burden to overcome the just and reasonable presumption established by the quartile range, the Commission should also affirm its intention that parties must meet this burden at the pleading stage.¹⁷² In the 2018 *Coakley* Order, the Commission stated that “we intend to dismiss an ROE complaint if the targeted utility’s existing ROE falls within the range of presumptively just and reasonable

¹⁷⁰ See *Emera Maine*, 854 F.3d at 24-25.

¹⁷¹ *Id.* at 24.

¹⁷² See 2018 *Coakley* Order at P 16.

ROEs for a utility of its risk profile—unless the presumption is sufficiently rebutted.”¹⁷³

The Commission’s goal is to provide a strong, predictable signal as soon as possible and avert unnecessary proceedings that sap the Commission’s administrative resources and leave ROEs uncertain for extended periods of time. The NETOs fully support this goal.

Question G3: When a successive complaint is filed while the current ROE is being adjudicated (i.e., a pancake complaint), should the subsequent complainant be required to make a *prima facie* showing of sufficient change in market conditions to meet the Coakley and MISO Briefing Order’s proposed determination of whether an existing ROE remains just and reasonable? If so, what type of information or showing should the complainant provide to demonstrate that market conditions have changed, and what standard should the Commission apply when assessing whether to deny the subsequent complaint without setting it for hearing?

The NETOs continue to believe that, except in very limited factual circumstances, allowing successive or “pancaked” ROE complaints while a prior complaint is pending is contrary to the statutory 15-month limitation on refunds under FPA Section 206(b).¹⁷⁴

The Commission previously has recognized Congress’ express directive: “[Section 206(b)] mandates that, absent dilatory behavior by the utility, refund protection for customers be limited to a *single* fifteen-month period.”¹⁷⁵

The Commission permits a second complaint that addresses an issue subject to an existing investigation only when the second complaint establishes “in substance . . . a

¹⁷³ *Id.*

¹⁷⁴ See, e.g., 16 U.S.C. § 824e(b); legislative history found at S. Rep. No. 100-491 at 6 (1988), reprinted in 1988 U.S.C.C.A.N. 2684, 2688.

¹⁷⁵ *Allegheny Elec. Coop., Inc. v. Niagara Mohawk Power Corp.*, 58 FERC ¶ 61,096 at 61,349 (1992) (emphasis added).

different issue in each of the [complaint] proceedings”¹⁷⁶ based on “a material changed circumstance.”¹⁷⁷ The precedent is clear that pancaked complaints are not permitted if the sole purpose of filing multiple complaints is to circumvent the fifteen-month refund period limitation.¹⁷⁸ Going forward, a pancaked complaint must demonstrate a material change in circumstances that was left unaddressed in the prior complaint proceeding, in order to warrant adjudication in a new proceeding.

The NETOs acknowledge that the Commission has not agreed with the NETOs’ understanding of how the statutory 15-month limitation on refunds under FPA Section 206 applies to ROE complaints. Accordingly, the NETOs have preserved this issue for appeal in a number of the ongoing proceedings involving pancaked complaints against the NETOs’ ROE. One advantage of the Coakley Methodology is that it minimizes the impact of the Commission’s past practice of allowing pancaked complaints that are contrary to the statute. For example, a proper application of the Coakley Methodology will result in the dismissal of pancaked complaints filed against the NETOs in Docket Nos. EL13-33, EL14-86, and EL14-86.¹⁷⁹

In addition, as discussed in the NETOs’ comments on Question G2, to the extent a public utility’s existing base ROE is within the quartile range of presumptively just and

¹⁷⁶ *Consumer Advocate Div. of Pub. Serv. Comm’n of W. Va. v. Allegheny Generating Co.*, 68 FERC ¶ 61,207, at 61,998 (1994).

¹⁷⁷ *EPIC Merch. Energy NJ/PA, L.P. v. PJM Interconnection, L.L.C.*, 136 FERC ¶ 61,041 at P 14 (2011).

¹⁷⁸ See *S. Co. Servs., Inc.*, 83 FERC ¶ 61,079 at 61,386 (1998); see also *Consumer Advocate Div. of Pub. Serv. Comm’n of W. Va. v. Allegheny Generating Co.*, 67 FERC ¶ 61,288 at 62,000 (1994).

¹⁷⁹ See, e.g., NETOs IB at 2.

reasonable ROEs, the Commission should only permit the presumption to be overcome through clear and convincing evidence set forth in the complaint itself.

H. Model Mechanics and Implementation

The Commission should confirm that the four financial models, implemented consistently with the 2018 *Coakley* Order and Opinion No. 531, combine to establish a just and reasonable methodology for determining a just and reasonable ROE. The Commission considered these methods in detail during the *Coakley* and MISO transmission owners' ROE complaint proceedings; the parties in those proceedings recently submitted further evidence demonstrating that these methods are sound and consistent with investors' expectations. The Commission should not delay confirming that these methods are appropriate in order to explore, and potentially resolve by regulation, the details of how to implement these methods. The Commission should confirm that the 2018 *Coakley* Order proposed just and reasonable methods to implement the financial models while recognizing areas where parties can develop records in future cases that justify improvements in the details and mechanics of the models.

1. General issues and issues that affect multiple models

Questions H.1.1, H.1.5 and H.1.6 all address issues relating to data sources for the financial models, particularly data sources for growth rates in the DCF model:

H.1.1. Are IBES data a good proxy for “investor consensus?”

H.1.1.a. If not, are there better alternatives, such as Bloomberg, Zacks, S&P Capital, Morningstar, and Value Line?

H.1.1.b. Should the Commission combine data from multiple sources?

- H.1.1.c. What weight, if any, should be given to an estimate if the number and identity of analysts contributing to the estimate is not available?*
- H.1.5. Should growth rates be based on Value Line, IBES, or alternative estimates?*
- H.1.6. Should the same growth rate sources be used across models, if more than one model is used to determine the ROE?*

The Commission should confirm that the data sources utilized in the analyses described in the 2018 *Coakley* Order are reasonable. However, it should not lock-in specific data sources for all future cases. The record evidence in each case should guide the selection of data sources for that case. The guiding standard for data sources should remain the source that provides the best reflection of “what the market expects.”¹⁸⁰

An approach guided by this standard is consistent with the record in the *Coakley* proceeding in Docket No. EL11-66 and prior Commission precedent. In Opinion No. 531 (and, as a result, in the analyses that the Commission proposed to rely on in the 2018 *Coakley* Order) the Commission relied on data sources appropriate for each of the different models it considered (*e.g.*, it relied on beta values from Value Line for the CAPM) and devoted particular attention to the source for the growth rate in the DCF model. With respect to the short-term growth estimate to be used in the DCF model, in Opinion No. 531, the Commission held that the “short-term growth estimate will be based on the five-year projections reported by IBES (or a comparable source).”¹⁸¹ The Commission should confirm that it will continue to rely on this balanced approach—*i.e.*,

¹⁸⁰ Opinion No. 531 at P 88.

¹⁸¹ *Id.* at P 39.

the data sources that it relied on in the *Coakley* proceeding are just and reasonable and provide a credible starting point for future cases, but that the Commission will consider evidence supplied by other sources that are demonstrated to be comparable or better guides to investors' expectations.

The Commission's explanation in Opinion No. 531 for its decision to affirm the Presiding Judge's decision to adopt the NETOs' use of IBES growth rate data published by Yahoo Finance "as the source of analysts' consensus growth rates"¹⁸² supports both using IBES data as the default starting point and considering other sources when supported by record evidence in future cases. In Opinion No. 531, the Commission recognized that IBES growth rates are "evidence of the growth rates expected by the investment community."¹⁸³ It also identified practical benefits of using "a single investor service such as IBES" with respect to ensuring estimates are "internally consistent" for proxy companies and based on uniform time periods.¹⁸⁴ The preference for IBES growth rate estimates published by Yahoo Finance is thus a practical consideration designed to serve the ultimate objective of relying on the best evidence of what investors expect, not a blanket determination that would discourage parties in future cases from providing evidence that other sources offer better evidence of investors' expectations. The Commission thus "reaffirmed that there may be more than one valid

¹⁸² *Id.* at P 89 (citing additional Commission precedent).

¹⁸³ *Id.*

¹⁸⁴ *Id.* at P 90. These aspects of Opinion No. 531 are undisturbed by the Court's decision in *Emera Maine*.

source of growth rate estimates” even as it concluded that the NETOs had correctly relied on IBES growth rate estimates for all relevant companies in the record there.¹⁸⁵

Additional evidence that the Commission received in the *Coakley* proceedings further demonstrates that other sources of growth rate data may be appropriate depending on the record evidence in a particular case. That evidence shows that investors rely on more than one source for growth rate estimates and that investors do not regard IBES growth rate estimates published by Yahoo! Finance as “inherently superior” to other sources.¹⁸⁶ Instead, the trends in this area have “shifted considerably,” and neither investors nor financial media regard IBES (also known as First Call/Thompson Reuters) as the “de facto standard for the broader financial community.”¹⁸⁷ That evidence included:

- A survey finding that “Bloomberg is used nearly five times as often as” IBES/First Call/Thompson Reuters;
- Another report that broke down trends for buy-side investors, sell-side investors and financial media, revealing that
 - A majority of buy-side investors rely on Bloomberg;
 - A plurality (one third) of sell-side investors utilize IBES/First Call, with nearly one quarter relying on FactSet;
 - Financial media have reduced utilization of IBES/First Call “and now favor FactSet, Bloomberg, and Zacks.”¹⁸⁸

The Commission should not lock-in a standard that runs counter to this evidence.

¹⁸⁵ *Id.* at P 90.

¹⁸⁶ McKenzie Ans. Test. (Docket No. EL16-64-002) at 114-17.

¹⁸⁷ *Id.* at 115.

¹⁸⁸ *Id.* at 114-15.

Trying to predict where the trend is headed would fare no better because investors' growth expectations are "unobservable, and there is no perfect proxy that exactly replicates the net impact of the disparate expectations of investors in the market for utility common stocks."¹⁸⁹ Instead the Commission should leave itself room to consider the record evidence on a case-by-case basis. While pre-identifying which other source is a "better" alternative to IBES or predetermining how to weigh growth rate estimates from different sources might provide a margin of uniformity, doing so would prevent future Commissions from exercising judgment and making reasoned decisions regarding evidence that is a reliable guide of investors' expectations. Instead, the Commission should consider IBES growth rate estimates and comparable alternatives when the record in an individual case supports doing so. Considering more sources would "reduce error and enhance confidence" in the Commission's evaluations of ROE.¹⁹⁰

The Commission's allowance for flexibility based on the record in individual cases ensures that comparable investments are not ignored because of a data source preference. The Commission should not remove this flexibility by mandating or excluding data sources in advance or otherwise pre-identifying which data sources are "better alternatives" without regard to how that mandate would affect the record in particular cases. Investors do not rely on a single source for growth rate estimates, and "alternative sources of analysts' growth estimates are routinely considered by financial

¹⁸⁹ *Id.* at 114.

¹⁹⁰ *Id.* at 115-16.

analysts and regulators when applying the DCF model to estimate the cost of equity for utilities.”¹⁹¹

Question H.1.2: To what extent does model risk affect all ROE methodologies?

The Commission directly addressed this question in the 2018 *Coakley* Order and identified reliable evidence supporting its conclusion that “any methodology has the potential for errors or inaccuracies.”¹⁹² Model risk thus affects all ROE methodologies. The Commission also explained that this is why it is important to rely upon multiple methods to reduce the likelihood that the Commission will rely on model results that are undermined by model risk and produce an unjust and unreasonable ROE. As the Commission stated, “[t]here is significant evidence indicating that combining estimates from different models is more accurate than relying on a single model.”¹⁹³ The Coakley Methodology particularly ameliorates the dangers of model risk by including the Expected Earnings analysis because the Expected Earnings analysis relies on different assumptions than the other models. The Commission has also reduced model risk by avoiding unnecessary duplication within the implementation of different models. For example, the DCF analysis of companies in the S&P 500 that is part of the CAPM should be designed for the purposes of the CAPM, not to replicate the two-stage DCF model of electric utilities. The Commission thus should confirm its commitment to the Coakley Methodology.

¹⁹¹ *Id.* at 116.

¹⁹² 2018 *Coakley* Order at P 38.

¹⁹³ *Id.* at P 38 & nn.77-78.

Mr. John Quackenbush, one of the witnesses that the Commission relied upon in the 2018 *Coakley* Order, explained that model risk is not a theoretical detail that any one model, by itself, might avoid to a greater extent than others. Instead, model risk is an inherent feature of the fact that models are not the real world; it is best dealt with by recognizing its existence and avoiding reliance on a single model or incorrectly assuming that model risk can be solved with additional theoretical modifications of a model:

Model risk exists in the real world, is a practical consideration for both investors and commissions, and does not attack or invalidate the efficient market hypothesis. Mechanically plugging data into a model, no matter how theoretically robust, can result in outputs that do not reflect the real world. Model risk and the lack of a perfect cost of capital model is further evidenced by the continual quest of academics and practitioners to discover new models.¹⁹⁴

Mr. Quackenbush reiterates in his present affidavit that the “Commission cannot avoid model risk but it can mitigate it by relying on multiple models.”¹⁹⁵

In the context of the Commission’s ROE methodology, limiting the potential impact of model risk depends on recognizing the existence of model risk and understanding the similarities and differences between the financial models. Mr. Quackenbush explains that this understanding is why the Expected Earnings analysis is a critical component of the Coakley Methodology and is further supported by its unique

¹⁹⁴ Answering Testimony of John D. Quackenbush, CFA, Exhibit No. NET-02300 (Docket No. EL16-64-002) at 15 (“Quackenbush Ans. Test. (Docket No. EL16-64-002”). The Certified Record in Docket No. EL16-64-002, including this admitted exhibit, is available on the eLibrary docket sheet with a file date of March 27, 2018.

¹⁹⁵ Quackenbush Affidavit at 34-35 (also noting that “[m]odel risk affects all ROE methodologies” and that to do so the Commission and investors must balance “theory and practice”).

“focus on book value rather than the value of utility stocks.”¹⁹⁶ Mr. Quackenbush thus concludes that the “Expected Earnings method is especially useful to include in the Commission’s portfolio of methods because the Expected Earnings method can potentially serve as a stabilizing feature and a mitigating offset to other methods in the Commission’s portfolio.”¹⁹⁷ He summarizes this advantage of the Coakley Methodology in his current affidavit: “the Expected Earnings approach is not subject to the same type of model risk as the other three Coakley methodologies, so the Expected Earnings approach provides some diversity.”¹⁹⁸

Question H.1.3 asks about a distinction between operating companies and parent companies in applying ROE methodologies:

- H.1.3. *The DCF model incorporates data at the parent/holding company level (e.g., stock price). The Commission adjudicates cases at the operating company level, for which there is no public data like stock prices, growth rates, and betas. What impact does this disparity have on the results of the DCF and other models?*

The Commission should not attempt to alter this long-established aspect of its ROE methodology. Mr. Quackenbush explains that the use of parent/holding company data is “unavoidable” and that investors are “accustomed” to regulators use of proxy groups in this manner.¹⁹⁹

¹⁹⁶ Reply Affidavit of John D. Quackenbush, CFA, Attachment B to NETOs RB, Docket Nos. EL11-66-001, *et al.* at 26 (Mar. 8, 2019) (“Quackenbush RB Affidavit”).

¹⁹⁷ *Id.*

¹⁹⁸ Quackenbush Affidavit at 34-35.

¹⁹⁹ *Id.* at 35.

Question H.1.4 addresses the efficient market hypothesis (“EMH”):

H.1.4. Should the Commission continue to rely on the [EMH], which underlies the DCF and CAPM models? Why or why not?

H.1.4.a. If yes, should the Commission continue to employ outlier screens, M&A screens, etc., for the DCF and CAPM models since these models need to incorporate all relevant information?

The Commission should continue to rely on the EMH, but it should clarify that the EMH does not imply that any single financial model is immune from model risk or guaranteed to produce perfect estimates of the returns that investors require. Accordingly, the Commission’s reliance on multiple models, rather than sole reliance on the single DCF model, is not contrary to the EMH.

The EMH posits that financial markets incorporate all relevant information into the prices of financial assets like utility common stocks and that, as a result, the market prices of those assets reflect investors’ evaluation of the fundamental economic value of the market assets.²⁰⁰ The EMH does not mean that financial models that rely on observed stock prices inherently generate results that reflect investors’ required returns. This is because no model, including the DCF, can replicate the full process by which markets efficiently translate the information available to investors into observable stock prices.²⁰¹ Models like the DCF thus depend on stock prices reflecting all relevant market

²⁰⁰ See, e.g., Morin at 279 (“An efficient market is one in which, at any time, security prices fully reflect all the relevant information available at that time.”).

²⁰¹ See Quackenbush Affidavit at 37 (noting that models “abstract from reality” and that “[i]t would be misleading to treat a simplified model as the ultimate truth”).

information because that relationship is what the model seeks to capture, but the EMH does not depend on the model's ability to do so.

As Mr. McKenzie explained in testimony during the *Coakley* proceedings, the DCF model's theoretical representation of the unobservable return that investors require "masks the underlying complexities that accompany any attempt to distill every facet of investors' expectations that are reflected in market prices."²⁰² In other words, the complex relationship between investors' expectations and stock prices remains equally efficient even when the DCF model produces less accurate estimates of investors' required return. Moreover, a model's estimates depend on inputs to the model's formula, and those inputs can become distorted or unrepresentative.²⁰³

The Commission has already rejected claims that the EMH supports setting ROEs based solely on the results of the DCF model. Instead, the Commission found that there is no tension between its finding that the DCF model has produced results that are far below the results of other models and the validity of the EMH:

We also disagree with arguments that the DCF methodology fully incorporates available information and investor expectations such that capital can be raised as inexpensively as the DCF results suggest. We find that such an outcome may not be the case due to model risk inherent in the DCF methodology in the presence of unusual market conditions. The finding that mechanical application of the DCF methodology may produce results inconsistent with *Hope* and *Bluefield* in certain circumstances is not inconsistent with

²⁰² McKenzie Ans. Test. (Docket No. EL16-64-002) at 105.

²⁰³ *Id.* at 104.

the efficient market theory underlying the typical application of the DCF methodology in normal circumstances.²⁰⁴

The Commission thus should continue to rely on the EMH and rely on more than one financial model in setting ROEs. As Mr. Quackenbush concisely explains, “[n]othing in the Coakley ROE Methodology contradicts or challenges the EMH.”²⁰⁵

Just as the EMH does not guarantee that a single financial model, such as the DCF, will always produce correct results, it also does not guarantee that all proxy companies are comparable to the utilities at issue in an ROE proceeding and that every result from a financial model is economically logical. The Commission discounts the relevance of certain model results because those results are illogical not because it believes that investors are irrational or that the observed stock prices disprove the EMH. Similarly, the Commission screens proxy companies because not all companies are comparable to the company whose ROE is at issue in a proceeding. Relative comparability is an aspect of the information that the market incorporates. In other words, part of the market’s incorporation of all relevant information is an implicit evaluation of the information’s relevance.

The Commission thus requires more than a model’s formula to evaluate a just and reasonable ROE; it must exercise judgment in applying that model. Exercising that judgment regarding what information is relevant does not invalidate the EMH, just as relying on multiple financial models does not. The Commission’s continued reliance on

²⁰⁴ Opinion No. 551 at P 132 (emphasis added).

²⁰⁵ Quackenbush Affidavit at 36.

the EMH is thus consistent with its long-standing approach to identifying proxy companies that are comparable in risk to the utility at issue and thereby ensuring that the Commission focuses on relevant information.

The EMH is a long-established concept, and it does not require that the Commission significantly disrupt its approach to proxy groups or the implementation of any particular financial model. The Commission should confirm its commitment to the Coakley Methodology, including the EMH.

2. Model-Specific Questions

a. DCF

Questions H.2.a.1 and H.2.a.2 concern utilizing the concepts of free cash flow and terminal stock value in the Commission's DCF model:

H.2.a.1. Should the Commission continue to use a dividend DCF model or should the Commission use a different DCF model, for example, one based on free cash flow?

H.2.a.2. Could terminal stock value be used in place of long-term growth projections? If so, how should terminal stock value be determined?

These concepts have not been addressed in recent ROE cases and would represent disruptive changes in the implementation of the DCF model. As a result, the disruptive effect of these changes would outweigh potential theoretical benefits (if any) from implementing these concepts. Moreover, neither concept would be helpful in making the Commission's ROE methodology more accurate, as both concepts add needless complication without any offsetting benefit.

The concept of free cash flow, whatever its theoretical merits, would undermine the Commission’s focus on understanding investors’ required returns, consistent with the standards set forth in *Hope* and *Bluefield*. As Mr. McKenzie explains, investors primarily focus on earnings and earnings growth, not free cash flow.²⁰⁶ A model based on free cash flow also would create significant implementation problems, particularly in finding forward-looking estimates of growth in free cash flow. Mr. McKenzie notes that this data is not widely available, and utilizing a model that depends on free cash flow would “undermine transparency” and increase the likelihood of “selected references to isolated data based on the objectives of the parties to rate proceedings.”²⁰⁷

Mr. Quackenbush explains further that there is no advantage in a free cash flow model in the context of electric utilities, particularly electric transmission providers because it is “crude” and unnecessary.²⁰⁸ The main reason why some analysts would use a free cash flow approach would be because it can act as an indirect substitute for dividend data. But there is no reason to use free cash flow when direct dividend data is available for the companies in the Commission’s proxy groups; the “Commission does not need to pursue an indirect substitute for dividends when virtually all utilities pay dividends.”²⁰⁹

²⁰⁶ See McKenzie Affidavit at 27 (explaining that “earnings are the driver of investors’ expectations—not dividends or free cash flow” and that reliance on earnings, rather than free cash flow, is “consistent with the assumptions of the [DCF] model itself”).

²⁰⁷ *Id.* at 28.

²⁰⁸ See Quackenbush Affidavit at 41.

²⁰⁹ *Id.*

Terminal stock value also would not improve the Commission’s ROE policy because it creates an unneeded shortcut in the determination of investors’ growth rate expectations. The shortcut just adds a new term to the mix in estimating the growth rate and thus creates the need to estimate another variable that is not the focus of investors’ analysis.²¹⁰ (As discussed below, the Commission’s current proxy for long-term growth is also badly flawed and fails to reflect investors’ expectations, but the concept of terminal stock value does not solve the fact that there is no widely available source for investors’ long-term growth expectations for particular stocks.)

Mr. Quackenbush explains that there is “no need” to use terminal stock value in evaluating ROEs for electric utilities.²¹¹ He explains that utilizing terminal stock value does not change the fundamental role that the net present value (NPV) of future dividends over the infinite future plays in a DCF analysis.²¹² The use of terminal value divides the NPV calculation in a DCF analysis into (i) the value of dividends over a fixed, discrete period and (ii) the terminal stock value at the end of the discrete period. But the terminal stock value is the value that the stock would have at the end of the discrete period, which would depend on estimating the stock price at that time, which would be determined by the NPV of dividends over the infinite future from that time forward, leaving the same

²¹⁰ Terminal stock value estimates might provide a benchmark for assessing the reasonableness of DCF model assumptions and results in some market conditions. However, a wholesale switch to a terminal value approach or a mandated use of a terminal value scenario in the application of the DCF adds unnecessary complexity which increases the number of subjective assumptions that must be made and increases the risk of model error.

²¹¹ Quackenbush Affidavit at 38.

²¹² *Id.*

inherently difficult task of estimating growth rates for that infinite future.²¹³ An analysis based on terminal stock value merely renames the problem. As Mr. Quackenbush states, “it would create an extra step of work and the Commission would still be left with the same valuation challenge.”²¹⁴

Mr. Quackenbush also identifies practical difficulties with this approach. First, he is not aware of data sources providing estimates of terminal value, and there is no consensus estimate comparable to the consensus short-term growth rates that the Commission utilizes for the first step of its two-step DCF model.²¹⁵ In addition, there is the issue of arbitrarily choosing the discrete time period for determining the terminal value. The absence of information on this time period would mean that even if there were terminal stock value estimates for the proxy group companies, there would be no way to combine them into a comparable consensus.²¹⁶ Mr. McKenzie identifies similar concerns with a lack of published forecasts to support terminal value analyses and thus concludes that a shift to reliance on terminal stock values would provide opportunities for “selective observations” and “undermine what is now a well-understood, transparent process based on objective third-party data.”²¹⁷

Other regulators have also identified shortcomings when parties have proposed approaches utilizing terminal stock value. The Public Utilities Commission of Ohio

²¹³ *Id.*

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ *Id.* at 38-39.

²¹⁷ McKenzie Affidavit at 28.

(PUCO) recognized that a witness's (Mr. Maugans) proposal of a DCF model utilizing terminal stock value still depended on "the basic assumption of the traditional DCF model" and rejected the proposal.²¹⁸ The PUCO explained that the "terminal value will depend upon other investors at that time being willing to buy the stock. The price they are willing to pay will depend upon their expectations of dividends and terminal value. So the process of evaluation of the stock is carried out by successive investors and the presence or absence of different holding periods becomes irrelevant. The total cash flow to all successive investors in a stock is the expected future dividend stream."²¹⁹ The PUCO also noted that "the intended holding periods of different investors vary a great deal" and concluded that it "must reject the use of the DCF model presented by Mr. Maugans."²²⁰

Questions H.2.a.3, H.2.a.4, and H.2.a.5 concern issues relating to the long-term growth assumptions in the Commission's DCF model and whether the Commission should use a multi-stage DCF model:

H.2.a.3. Do investment analysts project earnings/dividends growth beyond five years, and if not, why not, and is GDP an appropriate proxy for long-term growth?

H.2.a.4 How should the Commission weight short-term and long-term earnings/dividend growth projections?

²¹⁸ *Re Cleveland Electric Illuminating Co.*, Pub. Util. Comm. No. 81-146-EL-AIR, 0082 WL 1039191, at *33 (Mar. 17, 1982).

²¹⁹ *Id.*

²²⁰ *Id.*

H.2.a.5. The Commission uses a constant growth DCF model. Should the Commission consider using a multi-stage DCF model? If so, how would the Commission determine the length of each stage of a proxy company's growth?

These issues regarding how long-term growth should factor in the DCF model has been extensively litigated in recent ROE proceedings. Accordingly, the Commission is in position to rule on this issue without starting from scratch or unduly delaying a decision that confirms its overall approach to ROE determinations.

The evidence is overwhelming that investors do not consider GDP in evaluating equities, including utility equities, and that the GDP forecasts the Commission is currently utilizing understate investor expectations for electric utilities. Even though the overall approach and result that the Commission proposed in the 2018 *Coakley Order* achieved a just and reasonable result despite the use of these GDP forecasts, the Commission should recognize that its use of these GDP forecasts is not correct.

Mr. McKenzie provided extensive evidence that investors do not consider projections of long-term GDP growth in their evaluations of individual stocks. He explained that “the use of GDP growth places the theoretical assumptions of a financial model ahead of investor behavior.”²²¹ But these assumptions are not the touchstone for investors’ requirements. Indeed, the “only relevant growth rate is the growth rate used by investors. Investors do not have clarity to see far into the future, and there is little to no

²²¹ McKenzie Ans. Test. (Docket No. EL16-64-002) at 129-30.

evidence to suggest that investors share the view that growth in GDP must be considered a limit on earnings growth over the long-term.”²²² He also demonstrated that:

- Investors do not commonly reference GDP growth rates in evaluating long-term expectations for specific firms, including electric utilities,²²³ and
- Investors’ expectations for electric utilities exceed expectations for long-term GDP growth, as investors recognize that many electric utilities are engaged in significant capital spending.²²⁴

The Commission should not force a proxy for long-term growth that is contrary to investors’ expectations. Instead, the Commission should focus on the information that investors do rely upon in making investment decisions, primarily “three-to-five year EPS growth forecasts for individual companies.”²²⁵

In the event the Commission continues to insist on a proxy for long-term growth, it should clarify that it will accept alternative proxies for long-term growth in the DCF model if parties to future proceedings provide evidence in support of such an alternative. Parties that propose alternative proxies for long-term growth should also address the weight of these proxies relative to short-term growth rate estimates.

The Commission should not alter its implementation of the DCF model by utilizing a multi-stage DCF model at this time because there is no indication that investors generally expect a forthcoming transition in the electric utility industry or other

²²² *Id.*

²²³ *Id.* at 131-32.

²²⁴ *Id.* at 134-37.

²²⁵ *Id.* at 131-32.

industry change that would make investors expect a series of stages in the forecast growth of electric utilities. Mr. McKenzie explains that there is no evidence that investors expect electric utilities to grow in a multi-stage pattern.²²⁶ Mr. McKenzie thus concludes that “there is no discernable transition that would support use of multi-stage DCF approaches.”²²⁷

Question H.2.a.6: *Are six months of average high/low historical monthly stock prices an appropriate measure for the current stock price “P”?*

The Commission should not disrupt this aspect of the DCF model and should continue to rely on the average of high and low stock prices for each month during the six-month study period, as it did in Opinion No. 531.²²⁸ As Mr. McKenzie explained later in the *Coakley* proceedings, this approach based on intra-day prices “best reflects the range of investor sentiment.”²²⁹

b. CAPM

Question H.2.b.1 addresses the approach to the DCF model when it is applied in computing the market risk premium component of the CAPM analysis:

H.2.b.1. If the market risk premium is determined by applying the DCF methodology to a representative market index, should a long-term growth rate be used, as in the Commission’s two-step DCF methodology?

The Commission should not use a long-term growth rate in this circumstance because the DCF analysis that is part of the CAPM analysis does not serve the same

²²⁶ McKenzie Affidavit at 29.

²²⁷ *Id.* at 30.

²²⁸ Opinion No. 531 at P 76.

²²⁹ McKenzie Ans. Test. (Docket No. EL16-64-002) at 57.

purpose and should not duplicate the Commission’s two-step DCF methodology.

Instead, the Commission should use the approach to the CAPM method that it identified in the 2018 *Coakley* Order and that was previously accepted in Opinion Nos. 531 and 551. Nothing in *Emera Maine* undermined these findings.

The Commission explained in the 2018 *Coakley* Order that there are differences between the models it adopted. These differences are a feature of the new approach, as “combining estimates from different models is more accurate than relying on a single model.”²³⁰ By combining “different approaches to estimating the cost of equity,” the Commission “reduces the risk associated with relying on only one model,”²³¹ including the risk that the long-term growth estimate in the DCF model understates investors’ expectations.²³² As Judge Coffman explained in the Initial Decision underlying Opinion No. 551, “the CAPM serves as a valid check on the results of the two-step DCF analysis precisely because each analysis employs a different methodology. Were the methodologies identical in all material respects, the CAPM would simply duplicate the results of the two-step DCF.”²³³

The Commission’s two-stage DCF methodology for electric utilities is not an appropriate methodology with which to analyze the market risk premium. The market-risk premium requires an analysis of investors’ “required return on the overall market,”

²³⁰ 2018 *Coakley* Order at P 38.

²³¹ *Id.*

²³² See *supra* Section II.H (discussion of Questions H.2.a.3 – H.2.a.5).

²³³ *Ass’n of Buss. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Initial Decision, 153 FERC ¶ 63,027 at P 308 (2015).

not an analysis of a proxy group of electric utilities.²³⁴ As Mr. McKenzie has explained, “there is no support to evaluate growth rates for companies in the general economy using a GDP benchmark that the Commission has adopted specifically for regulated electric utilities.”²³⁵ Financial literature supports Mr. McKenzie’s conclusion that “the growth rates used in the NETOs’ CAPM studies are representative of the consensus expectations for the dividend paying firms in the S&P 500 Index as a whole” and demonstrates that growth patterns for individual stock in the S&P 500 are not constrained by GDP.²³⁶ The Commission similarly rejected the argument that “high short-term growth rates” cannot be sustained when analyzing “a stock index like the S&P 500.”²³⁷

Questions H.2.b.2 and H.2.b.3 both concern the use of beta in the CAPM:

H.2.b.2. Beta is a measure of a security’s risk relative to the broader market, such as the S&P 500, not of its absolute risk. Do CAPM’s assumptions break down if both utility stocks and the broader market become riskier over time on an absolute basis, but the relative increase in risk in utility stocks rises more slowly?

H.2.b.3. What are appropriate data sources for the beta value?

The CAPM is widely utilized by investors, academics and regulators,²³⁸ and the Commission should continue to include the CAPM in its ROE methodology and apply it as proposed in the 2018 *Coakley* Order.

²³⁴ Opinion No. 531-B at P 113.

²³⁵ McKenzie RB Affidavit at 20.

²³⁶ *Id.* at 28.

²³⁷ Opinion No. 531-B at P 113.

²³⁸ See, e.g., Opinion No. 531 at P 147 (stating “CAPM is utilized by investors as a measure of the cost of equity relative to its risk”).

Investors routinely rely on published beta values, including the Value Line betas utilized in the CAPM methodology from Opinion Nos. 531 and 551 and thus the 2018 *Coakley Order*.²³⁹ They are therefore appropriate for use in the CAPM. The Commission has also stated that “betas used in a CAPM study generally are not controversial.”²⁴⁰ Risk profiles for various industries often change more slowly or more rapidly than the economy as a whole. It is not plausible that the CAPM could become a widely respected method whose pioneering researchers received the Nobel Prize if the model broke down whenever an industry became riskier at a slower or faster rate than the market as a whole. This concern should not alter the Commission’s reliance on the CAPM, including beta.

The Commission has correctly found that Value Line is an appropriate data source for beta.²⁴¹ This conclusion was supported by record evidence in the *Coakley* proceedings. Even witnesses for parties that opposed the Commission’s proposed approach to the CAPM recognized Value Line as a source for beta, with Eastern Massachusetts Consumers-Owned Systems (“EMCOS”) witness Jonathan A. Lesser, Ph.D., stating “it is common to use Value Line betas in CAPM applications.”²⁴² Moreover, Mr. McKenzie explained that “Value Line betas are objective, well-accepted,

²³⁹ See, e.g., Opinion No. 551 at P 64 n.154 (“Value Line is a valid source of general financial data and [] Value Line estimates and financial data (e.g., betas) are acceptable . . .”).

²⁴⁰ Opinion No. 531-B at P 108.

²⁴¹ *Id.* at P 109 (approving the NETOs’ use of “betas published by Value Line”); *see also* Opinion No. 551 at P 64 n.154.

²⁴² Affidavit of Jonathan A. Lesser, Ph.D., Exhibit No. EMC-200 to Initial Brief on Paper Hearing of E. Mass. Consumer-Owned Systems, Docket No. EL11-66-001, *et al.* at ¶ 30 (Jan. 11, 2019).

and relied on by investors” and that Value Line’s use of adjustments for its betas aligns with investors’ expectations.²⁴³

Question H.2.b.4 asks whether the Commission should apply “more sophisticated” versions of the CAPM:

H.2.b.4. Should the Commission employ more sophisticated versions of the CAPM model that consider more variables instead of only beta, such as the Fama-French Model?

The Commission should confirm that the CAPM methodology utilized in the *Coakley* proceedings is appropriate, but it should allow parties to develop records in particular cases supporting variations on the CAPM by showing that applying a variation is more accurate and more consistent with investors’ expectations than the traditional CAPM.

In particular, the Commission should specify that it is open to the empirical CAPM (ECAPM) that is supported by research that is widely known to, and understood by, investors.²⁴⁴ Mr. McKenzie explains that this approach is more accurate than the traditional CAPM because it reflects real-world observations of the CAPM rather than complex theory.²⁴⁵ These considerations are more consistent with the *Hope* and *Bluefield* standards than a focus on whether a CAPM variant is “more sophisticated.” Mr.

²⁴³ McKenzie RB Affidavit at 45 (“Value Line adjusts its betas in order to offer investors its most accurate rendition of the forward-looking risk characteristics of the stocks it covers.”).

²⁴⁴ McKenzie Affidavit at 36 (quoting the Regulatory Commission of Alaska’s conclusion that a “reasonable investor would be aware of these empirical results”).

²⁴⁵ *Id.* at 35 (“While offering a refinement to the CAPM that addresses the findings of financial research, the ECAPM avoids the complexities of multi-factor models and has been relied upon in regulatory proceedings.”).

McKenzie also identifies further support of the ECAPM from academics, including in Dr. Morin's *New Regulatory Finance* textbook, as well as support from other regulators.²⁴⁶

The Commission should not encourage parties to expect that it will rely on other more "sophisticated" CAPM methods, like the Fama-French model, at this time because these models have not yet reached a stage at which they can produce practical results like the traditional CAPM and ECAPM. Mr. Quackenbush explains that at this time the Fama-French model is challenging to implement.²⁴⁷ He notes, however, that academics and practitioners are continually striving to improve financial models and may be able to overcome these difficulties with Fama-French in the future.²⁴⁸ Accordingly, the Commission should not prohibit parties from attempting to show that they can overcome the practical difficulties with implementing these variations and that the results are consistent with investors' expectations.

c. Expected Earnings

Questions H.2.c.1 and H.2.c.2 concern the Expected Earnings approach, whether it should be a forward looking analysis and the issue of circularity:

H.2.c.1. Should the use of utilities in the proxy group for the Expected Earnings model be predicated on the Expected Earnings analysis being forward-looking?

²⁴⁶ *Id.* at 27-35.

²⁴⁷ Quackenbush Affidavit at 39 (noting that investors seek a balance between conceptual appeal and "practical usefulness" and that the traditional CAPM currently provides an appropriate balance while Fama-French awaits a solution to its "implementational challenges").

²⁴⁸ *Id.* at 39.

H.2.c.2. What, if any, concerns regarding circularity are there with using the Expected Earnings analysis to determine the base ROE, as opposed to using the analysis for corroborative purposes?

The Commission should confirm its prior ruling that an Expected Earnings analysis should be forward looking.²⁴⁹ One of the reasons the Commission reached this determination was because a forward-looking analysis avoids concerns about circularity.²⁵⁰ The Commission explained in Opinion No. 551 that the “concern that the use of historical book ROE would be based on past actions of regulatory commissions and, therefore, [that] reliance on those past actions to set an ROE would raise issues of circularity” did not apply because an “expected earnings analysis is forward-looking” and thus not based on past actions.²⁵¹ The cost of equity is a forward-looking concept, and Mr. Quackenbush agrees that a forward looking Expected Earnings analysis is appropriate.²⁵² As he explains, “the Expected Earnings analysis should be forward looking because investors are focused on forward earnings expectations rather than historical earnings.”²⁵³

A forward looking Expected Earnings analysis, like the analysis the Commission found informative in Opinion Nos. 531 and 551 and proposed in the 2018 *Coakley Order*, is no more circular than the DCF model or any market-based model. Dr. Morin has

²⁴⁹ See Opinion No. 531-B at P 125-26 (“We consider the NETOs’ expected earnings analysis to be sound, as it is forward looking . . .”); see also Opinion No. 551 at P 231.

²⁵⁰ Sub-question H.2.c.2.i only applies “if” circularity is a concern, and it is not.

²⁵¹ Opinion No. 551 at P 231.

²⁵² Quackenbush Affidavit at 39.

²⁵³ *Id.*

explained that a “serious drawback of using market values is the circularity issue[].”²⁵⁴ Mr. Quackenbush agrees, concluding that “[a]ny minimal remaining circularity attributable to the Expected Earnings method is common to other methods, especially the DCF method.”²⁵⁵ Moreover, the general idea that there is a concern about circularity is relevant to the Comparable Earnings method, not the Expected Earnings method, and “it is misleading to project the circularity criticism applicable to a different model to the Expected Earnings method.”²⁵⁶

The Commission thus should use the approach to the Expected Earnings method that it identified in the 2018 *Coakley* Order and that was previously used by the Commission to validate and corroborate its ROE recommendations in Opinion Nos. 531 and 551. Nothing in *Emera Maine* undermined these findings.

d. Risk Premium

Question H.2.d.1 asks: *Should the analysis be historical or forward-looking?*

The Coakley Methodology properly considers both historical and forward-looking (*i.e.*, projected) bond yields in the Risk Premium analysis.²⁵⁷ The Commission should continue to consider both types of bond yields. Both approaches can provide a reasonable estimate of the return that investors require. For example, when the NETOs’ witness Dr. Avera proposed the Risk Premium method in the first New England ROE

²⁵⁴ Morin at 452-53.

²⁵⁵ Quackenbush Affidavit at 40.

²⁵⁶ *Id.*

²⁵⁷ 2018 *Coakley* Order at P 59 n.115.

complaint proceeding, he explained that projected bond yields were appropriate because there was “widespread consensus” that bond yields would change from the then-current historical bond yields.²⁵⁸

The Commission should confirm that the implementation of the Risk Premium analysis, including an averaging of results using historical bond yields and results using forecasted bond yields, that it proposed in the 2018 *Coakley* Order (and that was previously accepted in Opinion Nos. 531 and 551) is just and reasonable. Nothing in *Emera Maine* undermined these findings.

Question H.2.d.2: Is a Risk Premium analysis compatible with a finding of anomalous capital market conditions? Why or why not?

This question does not appear relevant to the Commission’s current ROE policy because the Commission found in the 2018 *Coakley* Order that anomalous market conditions “are largely irrelevant” under the approach proposed in that Order.²⁵⁹ The Commission should not allow a largely irrelevant issue to delay its confirmation of the approach it proposed in *Coakley*.

A finding of anomalous capital market conditions does not undermine the basis for including the Risk Premium analysis in the Commission’s ROE methodology. The Commission relied on multiple models, including the Risk Premium approach, because it is consistent with investors’ expectations.²⁶⁰ The Commission has never found that

²⁵⁸ Avera Test. (Docket No. EL11-66-001) at 53-54.

²⁵⁹ 2018 *Coakley* Order at P 44.

²⁶⁰ See, e.g., *id.* at PP 35-37.

anomalous market conditions justified completely excluding a model from consideration.

When it found that anomalous conditions reduced the Commission's confidence in the DCF model, the Commission did not cast aside the DCF model. Instead, it first found that it needed to consider additional evidence to further inform its judgment regarding the DCF results and ultimately concluded that it should not solely rely on the DCF model. Additionally, there is no suggestion by the Commission that it is appropriate to rely solely on the Risk Premium model, and accordingly, even if there were evidence that anomalous capital market conditions could affect the Risk Premium analysis, the proper solution would be to consider the Risk Premium approach in conjunction with other models, just as the Commission proposed in the 2018 *Coakley Order*.²⁶¹

Moreover, the record evidence in the *Coakley* proceedings demonstrates that anomalous market conditions or results do not undermine the reliability of the Risk Premium analysis. Staff witness Keyton argued that a spike in utility bond yields in late 2008 that persisted through most of 2009 justified removing monthly bond yields during this time period from the Risk Premium analysis. Mr. McKenzie showed that removing these data was not necessary because the Risk Premium analysis relies on an annual averaging approach that "would tend to 'wash out' the impact" of "temporary moves upward or downward" in bond yields.²⁶²

²⁶¹ In fact, the Risk Premium model has the benefit of not being based on the same market data which may skew the DCF or CAPM, and therefore provides valuable additional information. Disregarding the Risk Premium analysis would only heighten the risk that anomalous conditions may affect other ROE models.

²⁶² McKenzie RB Affidavit at 72.

III. CONCLUSION

The NETOs respectfully request that the Commission consider these comments and issue a statement terminating this proceeding in which it confirms that it intends to apply the Coakley Methodology, with the clarifications and refinement discussed herein, on a uniform basis going forward.

Respectfully submitted,

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June 26, 2019

ATTACHMENT A

**Affidavit of
Adrien M. McKenzie, CFA**

Attachment A
Page 1 of 38

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

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

AFFIDAVIT OF

ADRIEN M. MCKENZIE, CFA

**ON BEHALF OF
THE NEW ENGLAND TRANSMISSION OWNERS**

June 26, 2019

TABLE OF CONTENTS

I.	INTRODUCTION.....	3
II.	ANALYSIS OF SELECTED TOPIC AREAS	4
	A. Role and Objectives of the Commission's ROE Policy.....	4
	C. Performance of the DCF Model	9
	D. Proxy Groups.....	13
	F. Mismatch between Market-based ROE determinations and Book-Value Rate Base	18
	H.2 Model-Specific Questions	27
	a. DCF	27
	b. CAPM.....	33
III.	CONCLUSION.....	37

I. INTRODUCTION

1 My name is Adrien M. McKenzie. My business address is 3907 Red
 2 River St., Austin, Texas 78751. I am President of FINCAP, Inc. A description of
 3 my background and qualifications, including a resume containing the details of my
 4 experience, is included as Attachment 1 to this affidavit.

5 In *Emera Maine v. FERC*,¹ the United States Court of Appeals for the
 6 District of Columbia Circuit (“D.C. Circuit”) vacated and remanded Opinion No.
 7 531,² which addressed the just and reasonable return on equity (“ROE”) for the
 8 New England Transmission Owners (“NETOs”).³ In an October 16, 2018 order,
 9 the Commission proposed a methodology for addressing the issues that the D.C.
 10 Circuit remanded to the Commission in *Emera Maine* and established a paper
 11 hearing to address how this methodology (“Coakley Methodology”) should apply
 12 to the proceedings pending before the Commission involving the NETOs’ ROE.⁴
 13 On March 21, 2019, the Federal Energy Regulatory Commission (“Commission”)
 14 issued a Notice of Inquiry seeking information and comment on eight general
 15 topics related to the determination of a just and reasonable ROE and the

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

² *Coakley, Att'y Gen. of Mass. 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).

³ I am submitting this affidavit on behalf of the following New England Transmission Owners: Emera Maine f/k/a Bangor Hydro-Electric Company, Central Maine Power Company, New England Power Company d/b/a National Grid, Eversource Energy Service Company (on behalf of its operating company affiliates: The Connecticut Light and Power Company, NSTAR Electric Company, and Public Service Company of New Hampshire, each of which is doing business as Eversource Energy), The United Illuminating Company, Utilil Energy Systems, Inc., Fitchburg Gas and Electric Light Company, and Vermont Transco, LLC.

⁴ *Coakley, Att'y Gen. of Mass. v. Bangor Hydro-Elec. Co.*, Order Directing Briefs, 165 FERC ¶ 61,030 (2018) (“Coakley Briefing Order”). The Commission issued a similar order with respect to complaint proceedings involving the MISO TOs: *Association of Businesses Advocating Tariff Equity v. Midcontinent Independent System Operator, Inc.*, 165 FERC ¶ 61,118 (2018) (“MISO Briefing Order”).

(continued . . .)

1 approaches proposed in the Coakley Methodology.⁵ The purpose of my affidavit is
2 to provide comments on selected topics enumerated in the NOI.

II. ANALYSIS OF SELECTED TOPIC AREAS

A. Role and Objectives of the Commission's ROE Policy

3 The Coakley Methodology provides a supportive and transparent
4 framework that enhances clarity surrounding the Commission's ROE policies for
5 all stakeholders. From the standpoint of the investment community, uncertainty
6 and volatility undermine investor confidence, and regulatory signals are the
7 primary driver of investors' risk assessments for utilities. Securities analysts study
8 the Commission's orders and regulatory policy statements closely to gauge the
9 financial impact of regulatory actions and to advise investors. As Moody's noted,
10 "the regulatory environment is the most important driver of our outlook because it
11 sets the pace for cost recovery."⁶ Similarly, S&P observed that, "[r]egulatory
12 advantage is the most heavily weighted factor when S&P Global Ratings analyzes
13 a regulated utility's business risk profile."⁷ Value Line summarizes these
14 sentiments:

15 As we often point out, the most important factor in any utility's
16 success, whether it provides electricity, gas, or water, is the regulatory
17 climate in which it operates. Harsh regulatory conditions can make it
18 nearly impossible for the best run utilities to earn a reasonable return
19 on their investment.⁸

20 If regulatory actions instill confidence that the regulatory environment is
21 supportive, investors will provide the capital necessary to support needed

⁵ *Inquiry Regarding the Commission's Policy for Determining Return on Equity*, 166 FERC ¶ 61,207 (2019) ("NOI").

⁶ Moody's Investors Service, *Regulation Will Keep Cash Flow Stable As Major Tax Break Ends*, Industry Outlook (Feb. 19, 2014).

⁷ S&P Global Ratings, *Assessing U.S. Investors-Owned Utility Regulatory Environments*, RatingsExpress (Aug. 10, 2016).

⁸ Value Line Investment Survey, *Water Utility Industry* (Jan. 13, 2017) at 1780.

Attachment A
Page 5 of 38

1 investment. As a corollary, failure to promote a sound and stable environment for
2 transmission investment and follow through on expectations for ROEs that are
3 competitive with alternative investment opportunities could jeopardize investors'
4 willingness to finance increased capital investment in transmission infrastructure
5 and raise the cost of such capital. As a result, the need for regulatory certainty in
6 supporting transmission infrastructure investment is as relevant today as ever.

7 The Commission has stated that it "strives to provide regulatory certainty
8 through consistent approaches and actions."⁹ The Commission's policy efforts
9 focus on constructive and predictable rate regulation and have attracted large
10 commitments of private capital to expand the transmission grid, reduce
11 congestion, improve reliability, and secure access to new generation, including
12 wind and other renewable generation. With respect to ROE in particular, the
13 Commission has recognized the potential disincentive to investment stemming
14 from uncertainties over the administrative process leading to a determination of a
15 just and reasonable ROE. In Opinion No. 679-A, the Commission concluded that
16 "our hearing procedures for determining ROE can create uncertainty for
17 investors," and noted that:

18 Although our processes are designed to provide a just and reasonable
19 return, we recognize that there can be significant uncertainty as to the
20 ultimate return because of the uncertainties associated with
21 administrative determinations (*e.g.*, selection of the proxy group,
22 changes in growth rates, *etc.*) This can itself constitute a substantial
23 disincentive to new investment.¹⁰

24 The Coakley Methodology marks a significant and constructive step towards
25 resolving a decade-long policy vacuum with respect to the framework under which
26 the Commission will evaluate just and reasonable ROEs for electric utilities.

⁹ FERC, *About FERC*, www.ferc.gov/about/about.asp (last visited June 21, 2019).

¹⁰ *Promoting Transmission Investment through Pricing Reform*, Order No. 679-A, 117 FERC ¶ 61,345 at P 69 (2006), *order on reh'g and clarification*, 119 FERC ¶ 61,062 (2007).

Attachment A
Page 6 of 38

1 Apart from reducing impediments to increased investment and capital
2 attraction for Commission-jurisdictional electric utilities, by clearly outlining the
3 approach and application that the Commission considers to be relevant in
4 determining a just and reasonable ROE, the certainty provided by the Coakley
5 Methodology offers the prospect of achieving significant efficiencies in time and
6 cost. The evaluation of a just and reasonable ROE remains a highly controversial
7 issue, which is only magnified by the fact that a utility's cost of equity is
8 inherently unobservable and can only be estimated. Given the economic
9 significance of this parameter for the rates paid by consumers and the profitability
10 of the utilities themselves, disputes over ROE have devolved into multi-year
11 proceedings involving successive rounds of testimony from multiple expert
12 witnesses and Trial Staff. Apart from the uncertainty introduced by this process,
13 the economic and administrative burdens imposed by a lack of transparency
14 regarding ROE policies have ballooned.

15 By providing a consistent framework that clearly communicates the
16 Commission's intentions regarding its ROE policies, the Coakley Methodology
17 should operate to significantly reduce the time and expense required to resolve
18 disputes over a just and reasonable ROE. Apart from providing important
19 guidance over the primary financial models to be considered in evaluating
20 investors' required return, the Coakley Methodology also addresses key details
21 concerning the data and methods used in their application. This definition of the
22 approaches and methods underlying the Commission's ROE determinations
23 should result in significant efficiencies for all stakeholders. Moreover, the
24 increased certainty regarding the likely litigated outcome of ROE proceedings
25 provided by the Coakley Methodology would be expected to enhance the potential
26 for opposing parties to reach settlement, and thereby avoid the costly and
27 protracted litigation that has characterized ROE proceedings in recent years.

Attachment A
Page 7 of 38

1 Apart from reducing uncertainty by providing transparency in the
2 Commission's ROE policies, the Coakley Methodology also moderates volatility
3 for investors and other stakeholders through its consideration of multiple financial
4 models to estimate the ROE. As the Commission has explained, when conditions
5 associated with a model are outside of a normal range, there is a risk (referred to
6 as "model risk") that the theoretical model will fail to predict or represent the real
7 phenomenon that is being modeled.¹¹ For example, in my experience eliminating
8 a single company from the proxy group or revisions to a limited number of
9 analysts' consensus growth estimates can have a dramatic impact on the results
10 produced by the two-step discounted cash flow ("DCF") model. By giving equal
11 weight to the results of four financial models—the two-step DCF model, the
12 Capital Asset Pricing Model ("CAPM"), the Expected Earnings approach, and the
13 Risk Premium method—the Coakley Methodology insulates against the potential
14 for extreme variation in the Commission's ROE findings due to changes in the
15 results of any single method. As the Commission has correctly determined,
16 "[t]here is significant evidence indicating that combining estimates from different
17 models is more accurate than relying on a single model."¹² I agree with the
18 Commission's conclusion that "providing four different approaches to estimating
19 the cost of equity . . . reduces the risk associated with relying on only one model;
20 that is, the risk of misidentifying the just and reasonable ROE by relying on a
21 flawed cost of equity estimate."¹³

22 While the use of multiple approaches under the Coakley Methodology
23 represents a positive and supportive evolution in the Commission's ROE policies,

¹¹ Opinion No. 531 at P 145 n.286; *Ass'n of Buss. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 551, 156 FERC ¶ 61,234 at P 132 (2016) (finding that "mechanical application of the DCF methodology may produce results inconsistent with *Hope* and *Bluefield*" due to "model risk").

¹² Coakley Briefing Order at P 38; MISO Briefing Order at P 40.

¹³ Coakley Briefing Order at P 38; MISO Briefing Order at P 40.

Attachment A
Page 8 of 38

1 the Commission should be wary of substituting one mechanical exercise for
2 another. As the Federal Communications Commission correctly recognized:

3 Equity prices are established in highly volatile and uncertain capital
4 markets. . . . Different forecasting methodologies compete with each
5 other for eminence, only to be superseded by other methodologies as
6 conditions change. . . . In these circumstances, we should not restrict
7 ourselves to one methodology, or even a series of methodologies, that
8 would be applied mechanically. Instead, we conclude that we should
9 adopt a more accommodating and flexible position.¹⁴

10 The Commission correctly concluded that “[i]n relying on a broader range of
11 record evidence to estimate [the utility’s] cost of equity, we ensure that our chosen
12 ROE is based on substantial evidence and bring our methodology into closer
13 alignment with how investors inform their investment decisions.”¹⁵ But investors
14 do not adhere to the mechanical application of a particular arithmetic formula in
15 valuing common stocks. Nor do the Courts require the Commission to adopt a
16 formulaic procedure to evaluate the ROE. Rather, *Emera Maine* reaffirmed that
17 the courts afford “great deference” to the Commission in its decision-making,¹⁶
18 and noted that the Commission has “considerable latitude” in developing a
19 methodology to exercise its authority in arriving at a just and reasonable ROE.¹⁷
20 *Emera Maine* reiterated the Court’s view that ratemaking “is not a science,” and
21 the Commission “must use models to inform, not rigidly to determine, [its]
22 judgment as to an appropriate ROE for a utility.”¹⁸

23 The use of multiple methods, as proposed under the Coakley
24 Methodology, represents a significant advancement in the Commission’s ROE

¹⁴ *Amendment of Parts 65 & 69 of the Comm’n’s Rules*, 10 FCC Red. 6788, at P 88 (1995) (evaluating methods used to prescribe rates of return for telephone companies).

¹⁵ Coakley Briefing Order at P 15.

¹⁶ *Emera Maine*, 854 F.3d at 22 (quoting *Morgan Stanley Capital Grp., Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty.*, 554 U.S. 527, 532 (2008)).

¹⁷ *Id.* at 20 (internal quotation marks omitted).

¹⁸ *Id.* (internal quotation marks omitted).

1 policies that provides increased confidence in the veracity of the results and
2 greater certainty for stakeholders. Nevertheless, a defensible end result must be
3 based on all relevant and available data and requires reasonable accommodations
4 to the inherent dynamism of capital markets, not a mechanical and static formula.
5 As the Commission has already determined with respect to sole reliance on its
6 two-step DCF model, establishing ROEs based only on a formulaic approach can
7 leave the Commission with little flexibility when the record evidence shows that
8 the indicated result fails to reflect a just and reasonable ROE, or is inadequate to
9 support established policy goals. Such a rigid regulatory approach would be
10 impractical and destabilizing.

11 Thus, the Commission should affirm that the Coakley Methodology
12 represents a sound conceptual framework and provides the proper foundation for
13 the evaluation of a just and reasonable ROE. This guidance, however, does not
14 preclude consideration of other relevant evidence in the record of a particular case
15 or the Commission's exercise of informed judgment in the evaluation of investors'
16 required returns.

C. Performance of the DCF Model

17 In seeking comment regarding the robustness of the DCF model over
18 time and under differing capital market conditions, the Commission risks straying
19 from the bedrock principles that serve as the foundation for the consideration of
20 multiple financial models under the Coakley Methodology—namely, that no single
21 approach is inherently reliable as a guide to investors' required return. In fact,
22 debates regarding the ability of the DCF model—or any other model of investor
23 behavior—to accurately reflect the “true” cost of equity over some past time
24 period are misguided and irrelevant. The use of multiple financial models under
25 the Coakley Methodology does not require a study of the historical accuracy of the

1 DCF model. Even if it were possible to perform such a historical study, a finding
2 that the DCF model was reliable or unreliable in the past would not undercut the
3 Commission's sound reasoning for employing multiple approaches under the
4 Coakley Methodology.

5 The DCF method is only one theoretical approach to gain insight into the
6 return investors require; there are a number of other methodologies for estimating
7 the cost of capital and the ranges (or zones) produced by the different approaches
8 can vary widely. Recognizing that there is no failsafe method to estimate
9 investors' required cost of equity,¹⁹ approaches other than the DCF model have
10 earned widespread acceptance with investment and finance professionals, as well
11 as regulatory agencies throughout the United States. *New Regulatory Finance*
12 concluded that:

13 There is no single model that conclusively determines or estimates the
14 expected return for an individual firm. Each methodology possesses
15 its own way of examining investor behavior, its own premises, and its
16 own set of simplifications of reality. Each method proceeds from
17 different fundamental premises that cannot be validated empirically.
18 Investors do not necessarily subscribe to any one method, nor does
19 the stock price reflect the application of any one single method by the
20 price-setting investor. There is no monopoly as to which method is
21 used by investors. In the absence of any hard evidence as to which
22 method outdoes the other, all relevant evidence should be used and
23 weighted equally, in order to minimize judgmental error,
24 measurement error, and conceptual infirmities.²⁰

25 I agree with the Commission's conclusion that "providing four different
26 approaches to estimating the cost of equity . . . reduces the risk associated with
27 relying on only one model; that is, the risk of misidentifying the just and

¹⁹ I concur with the Commission's conclusion that "any methodology has the potential for errors or inaccuracies." Coakley Briefing Order at P 38; MISO Briefing Order at 40.

²⁰ Roger A. Morin, *New Regulatory Finance* 429 (Pub. Utils. Reports, Inc., 2006).

(continued . . .)

1 reasonable ROE by relying on a flawed cost of equity estimate.”²¹ The historical
2 performance of the DCF model has no bearing on this determination.

3 Moreover, the notion that it is possible to accurately assess the past
4 performance of the DCF model is misguided. First, there are multiple ways the
5 DCF model can be applied and, until Opinion No. 531, the Commission had
6 determined that the two-step DCF approach that is now embodied in the Coakley
7 Methodology was inconsistent with fundamentals in the electric utility industry
8 and the manner in which investors evaluated electric utility stocks. Thus, any
9 attempt to apply this approach to electric utility common stocks over the last ten to
10 twenty years would contradict the Commission’s findings for that time period.
11 Moreover, the necessary data (e.g., IBES growth rates from *Yahoo! Finance*) is not
12 available on a consistent basis, and the conclusions of such a study would
13 inherently depend on a wide range of assumptions that introduce the potential for
14 biased conclusions (e.g., determination of the eligible universe of electric utility
15 common stocks). Finally, as the Commission’s findings since Opinion No. 531
16 have recognized, a just and reasonable ROE cannot be determined using a
17 mechanical approach.²² Examination of DCF values over some historical period,
18 in the absence of a detailed study of the results of alternative approaches and
19 benchmarks, provides no basis on which to assess the robustness of the DCF
20 model, however it is applied.

21 While we can observe the end-result of our best attempt to apply the
22 DCF model in a way that we think mirrors investors’ expectations, there are many
23 exogenous factors that ultimately influence the price investors are willing to pay
24 for a utility’s common stock that may not be correctly reflected in the inputs used

²¹ Coakley Briefing Order at P 38; MISO Briefing Order at P 40.

²² See MISO Briefing Order at P 47 & n.90.

1 to apply the DCF model. The Commission's identification in previous
2 proceedings of DCF estimates that do not pass threshold tests of economic logic,
3 such as those rejected under the low-end bond yield test in Opinion No. 531,
4 indicates there is a limit to the robustness of the DCF model.²³ In addition, the
5 volatility of price/earnings ratios over historical time periods, which was cited in
6 the Coakley Briefing Order and raised again in the NOI,²⁴ provides another
7 illustration that the observed behavior of investors in the financial markets can
8 depart significantly from the underlying assumptions of the DCF model.²⁵ No
9 further study is needed or relevant. The fact that real-world evidence contradicts
10 the DCF assumptions simply illustrates what has been amply demonstrated in the
11 proceedings leading to the Coakley Methodology—there is no perfect way to
12 estimate the cost of equity, the DCF model's assumptions routinely depart
13 materially from what actually transpires in the capital markets, and reliance on
14 multiple approaches is fully supported by the views and actions of investors,
15 investment professionals, and other regulators. In fact, the Commission has
16 already correctly rejected the need to demonstrate any specific linkage between
17 the specific assumptions of the two-step DCF model and underlying capital market
18 conditions such as “swings in interest rates,”²⁶ concluding in Opinion No. 551 that
19 “a direct causal analysis linking specific capital market conditions to particular
20 inputs or assumptions in the DCF model is not necessary.”²⁷ The Coakley
21 Methodology is based on a sound conclusion that no method is inherently reliable,
22 irrespective of any particular set of capital market conditions, and there is no need

²³ Opinion No. 531 at P 123.

²⁴ See Coakley Briefing Order at Figure 3; NOI at C3.b.

²⁵ The DCF model assumes a flat yield curve, a constant growth rate in dividends, a constant payout ratio, and dividends, earnings, and stock price growth at the same constant rate to infinity. In other words, under the assumptions of the DCF model, the price/earnings ratio is constant into perpetuity.

²⁶ NOI at C3.b.

²⁷ Opinion No. 551 at P 125.

1 for reconsideration based on historical DCF studies that would be unavoidably
2 flawed and subjective.

D. Proxy Groups

The Commission’s proposal to adopt an approach that relies on multiple financial models and associated framework established in the Coakley Methodology need not disturb established precedent regarding the evaluation of a comparable risk proxy group. Under the regulatory standards established by *Hope*²⁸ and *Bluefield*,²⁹ the salient criteria in establishing a meaningful proxy group to estimate investors’ required return is relative risk. In evaluating relative risk, the Commission has relied primarily on the corporate credit ratings published by S&P Global Ratings (“S&P”) and Moody’s Investors Service (“Moody’s”). These credit ratings are based on a comprehensive and detailed evaluation of all of the key factors normally considered important in assessing a firm’s relative credit standing, including relative involvement in alternative segments within the electric utility industry (*i.e.*, distribution, transmission, and generation) and the impact of non-utility activities. Credit ratings are perhaps the most objective guide to utilities’ overall investment risks and they are widely cited in the investment community and referenced by investors. While the bond rating agencies are primarily focused on the risk of default associated with the firm’s debt securities, bond ratings and the risks of common stock are closely related. As noted in *Regulatory Finance: Utilities’ Cost of Capital*:

21 Concrete evidence supporting the relationship between bond
22 ratings and the quality of a security is abundant. ... The strong

²⁸ *FPC v. Hope Nat. Gas Co.*, 320 U.S. 591 (1944).

²⁹ *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).

(continued . . .)

1 association between bond ratings and equity risk premiums is
2 well documented in a study by Brigham and Shome (1982).³⁰

3 Thus, the Commission's reference to credit ratings as a basis to evaluate relative
4 risk is well-grounded.

5 Like the overall Coakley Methodology, the Commission's reference to
6 credit ratings in its proxy group criteria also serves as an objective and transparent
7 marker that provides clarity to investors and other stakeholders. Because credit
8 ratings are evaluated by independent research organizations and are widely
9 accepted and referenced by investors, they are insulated from subjectivity and the
10 competing objectives of participants in ROE proceedings at the Commission.

11 Thus, the credit ratings that serve as the cornerstone of an evaluation of
12 comparable risk under the Commission's accepted proxy group criteria establish a
13 neutral baseline that is verifiable and directly related to the perceptions of
14 investors, which is the fundamental requirement underlying a determination of a
15 just and reasonable ROE.

16 Modifications of established proxy group criteria based on arguments
17 regarding the implications of company-specific business operations—whether
18 based on relative contribution to revenues, assets, or other contentions³¹—would
19 undermine the clarity and transparency of the Coakley Methodology by
20 introducing the potential for opportunistic proxy group selection based on the
21 application of results-oriented criteria. The development of a proxy group is based
22 on relative risk, not the contribution of specific business lines. In contrast to credit
23 ratings, which provide an objective assessment of risks based on in-depth analyses
24 of the exposures faced by investors, there is no demonstrable link between an

³⁰ Morin, *New Regulatory Finance* at 92.

³¹ See NOI at P 34 (Questions D1 and D1.a).

1 isolated statistic, such as relative contribution to a firm’s consolidated revenues,
2 and the actual risk perceptions of the investment community. Moreover, due to
3 differences in business segment definition and reporting between utilities, it is
4 often impossible to accurately apportion financial measures, such as total
5 revenues, between utility segments (*e.g.*, distribution, transmission, or generation)
6 or regulated and non-regulated sources. As a result, even if one were to ignore the
7 fact that there is no clear link between the source of a utility’s revenues and
8 investors’ risk perceptions, it is generally not possible to accurately and
9 consistently apply revenue-based criteria.

10 Moreover, the Commission, on multiple occasions, has rejected
11 arguments concerning the impact of relative participation in specific business
12 segments on relative risk and proxy group determination. In *Midwest ISO*, for
13 example, the Commission concluded, “[w]e are unpersuaded...that transmission
14 investments are less risky than the other investments of the Midwest ISO TO
15 proxy companies.”³² Similarly, in *Bangor Hydro*, the Commission specifically
16 rejected arguments that PPL “should be excluded from the proxy group given the
17 risk factors associated with its unregulated, non-utility business operations.”³³ As
18 the Commission affirmed in *Pepco*:

19 This is inconsistent with Commission precedent in which we have
20 rejected proposals to restrict proxy groups based on narrow company
21 attributes.³⁴

22 In a comparable vein, the Commission rejected arguments of the California Public
23 Utilities Commission that adjustment mechanisms specific to California were

³² *Midwest Indep. Sys. Operator, Inc.*, 100 FERC ¶ 61,292 at P 12 (2002).

³³ *Bangor Hydro-Elec. Co.*, 117 FERC ¶ 61,129 at PP 19, 26 (2006).

³⁴ *Pepco Holdings, Inc.*, 124 FERC ¶ 61,176 at P 118 (2008). See also *Pepco Holdings, Inc.*, 125 FERC ¶ 61,130 at P 93 (2008) (The Commission denied arguments to exclude proxy companies based on a revenue test, finding it to be “inconsistent with Commission precedent.”).

1 indicative of lower risk, and justified a lower ROE. The Commission concluded
2 that, because it bases its ROE findings on the results of quantitative analyses
3 applied to proxy groups of other utilities, the impact of these individual risk
4 factors was already captured in its evaluation:

5 [T]hese risk factors are not applicable when determining the base
6 ROE. As we explained herein, when establishing a base ROE for
7 SoCal Edison, we utilize the DCF methodology, and apply a
8 significant set of screening factors. As a result of this process, we
9 have developed a reasonable proxy group that has been sufficiently
10 screened for risk.³⁵

11 The credit ratings published by S&P and Moody's provide a broad,
12 objective measure of overall investment risk that considers the impact of regulated
13 and unregulated businesses. The Commission has determined that "corporate
14 credit ratings are a reasonable measure to use to screen for investment risk," and
15 that "[c]redit ratings are a key consideration in developing a proxy group that is
16 risk-comparable."³⁶ The Commission has also ruled that the comparable risk band
17 afforded by its credit rating screen alone is a sufficient test of comparable
18 investment risks.³⁷ There is no basis to upend well-established precedent
19 regarding the evaluation of risk-comparable proxy groups, particularly when doing
20 so would undermine the clarity and transparency fostered by the Coakley
21 Methodology. Moreover, to the extent that peculiarities associated with a specific
22 company's ratings have implications for the identification of a proxy group (e.g., a
23 wide disparity between S&P and Moody's ratings that leads to a constrained proxy
24 group), the Commission can address such anomalies on a case-by-case basis

³⁵ *SoCal Edison Co.*, 131 FERC ¶ 61,020 at P 67 (2010).

³⁶ *Potomac-Appalachian Transmission Highline, L.L.C.*, 133 FERC ¶ 61,152 at P 63 (2010).

³⁷ *N. Pass Transmission LLC*, 134 FERC ¶ 61,095 at P 52 & n.70 (2011).

1 without undermining established standards, which are objective, well understood,
2 and should be maintained.

3 Consistent with the fundamental principle established by *Hope* and
4 *Bluefield* that a utility should be granted the opportunity to earn an ROE that is
5 commensurate with other enterprises of comparable risk, reference to cost of
6 equity estimates for non-utility companies can provide a highly relevant
7 benchmark in evaluating a just and reasonable ROE. The cost of capital is an
8 opportunity cost based on the returns that investors could realize by putting their
9 money in other alternatives. The total capital invested in utility stocks is only the
10 tip of the iceberg of total common stock investment and there is a wide range of
11 other enterprises available to investors beyond those in the utility industry.
12 Utilities must compete for capital, not just against firms in their own industry, but
13 with other investment opportunities of comparable risk. Indeed, modern portfolio
14 theory is built on the assumption that rational investors will hold a diverse
15 portfolio of stocks, not just companies in a single industry.

16 Returns in the competitive sector of the economy form the very
17 underpinning for utility ROEs because regulation purports to serve as a substitute
18 for the actions of competitive markets. The Supreme Court has recognized that it
19 is the degree of risk—not the nature of the business—that is relevant in evaluating
20 an allowed ROE for a utility. The *Bluefield* case refers to “business undertakings
21 which are attended by corresponding, risks and uncertainties[.]”³⁸ It does not
22 restrict consideration to other utilities. Indeed, if the requirement is business in the
23 same part of the country and the utility has the exclusive franchise, then the Court
24 could only be referring to non-utility businesses and any nearby utilities.
25 Similarly, the *Hope* case states: “By that standard the return to the equity owner

³⁸ *Bluefield*, 262 U.S. at 692.

1 should be commensurate with returns on investments in other enterprises having
2 corresponding risks.”³⁹ As in the *Bluefield* decision, there is nothing to restrict
3 “other enterprises” solely to the utility industry.

4 As a result, reference to cost of equity estimates for a group of non-
5 regulated companies that is demonstrated to be of comparable risk to the utility at
6 issue can inform the Commission’s deliberations. Just as the Commission has
7 indicated its willingness to examine state authorized ROEs as a useful guide in its
8 evaluation, cost of equity estimates for non-utility companies can serve as an
9 additional point of reference, both in assessing the reasonableness of the results of
10 any specific financial model applied to utilities, and in ensuring that the end-result
11 ROE from the Coakley Methodology will meet the tests of *Hope* and *Bluefield*.
12 The Commission need not specify a particular approach to implementing such an
13 analysis; nor should it alter the framework of the Coakley Methodology to
14 specifically accommodate such an approach. Rather, the Commission should
15 consider the relative merits of such analyses on a case-by-case basis. While the
16 Coakley Methodology establishes a rebuttable presumption as to a determination
17 of a just and reasonable ROE, the Commission is free to consider additional
18 evidence—such as cost of equity estimates for non-regulated companies or the
19 results of other financial models—and refine its ROE findings accordingly based
20 on case-specific evidence.

F. Mismatch between Market-based ROE determinations and Book-Value Rate Base

21 The Coakley Methodology is consistent with long-established principles
22 used as the basis to evaluate a just and reasonable ROE in regulatory proceedings
23 at the federal and state level. Under the traditional regulatory paradigm, the

³⁹ *Hope*, 320 U.S. at 603.

1 historical cost of a utility’s investment, as reflected in its accounting records, is the
2 generally accepted basis on which to compute the return component that is
3 reflected in rates.⁴⁰ Distinctions between the book value of a utility’s assets
4 determined on its accounting records and the market value of its equity established
5 by investors in the capital markets provide no basis to reconsider these governing
6 standards. Similarly, the rational underlying the Coakley Methodology—that
7 there is no single approach to estimating the cost of equity that is inherently
8 reliable or superior—is not premised on the relationship between the book value
9 and market value of a utility’s equity. Rather, the Coakley Methodology reflects
10 the reality that all methods used to estimate the cost of equity are theoretical
11 abstractions dependent on simplifying assumptions and are subject to error.
12 Recognizing the potential for any single model to produce results that deviate from
13 the cost of equity, investors and analysts do not restrict themselves to any one
14 method. The Coakley Methodology merely aligns the Commission’s practices
15 with these facts, and these facts are not dependent on any assumptions regarding
16 the relationship between accounting and market values of a utility’s common
17 equity.

18 Contentions concerning the implications of a “mismatch” between book
19 values and market values, which most frequently manifest as thinly-veiled
20 arguments for a target market-to-book ratio (“M/B”) of 1.0, are rooted in the
21 theoretical assumptions underlying the DCF model. These requirements include a
22 flat yield curve; a constant growth rate; a constant P/E ratio; a constant dividend
23 payout ratio; no stock issuances or purchases; dividends, earnings, book value, and

⁴⁰ While a number of states, such as Indiana and Arizona, continue to reference the fair value of a utility’s property in establishing rates, they are in the minority. The Supreme Court’s decision in *Hope* served to address the controversy regarding the valuation of rate base, holding that it is the end-result of a regulator’s decision that is of paramount importance, not the specific methodology. In any event, distinctions between fair value regulation and reliance on historical cost largely turn on the manner in which the impacts of price inflation are accounted for in rates, rather than the methodologies used to estimate the cost of equity.

1 stock price all grow at the same rate; and that all of these conditions hold to
2 infinity. Accepting all of the strict assumptions underlying the constant growth
3 DCF model, it is possible to “prove” that the “market required ROE” aligns with
4 expected “book ROE” only when the utility’s market price per share and book
5 value per share are aligned.

6 Under this theoretical construct, it can also be demonstrated that a return
7 on book value (“r”) that exceeds the cost of equity (“k”) will result in an M/B ratio
8 that exceeds unity. With M/B ratios for electric utilities generally greater than 1.0,
9 the gist of such arguments is that the ROEs allowed by regulatory commissions
10 have significantly exceeded the cost of capital. Arguments regarding an M/B in
11 excess of 1.0 have also been advanced in an attempt to undermine the relevance of
12 the Expected Earnings approach, which has been included as one of the four
13 financial models in the Coakley Methodology. Because investors are willing to
14 purchase utility stocks at prices that exceed their book value, strict DCF tenets
15 would suggest that “r” exceeds “k”. Or, in other words, a “mismatch” between
16 market and book values suggests that the results of the Expected Earnings
17 approach overstates a fair ROE when M/B is greater than 1.0.

18 The fundamental infirmity underlying such contentions is the failure to
19 recognize that the theoretical assumptions of the DCF model differ considerably
20 from the situation that confronts actual investors in the capital markets. While it
21 may be possible to “prove” a relationship between M/B ratios and “r” under the
22 tautology of a theoretical model, the restrictive assumptions on which this
23 construct is based are never met in practice. Assertions concerning the
24 implications of a “mismatch” between market and book values confuse the theory
25 underlying the DCF model with the practical realities of real-world capital markets
26 and ignore the regulatory standards underlying a just and reasonable ROE. In fact,

1 it was just this recognition—that DCF results can depart significantly from the
2 ROE necessary to meet established standards of fairness—that led to the
3 development of the Coakley Methodology.

4 The Commission’s mandate is to establish just and reasonable rates that
5 meet the end-result standards promulgated by the Supreme Court. This mandate
6 does not extend to the regulation of the stock prices, which are established by
7 investors in the capital markets. It is well established that policies designed to
8 remedy a perceived “mismatch” between book values and market values in order
9 to obtain a targeted relationship between the stock price and the book value of a
10 utility’s stock (e.g., M/B ratio of 1.0) are fundamentally misguided. In a 1988
11 publication, for example, James C. Bonbright noted that focus on M/B ratios was
12 unwarranted and outside the purview of regulators:

13 In the first place, commissioners cannot forecast, except within wide
14 limits, the effect their rate orders will have on the market prices of the
15 stocks of the companies they regulate. In the second place, whatever
16 the initial market prices may be, they are sure to change not only with
17 the changing prospects for earnings, but with the changing outlook of
18 an inherently volatile stock market. In short, market prices are beyond
19 the control, though not beyond the influence, of rate regulation.
20 Moreover, even if a commission did possess the power of control, any
21 attempt to exercise it . . . would result in harmful, uneconomic shifts
22 in public utility rate levels.⁴¹

23 The well-known financial researcher Stewart C. Myers also observed the
24 disconnect between regulation and resulting M/B ratios:

25 [A] straightforward application of the cost of capital to a book value
26 rate base does not automatically imply that the market and book
27 values will be equal. This is an obvious but important point. If

⁴¹ James C. Bonbright, Albert L. Daniels, and David R. Kamerschen, *Principles of Public Utility Rates* 334 (Pub. Util. Reports, Inc. 2d ed., 1988).

(continued . . .)

1 straightforward approaches did imply equality of market and book
2 values, then there would be no need to estimate the cost of capital.⁴²

3 Similarly, Charles F. Phillips also recognized the divergence between the
4 implications of theoretical models and real-world considerations:

5 Many question the assumption that market price should equal book
6 value, believing that the earnings of utilities should be sufficiently
7 high to achieve market-to-book ratios which are consistent with those
8 prevailing for stocks of unregulated companies.⁴³

9 While arguments regarding the implications of differences between book and
10 market values are not uncommon at the level of expert testimony, regulatory
11 actions to address such discrepancies are nonexistent in recent history.

12 In fact, the majority of stocks sell substantially above book value, with
13 Value Line reporting that approximately 1,400 of the roughly 1,700 stocks it
14 follows (including utilities and other industries) sell for prices in excess of book
15 value.⁴⁴ The figure below illustrates the average historical M/B for the companies
16 in the S&P 500 Index.

⁴² Stewart C. Myers, *The Application of Finance Theory to Public Utility Rate Cases*, Bell J. Econ. & Mgmt. Science 76 (Spring 1972).

⁴³ Charles F. Phillips, Jr., *The Regulation of Public Utilities, Theory and Practice* 395 (Pub. Utils. Reports, Inc., 1993) (internal quotes omitted).

⁴⁴ www.valueline.com (retrieved Jun. 19, 2019).

1
2**FIGURE 1**
S&P 500 PRICE TO BOOK VALUE3
4
5
6
7
8

Mean: 2.80
Median: 2.76
Min: 1.78 (Mar. 2009)
Max: 5.06 (Mar. 2000)
Source: www.multpl.com/s-p-500-price-to-book (last visited Jun. 18, 2019)

9 For the 500 largest publicly-traded companies in the U.S. economy, stock market
10 prices have averaged almost three times book value. The lowest M/B ratio
11 occurred at the market bottom in early 2009 during the “great recession,” with
12 average market prices at 1.78 times book value. The table below provides a listing
13 of recent M/B by industry.

1
2**TABLE 2**
MARKET-TO-BOOK RATIOS BY SECTOR

Sector	Ratio
Energy	1.48
Financial	1.82
Utilities	2.08
Basic Materials	2.47
Consumer Discretionary	3.02
Services	3.34
Conglomerates	3.53
Transportation	3.66
Healthcare	4.82
Consumer Non-cyclical	4.91
Capital Goods	5.43
Technology	6.61
Retail	8.37

Q1 2019 from <https://csimarket.com> (last viewed Jun. 18, 2019)

3 The M/B for the utilities sector of 2.08 is among the lowest of the industry groups,
 4 and it is well below the 2.80 times historical average for the S&P 500 Index. The
 5 consistently higher M/B for unregulated companies shows that arguments for a
 6 theoretical “matching” of market and book values are misplaced.

7 Apart from the misplaced theoretical notion that regulation should act to
 8 harmonize market and book values, such arguments ignore the opportunity cost
 9 and financial attraction standards that firmly support reference to book returns on
 10 equity. These standards, which are grounded in finance and firmly rooted in the
 11 Supreme Court’s *Hope* and *Bluefield* rulings, hold that a utility’s ROE should offer
 12 the utility an opportunity to earn a return that is commensurate with other
 13 investments of comparable risk, while maintaining its ability to support its
 14 financial integrity and attract capital. These requirements support the relevance of
 15 the Expected Earnings approach, which focuses on the projected earned returns on

1 book equity supporting the investors' expectations underlying the market price of
2 the stock. As noted earlier, regulators do not set the returns that investors earn in
3 the capital markets. Instead, they establish the allowed ROE on the book value of
4 a utility's investment in rate base. As a result, the Expected Earnings approach
5 provides a direct guide to ensure that the allowed ROE is similar to the returns that
6 investors expect other utilities of comparable risk will earn on invested capital. In
7 recognition of these standards, the Commission has correctly rejected arguments
8 concerning a "mismatch" between book values and market values, concluding that
9 "[i]f, all else being equal, the regulator sets a utility's ROE so that the utility does
10 not have the opportunity to earn a return on its book value comparable to the
11 amount that investors expect that other utilities of comparable risk will earn on
12 their book equity, the utility will not be able to provide investors the return they
13 require to invest in that utility."⁴⁵

14 Considering that M/B ratios for electric utilities are currently greater
15 than 1.0, arguments that regulators should set ROEs to produce a M/B ratio of
16 approximately 1.0 would violate the *Hope* and *Bluefield* standards. Following this
17 theoretical construct to its conclusion implies that the Commission should sacrifice
18 the financial strength of the utilities it regulates to favor a theoretical ideal of a
19 M/B ratio equaling unity. There are many leaps between the economic theory and
20 reality. But if the theory were correct, then such misguided contentions imply that
21 the Commission should set an ROE that would almost certainly lead to capital
22 losses for utility shareholders. With M/B ratios well above 1.0, such a position
23 would require the Commission to authorize ROEs that will cause share prices to
24 fall. The implication of this distorted train of logic is that investors are willing to
25 purchase the common stock of a utility in expectation of a *negative* ROE. Apart

⁴⁵ Opinion No. 531-B at P 129.

1 from denying investors the opportunity to earn a fair return, such actions would
2 severely undermine the financial strength of utilities and their ability to compete
3 for the capital that is necessary to meet established policy goals supporting greater
4 investment in transmission infrastructure.

5 This is not to say that the DCF model is not a useful methodology when
6 considered along with other methods. But as this discussion makes clear,
7 arguments based on “truisms” inherent in the mathematical tautology of DCF
8 theory turns the evaluation of investors’ required return on its head—instead of
9 looking to market-based measures or expectations of earned returns, the
10 Commission would elevate a theoretical premise based on the strict assumptions
11 of the DCF model to preeminence. Such a policy would contravene the
12 Commission’s evidence-based findings in Opinion Nos. 531 that support the
13 Coakley Methodology.

14 Apart from the disruption that would result from such a shift in
15 regulatory policy, the implications for the rates paid by consumers are not
16 definitive. For example, the notion of a “mismatch” between book and market
17 values could also justify establishing utility capital structure ratios based on the
18 market value of equity, rather than book value. Investors measure the expected
19 return and risk associated with their portfolios based on market value weights, not
20 book value weights, and the market value of a firm’s debt and equity provide a
21 superior guide to the amounts of debt and equity investors have invested in the
22 company on a going forward basis. In contrast, regulators have traditionally
23 defined the weighted average cost of capital using the embedded cost of debt and
24 the book values of debt and equity in a company’s capital structure. Alternatively,
25 with M/B ratios greater than 1.0, this would imply an upward adjustment to the

1 ROE to compensate for the greater financial risks inherent in the book value
2 capital structure, relative to market values.

3 As this discussion makes clear, support for the Coakley Methodology is
4 not dependent on the relationship between book and market values; rather, the
5 Commission's proposed ROE methodology is grounded in the recognition that
6 consideration of multiple methods provides a superior basis on which to evaluate a
7 just and reasonable ROE. Arguments regarding a "mismatch" between book and
8 market values are premised on theoretical arguments that lack practical validity
9 and are inconsistent with the fundamental regulatory standards that the
10 Commission is bound to uphold.

H.2 Model-Specific Questions

11 a. DCF

12 The Commission should use the DCF model in a manner that best
13 reflects how investors value common stocks. Under this approach, earnings are
14 the driver of investors' expectations—not dividends or free cash flow—and
15 reliance on analysts' consensus forecasts of earnings growth to apply the DCF
16 model is consistent with this reality. It is also consistent with the assumptions of
17 the model itself and the manner in which it is customarily applied by finance
18 professionals and in regulatory proceedings.

19 The continued success of investment services such as IBES, and the fact
20 that projected growth rates from such sources are widely referenced, provides
21 strong evidence that investors give considerable weight to analysts' earnings
22 projections in forming their expectations for future growth. Earnings growth
23 projections of security analysts provide the most frequently referenced guide to
24 investors' views and are widely accepted in applying the DCF model. As
25 explained in *New Regulatory Finance*:

1 Because of the dominance of institutional investors and their influence
2 on individual investors, analysts' forecasts of long-run growth rates
3 provide a sound basis for estimating required returns. Financial
4 analysts exert a strong influence on the expectations of many investors
5 who do not possess the resources to make their own forecasts, that is,
6 they are a cause of g [growth].⁴⁶

7 Reliance on published analysts' consensus earnings growth rates, such as IBES
8 and comparable sources, provides an objective source of information regarding
9 investors' expectations that is supported by financial literature and is consistent
10 with how the DCF model is typically applied.

11 Moreover, there are no ready substitutes for consensus earnings growth
12 estimates. Forward-looking expectations of growth in measures such as cash flow
13 or dividends are not widely reported on a consistent basis; nor are there any
14 published consensus growth estimates other than for earnings. As a result, reliance
15 on such alternative measures would undermine transparency by allowing the
16 potential for selective reference to isolated data based on the individual objectives
17 of parties to rate proceedings. The Commission should continue its long-
18 established policy of relying on consensus earnings growth rates in applying the
19 DCF model.

20 Similarly, while the notion of a terminal stock price is consistent with
21 DCF theory, there are no published long-term forecasts of stock prices for utility
22 stocks. Nor is there any compiled "consensus" regarding near-term projections of
23 stock market prices. While near-term target prices may be available from
24 individual analyst reports, there is no consistent time horizon for such projections
25 and the lack of a consensus again introduces the potential for parties to seek out
26 selective observations to achieve a desired end result. Such a shift would

⁴⁶ Morin, *New Regulatory Finance*, at 298.

1 undermine what is now a well-understood, transparent process based on objective
2 third-party data.

3 There is no evidence to support the notion that investors anticipate that
4 growth rates for electric utilities will be characterized by discrete stages and the
5 Commission should reject any reference to multi-stage DCF models. Reference to
6 multiple growth rates may be reflective of investors' expectations for firms at the
7 early stage of the corporate life cycle. Pioneering development firms may
8 experience explosive earnings growth in initial years, which could reasonably be
9 expected to moderate as the firm matures. As the Commission has noted, “[s]hort-
10 term growth may be atypically high or low depending on the industry cycle.”⁴⁷
11 Alternatively, a profound and definable shift in an industry's economics could also
12 warrant consideration of multiple growth rates. For example, in deciding to adopt
13 a two-step model for gas pipelines, the Commission was concerned that IBES
14 growth rates were “too influenced by the current position of the industry,”⁴⁸
15 noting:

16 Northwest's expert witness testified that the short-term IBES figures
17 were at historic high levels because the pipeline industry was
18 recovering from the deterioration in earnings resulting from the
19 collapse in oil prices and dramatic changes in regulatory framework.⁴⁹

20 Similarly, in the 1990s when investors thought the electric utility
21 industry was transitioning to non-regulated markets, two-stage models arguably fit
22 investors' expectations. The first stage was based on expectations of growth rates
23 under regulation and the second stage would be more akin to non-utility growth
24 rates. A number of experts presented two-stage models based on investors'

⁴⁷ *Nw. Pipeline Co.*, Opinion No. 396-C, 81 FERC ¶ 61,036 at 61,189 (1997).

⁴⁸ *Id.* at 17.

⁴⁹ *Id.*

1 expectations of a transition and a number of regulatory agencies found these
2 models to be reasonable.

3 But expectations of widespread deregulation are a relic from the past and
4 there is no evidence that the growth transition implied by a multi-stage DCF
5 model fits the expectations that investors currently build into electric utility stock
6 prices. Investors recognize that, while the electric utility industry is facing the
7 possibility of disruption related to accelerating technological shifts, it is relatively
8 stable in comparison to many other sectors, and there is no evidence that they
9 anticipate a series of discrete, life cycle stages. As a result, there is no discernable
10 transition that would support use of multi-stage DCF approaches.

11 Consistent with these facts, the Commission should continue to evaluate
12 the extent to which its two-step DCF model conforms to investor expectations.
13 This DCF application itself is a form of a multi-stage approach, with its underlying
14 premise being the assumption that investors expect growth rates for all electric
15 utilities to equal projected growth in Gross Domestic Product (“GDP”) over a
16 long-term horizon.⁵⁰ But there is no demonstrable evidence that investors look to
17 GDP growth rates in the far distant future in assessing their expectations for
18 electric utility common stocks. And while the theoretical assumptions underlying
19 this method contemplate an infinite stream of cash flows, this is simply at odds
20 with the practical circumstances in which real-world investors operate. As
21 evidence submitted by the NETOs in the New England ROE complaint
22 proceedings demonstrates; 1) investors do not reference long-term GDP growth in
23 evaluating expectations for individual utility common stocks; 2) the theoretical
24 proposition that growth rates for all firms converge to overall growth in the

⁵⁰ The GDP growth rate used in the application of the two-step DCF model considers forecasted GDP up to 50 years in the future.

Attachment A
Page 31 of 38

1 economy over the very long horizon does not guide investors' views, 3) actual
2 historical growth rates for electric utilities refute the notion that long-term growth
3 is constrained by a ceiling tied to GDP; 4) there is no evidence that investors'
4 growth expectations for regulated electric utilities have begun to—or are expected
5 to—converge to that of the economy.⁵¹

6 While adoption of the two-step approach in Opinion No. 531 aligned the
7 Commission's DCF method for electric utilities with its approach for natural gas
8 and oil pipelines, investors' growth expectations for pipelines and electric utilities
9 are not in synchronicity. Nor do the analysts' growth rates for the proxy firms in
10 evidence in ongoing electric ROE proceedings resemble those that originally
11 motivated the adoption of the two-step DCF model, which stemmed from the
12 Commission's concerns over IBES growth rates that were perceived to be
13 atypically high. This was noted by the Presiding Judge in *Northwest Pipeline*:

14 For many years growth in the [pipeline] industry was sluggish and the
15 IBES predictions were accordingly modest, but after the issuance of
16 Order No. 636, IBES forecasts reflected higher expectations of growth
17 for the proxy group companies in the years ahead. Suddenly
18 confronted with unusually high DCF rate of return recommendations
19 based upon these higher projections for revenue growth, the
20 Commission balked, and sought to offset short run optimism with
21 more conservative estimates for the long run.⁵²

⁵¹ Docket No. EL11-66-001, *Supplemental Testimony of William E Avera, Ph.D., CFA*, Exhibit No. NET-900 (Aug. 4, 2014) at 12-26; Docket No. EL11-66-001, *Supplemental Reply Testimony of William E. Avera, Ph.D., CFA*, Exhibit No. NET-1000 (Sept. 3, 2014); Docket Nos. EL13-33, et al., *Prepared Answering Testimony and Exhibits of William E. Avera*, Exhibit No. NET-1300 (Feb. 2, 2015) at 15-17; Docket No. EL16-64-002, *Answering Testimony and Exhibits of Adrien M. McKenzie, CFA*, Exhibit No. NET-02200 (Mar. 23, 2017) at 127-39; Docket No. EL16-64-002, *Supplemental Answering Testimony and Exhibits of Adrien M. McKenzie, CFA*, Exhibit No. 02400 (July 31, 2017) at 34-35.

⁵² *Nw. Pipeline Corp.*, 77 FERC ¶ 63,007 at 65,014-15 (1996) ("*Northwest Pipeline*"), rev'd, Opinion No. 396-B, 79 FERC ¶ 61,309, reh'g denied, Opinion No. 396-C, 81 FERC ¶ 61,036 (1997).

(continued . . .)

1 The magnitude of the disparity between the near-term growth rates for
2 pipelines and growth in GDP that prompted the use of the two-step model bears no
3 similarity to the current facts for electric utilities. For example, in
4 *Transcontinental Gas*, IBES growth rates for the proxy group ranged from 8.0% to
5 15.0% and averaged 11.3%.⁵³ In Opinion No. 531, however, the Commission
6 concluded that “the IBES growth projections of electric utilities continue to reflect
7 a different pattern from those of natural gas and oil pipelines.”⁵⁴ This “different
8 pattern” has significant implications with respect to the validity of the two-step
9 DCF model as applied to electric utilities. The Commission’s original adoption of
10 the two-step DCF model envisioned a “short-term transition stage,” after which
11 the relatively high near-term IBES growth rates for pipelines would be expected
12 moderate and reach “a state of maturity.”⁵⁵ However, the facts specific to electric
13 utilities are dramatically different from those that motivated the Commission’s
14 shift from the constant growth to the two-step DCF model for gas pipelines.⁵⁶
15 There is no evidence that analysts’ EPS growth rates for electric utilities are
16 characterized by the “short run optimism” that led the Commission to adopt the
17 two-step DCF model, particularly in light of long-term expectations of continued
18 high levels of capital investment.

⁵³ *Transcon. Gas Pipe Line Corp.*, Opinion No. 414-A, 84 FERC ¶ 61,084 at Appendix A (“*Transcontinental Gas*”), order on reh’g, Opinion No. 414-B, 85 FERC ¶ 61,323 (1998); see also *Williston Basin Interstate Pipeline Co.*, 91 FERC ¶ 63,005 at Attachment A (2000) (reporting IBES growth rates for the six-company proxy group ranging from 8.0% to 15.0%).

⁵⁴ Opinion No. 531 at P 38.

⁵⁵ *Ozark Gas Transmission Sys.*, 68 FERC ¶ 61,032 at 61,105 (1994), order on reh’g, 71 FERC ¶ 61,138 (1995).

⁵⁶ For example, a review of the IBES growth rates on Appendix A to Opinion No. 531 indicates that only two of the forty-one estimates (at 8.04% and 8.10%) exceed the 8.0% low-end value considered in *Transcontinental Gas*. Similarly, only two of the IBES growth rates underlying the DCF results accepted by the Commission in Opinion No. 551 fell above 8%. Docket No. EL14-12-002, Initial Decision, 153 FERC ¶ 63,027 at Appendix B (2015).

(continued . . .)

1 As the ROE witness for the Complainant-Aligned Parties in Docket No.

2 EL11-66 concluded in testimony filed with the Virginia State Corporation

3 Commission:

4 The economics of the public utility business indicate that the industry
5 is in the maturity or constant-growth stage of a three-stage DCF. . . .
6 The appropriate DCF valuation procedure for companies [is] the
7 maturity or constant-growth DCF.⁵⁷

8 The Commission confirmed the potential unreliability of its two-step DCF model
9 in Opinion No. 531 itself, noting that, under conditions analogous to those present
10 in capital markets today, an ROE based on the midpoint of the DCF range would
11 violate the *Hope* and *Bluefield* standards.⁵⁸ More recently, the Commission
12 affirmed that relying on its two-step DCF methodology alone “will not produce a
13 just and reasonable ROE,” and that this method “may no longer singularly reflect
14 how investors make their decisions.”⁵⁹ Accordingly, while reliance on multiple
15 financial models under the Coakley Methodology provides greater assurance that
16 the resulting ROE will reflect a just and reasonable return, the Commission should
17 consider addressing the problems with the two-step model directly by examining
18 the results of the constant growth DCF method in future proceedings.

19 **b. CAPM**

20 The Commission should not rely on multi-factor models as a substitute
21 for the CAPM. While such approaches may have support in the academic
22 research, they also impart additional complexities and controversy. In contrast to
23 multiple-factor versions such as the Arbitrage Pricing Model and Fama-French
24 Three-Factor Model, the CAPM is widely referenced by investors, financial

⁵⁷ Direct Testimony and Exhibits of Dr. J. Randall Woolridge at 44, Case No. PUE-2016-00038, Virginia State Corporation Commission (Aug. 2, 2016).

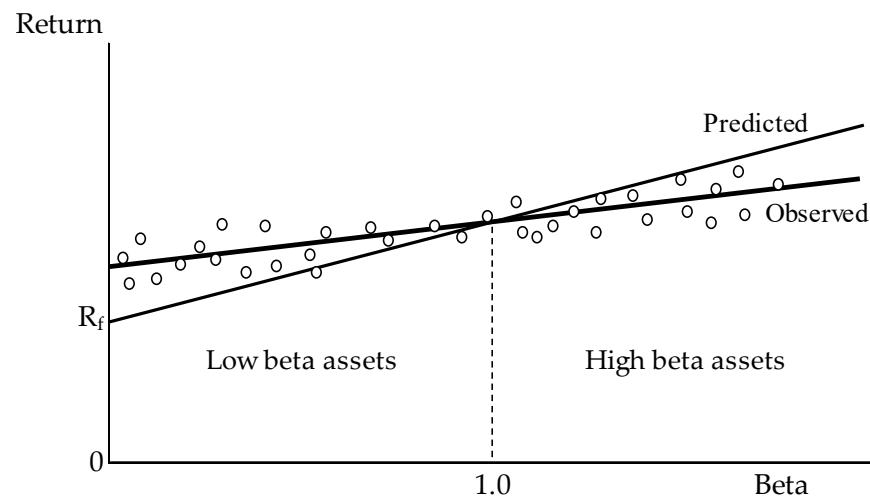
⁵⁸ Opinion No. 531 at P 142.

⁵⁹ Coakley Briefing Order at PP 32, 40; MISO Briefing Order at PP 34, 42.

1 practitioners, and regulators. Moreover, because of its ubiquity, continued use of
 2 the CAPM over multiple-factor approaches supports the goal of providing clarity
 3 and transparency in the Commission's ROE determinations, consistent with the
 4 Coakley Methodology.

5 Rather than replacing the CAPM with more complex, multi-factor
 6 formulations, the Commission should instead consider the refinement offered by
 7 the Empirical CAPM ("ECAPM"). Empirical tests of the CAPM have shown that
 8 low-beta securities earn returns somewhat higher than the CAPM would predict,
 9 and high-beta securities earn somewhat less than predicted. In other words, the
 10 CAPM tends to overstate the actual sensitivity of the cost of capital to beta, with
 11 low-beta stocks tending to have higher returns and high-beta stocks tending to
 12 have lower risk returns than predicted by the CAPM. This is illustrated
 13 graphically in the figure below:

14
 15 **FIGURE 3**
CAPM – PREDICTED VS. OBSERVED RETURNS



16 Because the betas of utility stocks are generally less than 1.0, this
 17 implies that cost of equity estimates based on the traditional CAPM would

1 understate the cost of equity. This empirical finding is widely reported in the
2 finance literature, as summarized in *New Regulatory Finance*:

3 As discussed in the previous section, several finance scholars have
4 developed refined and expanded versions of the standard CAPM by
5 relaxing the constraints imposed on the CAPM, such as dividend
6 yield, size, and skewness effects. These enhanced CAPMs typically
7 produce a risk-return relationship that is flatter than the CAPM
8 prediction in keeping with the actual observed risk-return relationship.
9 The ECAPM makes use of these empirical relationships.⁶⁰

10 Based on a review of the empirical evidence, *New Regulatory Finance*
11 concluded that the relationship between the expected return on a security and its
12 risk is represented by the following ECAPM formula:

$$R_j = R_f + 0.25(R_m - R_f) + 0.75[\beta_j(R_m - R_f)]$$

14 This equation, and the associated weighting factors, recognizes the observed
15 relationship between standard CAPM estimates and the cost of capital documented
16 in the financial research, and corrects for the understated returns that would
17 otherwise be produced for low beta stocks.

18 While offering a refinement to the CAPM that addresses the findings of
19 financial research, the ECAPM avoids the complexities of multi-factor models and
20 has been relied on in regulatory proceedings. For example, a witness for the Staff
21 of the Maryland Public Service Commission noted that “the ECAPM model
22 adjusts for the tendency of the CAPM model to underestimate returns for low Beta
23 stocks,” and concluded that, “I believe under current economic conditions that the
24 ECAPM gives a more realistic measure of the ROE than the CAPM model
25 does.”⁶¹ The Regulatory Commission of Alaska has also relied on the ECAPM
26 approach, noting that:

⁶⁰ Morin, *New Regulatory Finance*, at 189.

⁶¹ *Direct Testimony and Exhibits of Julie McKenna*, Maryland PSC Case No. 9299 (Oct. 12, 2012) at 9.

Attachment A
Page 36 of 38

1 Tesoro averaged the results it obtained from CAPM and ECAPM
2 while at the same time providing empirical testimony that the ECAPM
3 results are more accurate than [sic] traditional CAPM results. The
4 reasonable investor would be aware of these empirical results.
5 Therefore, we adjust Tesoro's recommendation to reflect only the
6 ECAPM result.⁶²

7 Similarly, the Montana Public Service Commission more recently concluded that
8 “[t]he evidence in this proceeding has convinced the Commission that the
9 Empirical Capital Asset Pricing Model (“ECAPM”) should be the primary method
10 for estimating the [utility’s] cost of equity.”⁶³

11 The staff of the Colorado Public Utilities Commission has also
12 recognized that, “[t]he ECAPM is an empirical method that attempts to enhance
13 the CAPM analysis by flattening the risk-return relationship,”⁶⁴ and relied on the
14 exact same standard ECAPM equation presented above.⁶⁵ The Wyoming Office of
15 Consumer Advocate, an independent division of the Wyoming Public Service
16 Commission, has also relied on this same ECAPM formula in estimating the cost
17 of equity for a natural gas utility, as have witnesses for the Office of Arkansas
18 Attorney General.⁶⁶

19 This approach, which is supported by the Morin treatise recognized by
20 the Commission, has been recognized in regulatory proceedings as an
21 improvement that better aligns the theoretical CAPM model with actual results.
22 As a result, the Commission should allow consideration of the ECAPM approach
23 as a potential refinement to the Coakley Methodology based on case-specific
24 evidence in future proceedings.

⁶² Regulatory Commission of Alaska, Order No. P-97-004(151) at 145 (Nov. 27, 2002).

⁶³ Mont. Pub. Serv. Comm'n, Order No. 7575c at P 114 (Sept. 26, 2018).

⁶⁴ Proceeding No. 13AL-0067G, *Answer Testimony and Exhibits of Scott England* (July 31, 2013) at 47.

⁶⁵ *Id.* at 48.

⁶⁶ Docket No. 30011-97-GR-17, *Pre-Filed Direct Testimony of Anthony J. Ornelas* (May 1, 2018) at 52-53; Docket No. 17-071-U, *Direct Testimony of Marlon F. Griffing, PH.D.* (May 29, 2018) at 33-35.

III. CONCLUSION

1 The topic areas introduced for comment in this NOI are so extensive as
2 to allow for the introduction of virtually any issue or opinion potentially related to
3 evaluating the just and reasonable ROE for a utility. The Coakley Methodology
4 reflects the Commission's careful consideration of extensive record evidence in
5 multiple ROE proceedings involving exhaustive testimony from witnesses
6 representing numerous parties, which, unlike submissions to this NOI, was subject
7 to lengthy cross-examination. This detailed record evidence serves as a solid
8 foundation on which to clarify the Commission's ROE policies, and the
9 Commission should avoid *ad hoc* changes to the Coakley Methodology based on
10 theories or opinions that have not withstood the scrutiny of a litigated proceeding.

11 The Coakley Methodology correctly recognizes that (1) no single
12 financial model is fail-safe, (2) investors, financial analysts, and regulators
13 customarily consider the results of different approaches, and (3) each model has its
14 own way of evaluating investor behavior, which means that they are not
15 identically affected by prevailing conditions in the capital markets or a specific set
16 of data. The general framework of the Coakley Methodology provides a
17 supportive and transparent baseline that enhances clarity surrounding the
18 Commission's ROE policies for all stakeholders. But as the Commission has
19 already determined with respect to sole reliance on its two-step DCF model,
20 establishing ROEs based only on a formulaic approach can leave the Commission
21 with little flexibility when the record evidence showed that the indicated result
22 fails to reflect a just and reasonable ROE, or is inadequate to support established
23 policy goals. Such a rigid regulatory approach would be impractical and
24 destabilizing. The Commission should make clear that, while the Coakley
25 Methodology represents a sound conceptual framework in which to evaluate a just

1 and reasonable ROE, this guidance does not preclude consideration of other
2 relevant evidence or its exercise of informed judgment in the evaluation of
3 investors' required returns.

QUALIFICATIONS OF ADRIEN M. MCKENZIE**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Adrien M. McKenzie. My business address is 3907 Red River St., Austin, Texas 78751.

Q. PLEASE STATE YOUR OCCUPATION.

A. I am a principal in FINCAP, Inc., a firm engaged primarily in financial, economic, and policy consulting in the field of public utility regulation.

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I received B.A. and M.B.A. degrees with a major in finance from The University of Texas at Austin, and hold the Chartered Financial Analyst (CFA[®]) designation. Since joining FINCAP in 1984, I have participated in consulting assignments involving a broad range of economic and financial issues, including cost of capital, cost of service, rate design, economic damages, and business valuation. I have extensive experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before courts, regulatory agencies, and legislative committees throughout the U.S. and Canada. I have personally sponsored direct and rebuttal testimony in over 100 proceedings filed with the Federal Energy Regulatory Commission (“FERC”) and regulatory agencies in Alaska, Arkansas, Colorado, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Montana, Nebraska, New Mexico, Ohio, Oklahoma, Oregon, South Dakota, Texas, Virginia, Washington, West Virginia, and Wyoming. My testimony addressed the establishment of risk-comparable proxy groups, the application of alternative quantitative methods, and the consideration of regulatory standards and policy

objectives in establishing a fair rate of return on equity for regulated electric, gas, and water utility operations. In connection with these assignments, my responsibilities have included critically evaluating the positions of other parties and preparation of rebuttal testimony, representing clients in settlement negotiations and hearings, and assisting in the preparation of legal briefs.

FINCAP was formed in 1979 as an economic and financial consulting firm serving clients in both the regulated and competitive sectors. FINCAP conducts assignments ranging from broad qualitative analyses and policy consulting to technical analyses and research. The firm's experience is in the areas of public utilities, valuation of closely-held businesses, and economic evaluations (e.g., damage and cost/benefit analyses). Prior to joining FINCAP, I was employed by an oil and gas firm and was responsible for operations and accounting. I am a member of the CFA Institute, the CFA Society of Austin, and the Literary and Historical Society of Quebec. A resume containing the details of my qualifications and experience is attached below.

ADRIEN M. McKENZIE

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Financial Concepts and Applications
Economic and Financial Counsel

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FAX (512) 458-4768
amm.fincap@outlook.com

Summary of Qualifications

Adrien McKenzie has an MBA in finance from the University of Texas at Austin and holds the Chartered Financial Analyst (CFA®) designation. He has over 30 years of experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before courts, regulatory agencies, and legislative committees throughout the U.S. and Canada. Assignments have included a broad range of economic and financial issues, including cost of capital, cost of service, rate design, economic damages, and business valuation.

Employment

President
FINCAP, Inc.
(June 1984 to June 1987)
(April 1988 to present)

Economic consulting firm specializing in regulated industries and valuation of closely-held businesses. Assignments have involved electric, gas, telecommunication, and water/sewer utilities, with clients including utilities, consumer groups, municipalities, regulatory agencies, and cogenerators. Areas of participation have included rate of return, revenue requirements, rate design, tariff analysis, avoided cost, forecasting, and negotiations. Develop cost of capital analyses using alternative market models for electric, gas, and telephone utilities. Prepare pre-filed direct and rebuttal testimony, participate in settlement negotiations, respond to interrogatories, evaluate opposition testimony, and assist in the areas of cross-examination and the preparations of legal briefs. Other assignments have involved preparation of technical reports, valuations, estimation of damages, industry studies, and various economic analyses in support of litigation.

Manager,
McKenzie Energy Company
(Jan. 1981 to May. 1984)

Responsible for operations and accounting for firm engaged in the management of working interests in oil and gas properties.

Education

M.B.A., Finance,
University of Texas at Austin
(Sep. 1982 to May. 1984)

Program included coursework in corporate finance, accounting, financial modeling, and statistics. Received Dean's Award for Academic Excellence and Good Neighbor Scholarship.

Professional Report: *The Impact of Construction Expenditures on Investor-Owned Electric Utilities*

B.B.A., Finance,
University of Texas at Austin
(Jan. 1981 to May 1982)

Electives included capital market theory, portfolio management, and international economics and finance. Elected to Beta Gamma Sigma business honor society. Dean's List 1981-1982.

Simon Fraser University,
Vancouver, Canada and University
of Hawaii at Manoa, Honolulu,
Hawaii
(Jan. 1979 to Dec 1980)

Coursework in accounting, finance, economics, and liberal arts.

Professional Associations

Received Chartered Financial Analyst (CFA®) designation in 1990.

Member – CFA Institute.

Bibliography

“A Profile of State Regulatory Commissions,” A Special Report by the Electricity Consumers Resource Council (ELCON), Summer 1991.

“The Impact of Regulatory Climate on Utility Capital Costs: An Alternative Test,” with Bruce H. Fairchild, *Public Utilities Fortnightly* (May 25, 1989).

Presentations

“ROE at FERC: Issues and Methods,” *Expert Briefing on Parallels in ROE Issues between AER, ERA, and FERC*, Jones Day (Sydney, Melbourne, and Perth, Australia) (April 15, 2014).

Cost of Capital Working Group eforum, Edison Electric Institute (April 24, 2012).

“Cost-of-Service Studies and Rate Design,” General Management of Electric Utilities (A Training Program for Electric Utility Managers from Developing Countries), Austin, Texas (October 1989 and November 1990 and 1991).

Representative Assignments

Mr. McKenzie has prepared and supported prefilled testimony submitted in over 250 regulatory proceedings. In addition to filings before regulators in over thirty state jurisdictions, Mr. McKenzie has considerable expertise in preparing expert analyses and testimony before the Federal Energy Regulatory Commission (“FERC”) on the issue of rate of return on equity (“ROE”), and has broad experience in applying and evaluating the results of quantitative methods to estimate a fair ROE, including discounted cash flow approaches, the Capital Asset Pricing Model, risk premium methods, and other quantitative benchmarks. Other representative assignments have included developing cost of service and cost allocation studies, the application of econometric models to analyze the impact of anti-competitive behavior and estimate lost profits; development of explanatory models for nuclear plant capital costs in connection with prudence reviews; and the analysis of avoided cost pricing for cogenerated power.

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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

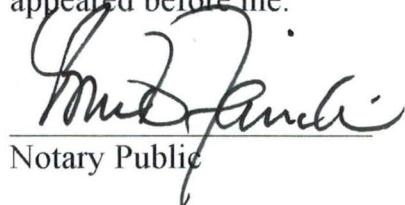
AFFIDAVIT OF ADRIEN M. MCKENZIE

Adrien M. McKenzie, being first duly sworn, deposes and says that he is the Adrien M. McKenzie referred to in the foregoing Affidavit, that he has read such Affidavit and is familiar with the contents thereof and that the answers therein are true and correct to the best of his knowledge, information, and belief.



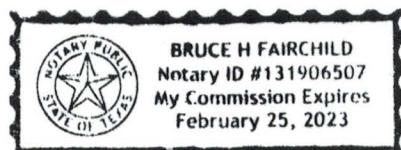
Adrien M. McKenzie

Subscribed and sworn to before me this 21st day of June, 2019, by Adrien M. McKenzie, proved to me on the basis of satisfactory evidence to be the person who appeared before me.



Notary Public

Commission Expires on: 2/25/23



ATTACHMENT B

**Affidavit of
John D. Quackenbush, CFA**

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

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

AFFIDAVIT OF

JOHN D. QUACKENBUSH, CFA

**ON BEHALF OF
THE NEW ENGLAND TRANSMISSION OWNERS**

June 26, 2019

TABLE OF CONTENTS

I.	INTRODUCTION.....	3
II.	SUMMARY AND CONCLUSIONS	8
III.	NOI SECTION A QUESTIONS – THE COAKLEY METHODOLOGY WILL ENHANCE THE COMMISSION’S FUTURE ROE DETERMINATIONS	9
IV.	NOI SECTION C QUESTIONS – THE EXISTENCE OF MODEL RISK INDICATES THAT THE COMMISSION REACHED AN APPROPRIATE CONCLUSION IN THE 2018 <i>COAKLEY</i> ORDER WHEN IT DECIDED TO USE MULTIPLE FINANCIAL MODELS.....	13
V.	NOI SECTION D QUESTIONS – THE COMMISSION’S USE OF CREDIT RATINGS IN PROXY GROUP DETERMINATIONS IS UNLIKELY TO IMPACT PUBLIC UTILITY BEHAVIOR	15
VI.	NOI SECTION E QUESTIONS – INVESTORS USE MULTIPLE FINANCIAL MODELS AND THE COMMISSION APPROPRIATELY INCLUDED THE EXPECTED EARNINGS APPROACH IN ITS ROE METHODOLOGY	17
VII.	NOI SECTION F QUESTIONS – DUE TO THE PREVALENCE OF COST OF SERVICE RATEMAKING, THE PERCEIVED “MISMATCH” BETWEEN MARKET-BASED ROES AND BOOK VALUE RATE BASE IS NOT A PROBLEM.....	35
VIII.	NOI SECTION H QUESTIONS – THE COMMISSION’S PORTFOLIO OF ROE METHODOLOGIES SET FORTH IN THE 2018 <i>COAKLEY</i> ORDER REPRESENTS AN APPROPRIATE BALANCE OF DIVERSE FINANCIAL MODELS.....	37

ATTACHMENTS TO AFFIDAVIT**Attachment No. Description**

- 1 Qualifications of John D. Quackenbush
- 2 March 8, 2019 Reply Affidavit in Docket No. EL16-64-002
- 3 Weighted Average Cost of Capital Curve
- 4 S&P Utility Credit Ratings Distribution – 2018 Q4

I. INTRODUCTION

1 **Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, EMPLOYER,**
2 **AND TITLE.**

3 A1. My name is John D. Quackenbush. My business address is 46320 Station
4 Road, New Buffalo, Michigan 49117. I am President of JQ Resources, LLC.

5 **Q2. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
6 **PROFESSIONAL EXPERIENCE.**

7 A2. A description of my background and qualifications consisting of a resume
8 containing the details of my professional experience is included as
9 Attachment 1 to this affidavit.

10 **Q3. WHAT IS THE PURPOSE OF YOUR AFFIDAVIT?**

11 A3. On March 21, 2019, the Federal Energy Regulatory Commission
12 (“Commission”) issued a Notice of Inquiry (“NOI”) seeking information and
13 stakeholder views regarding whether, and if so how, it should modify its
14 policies concerning the determination of the return on equity (“ROE”) to be
15 used in designing jurisdictional rates charged by public utilities. In the NOI,
16 the Commission asks numerous questions to facilitate its future
17 determinations of ROEs. The NOI follows recent related court and
18 regulatory proceedings. In *Emera Maine v. FERC*,¹ the United States Court
19 of Appeals for the District of Columbia Circuit (“D.C. Circuit”) vacated and
20 remanded Opinion No. 531,² which addressed the just and reasonable ROE

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

² *Coakley Mass. Attorney Gen. v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 (2014), *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).

1 for the New England Transmission Owners (“NETOs”).³ In an October 16,
2 2018 order (the “2018 *Coakley Order*”), the Commission proposed a
3 methodology for addressing the issues that the D.C. Circuit remanded to the
4 Commission in *Emera Maine* and established a paper hearing to address how
5 this methodology should apply to the four complaint proceedings pending
6 before the Commission involving the NETOs’ ROE.⁴ On January 11, 2019,
7 parties to that proceeding filed Initial Briefs and attached Affidavits
8 addressing certain aspects of the 2018 *Coakley Order*. On March 8, 2019,
9 parties to that proceeding filed Reply Briefs and attached Reply Affidavits in
10 response to the Initial Briefs. I submitted a Reply Affidavit on behalf of the
11 NETOs on March 8 after previously participating as a witness in the case
12 involving the fourth complaint against the NETOs, Docket No. EL16-64-
13 002.

14 The purpose of this affidavit is to respond to several questions posed by
15 the Commission in the NOI. Specifically, I will comment on certain
16 questions in Sections A, C, D, E, F, and H of the NOI. A number of the issues
17 raised by the NOI are similar to issues covered by my previous testimony
18 and March 8 Reply Affidavit on behalf of the NETOs. As a result, some of
19 my responses overlap with comments I previously offered in testimony and
20 in my March 8 Reply Affidavit, which is attached as Attachment 2. Some of
21 my responses cover issues that I have not previously addressed. In this

³ For purposes of this affidavit, the NETOs are: Emera Maine f/k/a Bangor Hydro-Electric Company, Central Maine Power Company, New England Power Company d/b/a National Grid, Eversource Energy Service Company (on behalf of its operating company affiliates: The Connecticut Light and Power Company, NSTAR Electric Company, and Public Service Company of New Hampshire, each of which is doing business as Eversource Energy), The United Illuminating Company, Utilil Energy Systems, Inc., Fitchburg Gas and Electric Light Company, and Vermont Transco, LLC.

⁴ *Coakley v. Bangor Hydro-Elec. Co.*, 165 FERC ¶ 61,030 (2018) (“2018 *Coakley Order*”).

1 affidavit, I attempt to minimize duplication of responses that I previously
2 addressed in the March 8 Reply Affidavit, but find it useful to re-focus some
3 of my previous comments to specifically relate to questions asked in the NOI.

4 **Q4. WHAT IS THE BASIS FOR YOUR AFFIDAVIT?**

5 A4. My affidavit is based on my 37 years of experience working in the field of
6 utility regulation. My career includes: more than four years supporting and
7 briefing state utility regulators as a finance staff member of the Illinois
8 Commerce Commission; 14 years performing regulatory and treasury
9 functions in the telecommunications industry for Sprint Corporation,
10 partially during the application of utility cost of service regulation to
11 incumbent local exchange carriers and partially during the transition from
12 cost of service regulation to price cap regulation; 11 years in the investment
13 community as a capital market participant covering North American
14 companies in several industries including regulated utilities, building
15 United States (U.S.) and Canadian domestic portfolios, and leading the
16 global utilities team in building global utility portfolios for UBS Global Asset
17 Management (“UBS”); more than four years regulating utilities as a state
18 utility regulatory commissioner and Chairman at the Michigan Public
19 Service Commission; and most recently, for the last several years, providing
20 consulting services to participants in regulated utility industries.

21 In preparing my affidavit, I relied on my own knowledge of both U.S. and
22 global financial markets in which the NETOs and other U.S. electric
23 transmission providers compete against other investments for investor-
24 supplied capital. Also, I regularly meet and interact with buy-side
25 institutional investors and sell-side analysts that focus on the utility sector

1 and I continue to monitor how investors currently perceive and evaluate
2 utility investment opportunities and risks.

3 **Q5. WHAT DO YOU MEAN WHEN YOU STATE THAT YOU COVERED
4 NORTH AMERICAN COMPANIES IN SEVERAL INDUSTRIES
5 INCLUDING REGULATED UTILITIES AT UBS?**

6 A5. My duties at UBS during 2001 through 2011 included performing
7 quantitative and qualitative analysis on each covered company for the
8 purpose of making equity investment recommendations and decisions. The
9 quantitative analysis included analyzing financial statements and developing
10 a set of five-year forecasted financial statements including income
11 statements, balance sheets, and cash flow statements for each covered
12 company. The exact number of covered companies varied over time with
13 mergers, acquisitions, and divestitures, but I generally covered scores
14 of regulated electric utilities at any given time. As part of the qualitative
15 analysis, I met regularly with the senior management, customers, suppliers,
16 and regulators of the covered companies. During my time at UBS, I covered
17 and directed investment decisions for several owners of the NETOs and
18 many global regulated utilities and their parent companies, including electric
19 transmission utilities regulated by the Commission. While at UBS, I
20 regularly interacted with utility sell-side analysts that published research
21 reports on electric utility equities and utility buy-side analysts who were my
22 peers and competitors.

23 **Q6. WHILE WORKING IN THE TELECOMMUNICATIONS
24 INDUSTRY, WHAT TREASURY DUTIES DID YOU PERFORM**

1 **THAT ARE RELEVANT TO THE PREPARATION OF YOUR**
2 **AFFIDAVIT?**

3 A6. At Sprint Corporation, during the period from 1995 through 2000, I prepared
4 risk-adjusted cost of capital estimates on a quarterly basis that were used for
5 capital investment, valuation, mergers and acquisitions, Economic Value
6 Added, and product/service costing analysis across divisions. These risk-
7 adjusted cost of capital estimates covered both regulated and competitive
8 operations, varied by division, and were utilized as hurdle rates for capital
9 budgeting decisions across the Local, Long Distance, and Wireless
10 Divisions.

11 Additionally, during 1995 through 2000, I was responsible for managing
12 Sprint's relationships with four credit rating agencies. In providing the
13 quantitative and qualitative information required by the credit rating agencies
14 to rate the parent and several separately-rated subsidiaries, I became familiar
15 with how the rating agencies differentiated risk among different companies
16 and subsidiaries of the same company. I also regularly interacted with credit
17 rating agency analysts that published credit rating research reports along with
18 corporate finance professionals who were my peers at other regulated and
19 competitive firms.

20 Q7. **DURING YOUR TENURE ON THE MICHIGAN PUBLIC SERVICE**
21 **COMMISSION, DID YOU REVIEW ROE EVIDENCE AND**
22 **AUTHORIZE ROES FOR MICHIGAN ELECTRIC UTILITIES?**

23 A7. Yes, I did.

24 Q8. **ARE YOUR RECOMMENDATIONS FOR THE COMMISSION IN**
25 **THIS AFFIDAVIT SUBSTANTIALLY DIFFERENT FROM THE**
26 **APPROACH YOU UTILIZED TO ESTABLISH AUTHORIZED**

1 **ROES WHILE ON THE MICHIGAN PUBLIC SERVICE**
2 **COMMISSION?**

3 A8. No, they are not.

II. SUMMARY AND CONCLUSIONS

4 **Q9. PLEASE SUMMARIZE YOUR CONCLUSIONS.**

5 A9. My overriding general observation is that the Commission got a lot of things
6 right in the 2018 *Coakley* Order that will enhance future ROE determinations
7 by the Commission. Specifically, I will address six groups of questions that
8 the Commission asked in the NOI from Sections A, C, D, E, F, and H. I
9 provide six primary conclusions: 1) the 2018 *Coakley* Order ROE
10 methodology (“Coakley Methodology”) will enhance the Commission’s
11 future ROE determinations; 2) the existence of model risk indicates that the
12 Commission reached an appropriate conclusion in the 2018 *Coakley* Order
13 when it decided to use multiple financial models; 3) the Commission’s use
14 of credit ratings in proxy group determinations is unlikely to impact public
15 utility behavior; 4) investors use multiple financial models and the
16 Commission appropriately included the Expected Earnings approach in its
17 ROE methodology; 5) due to the prevalence of cost of service ratemaking,
18 the perceived “mismatch” between market-based ROEs and book value rate
19 base is not a problem; and 6) the Commission’s portfolio of ROE
20 methodologies set forth in the 2018 *Coakley* Order represents an appropriate
21 balance of diverse financial models.

22 I organize my responses in the same order in which the Commission’s
23 questions appear in the NOI. To facilitate cross-referencing, I refer to the
24 general topics and the enumerated questions that I address.

III. NOI SECTION A QUESTIONS – THE COAKLEY METHODOLOGY WILL ENHANCE THE COMMISSION’S FUTURE ROE DETERMINATIONS

1 **Q10. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTIONS A1
2 AND A2.**

3 A10. In NOI Questions A1 and A2, the Commission asks about the extent to which
4 the Coakley Methodology would impact the predictability of the ROE
5 determinations and affect an investor’s ability to forecast the ROE the
6 Commission would establish in a litigated proceeding. The Coakley
7 Methodology provides useful guidance to investors and other stakeholders
8 and enhances investors’ ability to forecast, anticipate, and predict
9 Commission ROE determinations compared to using only the Discounted
10 Cash Flow (“DCF”) method. The Coakley Methodology strikes an
11 appropriate balance by providing a reasonable framework but appropriately
12 leaving flexibility for the Commission to exercise judgment where needed.
13 Investors can build templates that would replicate the Coakley Methodology.
14 The benefits of the Coakley Methodology will be especially relevant to the
15 Commission’s review of Federal Power Act (“FPA”) Section 206 complaints
16 pursuant to the first step of the FPA Section 206 analysis where the
17 Commission proposed to identify a quartile range of presumptively just and
18 reasonable ROEs as a screen to determine whether the Commission should
19 dismiss a complaint for failing to demonstrate that the existing ROE has
20 become unjust and unreasonable. Investors and other stakeholders would be
21 reasonably assured that spurious complaint cases would not proceed.
22 Moreover, investors will also have greater confidence that the Commission’s
23 ROE determinations are the result of more robust decision-making based on
24 multiple models rather than sole reliance on one model.

1 **Q11. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION A3.**

2 A11. In NOI Question A3, the Commission inquires if ROE variations between
3 different RTOs/ISOs due primarily to timing differences are justified, and
4 should the Commission consider applying the same ROE to all utilities in
5 RTOs/ISOs based on the most recent proceeding. Investors are familiar with
6 the current landscape with different ROEs for different RTOs/ISOs due to
7 timing differences. Investors further recognize that all RTOs/ISOs do not
8 have their ROE set simultaneously and recognize the administrative burden
9 and potential lack of due process that would result from attempting to do so.
10 State commissions generally do not attempt to simultaneously establish
11 ROEs for all utilities under their jurisdiction, and investors are comfortable
12 with a process that allows for variations due to timing differences. State-
13 authorized ROEs are generally set in rate cases based on a specific record
14 developed on a case-by-case basis. State regulatory commissions do not
15 impose an ROE on one utility merely because it reached an ROE finding for
16 a different utility.

17 Moreover, the Commission should not use the record from one case for a
18 transmission provider or group of providers to establish an ROE for a
19 different transmission provider that did not participate in the proceeding.
20 Attempting to impose an ROE from the record of another case would create
21 due process concerns, and could lead to the untenable situation where
22 transmission providers need to shoulder the administrative burden of
23 participating by intervention in many cases that they otherwise would not, in
24 order to be assured that they are not blindsided by an ROE finding from a
25 case in which it had no input. Additionally, participating in multiple litigated
26 proceedings on an ongoing basis that they otherwise would not need to

1 participate in would create a significant burden for those utilities and create
2 a significant challenge for investors to assess possible investment choices in
3 the face of such extensive litigation.

4 For all these reasons, the ROE variations across utilities due to timing
5 differences are justified. Such a forced synchronization of ROE
6 determinations is unnecessary and may harm utilities, their investors, and
7 their customers.

8 **Q12. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION A4.**
9 A12. In NOI Question A4, the Commission asks if the ROE should reflect the cost
10 of equity at the time of the investment or be subject to adjustment to reflect
11 the contemporary ROE required by investors, if the Commission should
12 consider a “vintage approach” with an ROE fixed for the life of the asset at
13 the time each asset was completed, and if a “vintage approach” should be
14 coupled with an annual national default ROE for investments made in that
15 year. In my opinion, the Commission would more accurately reflect investor
16 requirements over time if it does not lock in a fixed ROE for the entire life
17 of a multiple-decade asset. State regulators generally do not track different
18 ROEs for specific assets nor do they lock in ROE to be fixed for the life of
19 an asset. Investors are comfortable with the conventional cost of service
20 ratemaking approach and recognize that the ROE will be periodically reset.

21 The contemplated “vintage approach” is unnecessary and would be
22 administratively burdensome. Transmission providers would need to
23 develop accounting systems to implement a vintage approach. Investors do
24 not expect a vintage approach and do not provide capital to a transmission
25 provider with the understanding that a vintage approach will be used.

1 Moreover, state regulators do not use a vintage approach for rate base
2 components.

3 The establishment of an annual nationwide default ROE is unnecessary
4 and is unlikely to result in litigation savings. Although the pursuit of an
5 annual nationwide default ROE may lower the number of litigated ROE
6 proceedings each year, it would create an annual massive litigated ROE
7 proceeding with a huge number of parties leading to significant expenditures
8 of resources and would not be an improvement over periodic proceedings for
9 separate companies (and groups of companies in some RTOs/ISOs). Such a
10 massive annual process would ensure a vast expenditure of resources even if
11 no year-over-year change in ROE was justified. The previously regulated
12 telecommunications sector has, in the past, experienced a proposal play out
13 with many challenging features. Beginning in 1985, the Federal
14 Communications Commission (“FCC”) conducted periodic Rate of Return
15 (“ROR”) prescriptions (not ROE, but the ROR was based on a corresponding
16 ROE) to determine a unitary ROR when incumbent local exchange carriers
17 were operating as regulated monopolies. The FCC originally granted an
18 ROR (not ROE) of 12.0% and envisioned a biennial re-prescription process.
19 In 1990, after massive multi-year proceedings and several delays, the FCC
20 changed the ROR from 12.0% to 11.25%, an ROR that would remain intact
21 for twenty-six years with local exchange carriers no longer operating as
22 regulated monopolies. In 2016, the FCC reduced the long-standing ROR
23 established in 1990 from 11.25% to 9.75% (corresponding to a 14.37%
24 ROE). These RORs were not applied on a vintage basis. Throughout the
25 1990s, the FCC conducted ROR prescription notice and comment
26 proceedings that resulted in no biennial ROR changes but required a vast

1 amount of resources from all stakeholders. The FCC process resulted in
2 fewer ROR/ROE cases but massive mega-dockets with many participants.
3 The net result was no reduction, and likely an increase, in litigation.
4 Moreover, investors did not consider the FCC process to be more transparent
5 or increase reliability or predictability. An annual national default ROE
6 would be challenging to establish and re-establish perpetually on a regular
7 basis.

IV. NOI SECTION C QUESTIONS – THE EXISTENCE OF MODEL RISK INDICATES THAT THE COMMISSION REACHED AN APPROPRIATE CONCLUSION IN THE 2018 COAKLEY ORDER WHEN IT DECIDED TO USE MULTIPLE FINANCIAL MODELS

8 **Q13. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTIONS C1,**
9 **C2, AND C3.**

10 A13. In Section C, the Commission seeks comment on the robustness of the DCF
11 model over time and under differing investment conditions. These questions
12 bear a significant relationship to the issue of model risk, which I have already
13 discussed in previous testimony and the March 8 Reply Affidavit submitted
14 in response to the 2018 *Coakley* Order. The Commission has also made
15 appropriate model risk findings. Without reiterating the details, I will
16 provide a brief summary of model risk.

17 **Q14. WHAT IS MODEL RISK?**

18 A14. Model risk is the risk that a model used to evaluate real-world situations will
19 fail to predict or to represent the real phenomenon that is being modeled.

20 **Q15. DID THE COMMISSION ADDRESS MODEL RISK IN OPINION**
21 **NO. 531 AND OPINION NO. 551?**

22 A15. Yes. The Commission stated the following in footnote 286 of Opinion
23 No. 531:

1 As the NETOs' witness [Ellen] Lapson testified, "There is 'model
2 risk' associated with the excessive reliance or mechanical
3 application of a model when the surrounding conditions are
4 outside of the normal range. 'Model risk' is the risk that a
5 theoretical model that is used to value real-world transactions fails
6 to predict or represent the real phenomenon that is being
7 modeled."

8 The Commission also stated in paragraph 125 of Opinion No. 551:

9 Consistent with Opinion No. 531, we find that the DCF
10 methodology is subject to model risk of providing unreliable
11 outputs in the presence of unusual capital market conditions.

12 I agree with the Commission's finding that model risk exists and is a
13 relevant concern with respect to placing sole reliance on the DCF model.
14 Clearly, the Commission is concerned, as are investors, with balancing the
15 theoretical and the practical.

16 It is important for investors, and the Commission, to acknowledge that
17 there can be measurement problems with financial models. Model risk
18 captures the reality that model inputs, design, and results may not accurately
19 reflect the real-world situation being modeled. The failure of modeling
20 results to reflect the real-world can be due to simplifications within the
21 model, poor choice of inputs, measurement challenges, inaccurate estimates,
22 flawed analyses, or user errors. Model risk is not mitigated by complex
23 proxy group screening or fine-tuning preferred inputs. Financial modelers,
24 investors, witnesses, and commissions should not engage in modeling and
25 interpreting modeling results without being cognizant of model risk. In short,
26 financial models should not be viewed as representing economic truth
27 regardless of circumstances.

28 **Q16. GIVEN THE EXISTENCE OF MODEL RISK, IS SOLE RELIANCE
29 ON THE DCF MODEL THE BEST APPROACH?**

30 A16. No.

1 **Q17. DOES ANALYZING PAST PERFORMANCE OF THE DCF MODEL
2 ALLEVIATE CONCERNS ABOUT MODEL RISK?**

3 A17. No.

4 **Q18. DOES ANALYZING PAST PERFORMANCE OF THE DCF MODEL
5 DIMINISH THE ADVANTAGE OF MULTIPLE MODELS?**

6 A18. No.

**V. NOI SECTION D QUESTIONS – THE COMMISSION’S USE OF
CREDIT RATINGS IN PROXY GROUP DETERMINATIONS IS
UNLIKELY TO IMPACT PUBLIC UTILITY BEHAVIOR**

7 **Q19. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTION D5.**

8 A19. In NOI Question D5, the Commission asks how, if at all, the Commission’s
9 use of credit ratings in ROE determinations incentivizes public utilities to
10 behave in certain ways, such as issuing more debt, and does this affect the
11 public utilities’ credit ratings. To begin with, the Commission’s use of credit
12 ratings in ROE determinations does not incentivize public utility debt
13 issuance behavior. Rather, corporate treasury professionals have a focus on
14 managing debt so as to minimize the Weighted Average Cost of Capital
15 (“WACC”), which has a much more significant financial impact than the
16 Commission’s use of credit ratings for regulatory purposes. The
17 Commission’s use of credit ratings for ROE analysis does not impact credit
18 ratings. The company’s actual use of debt impacts credit ratings. Investors
19 expect to earn a return commensurate with the inherent risk. No amount of
20 leverage manipulation would allow investors to earn a return greater than the
21 inherent risk.

22 Capital structure ratio targets are determined independently of a
23 commission’s use of credit ratings for regulatory purposes. Capital structure
24 decisions are made based on risk considerations and the credit rating

1 agencies' perceptions of risk. To that extent, credit ratings and the views of
2 the credit rating agencies do impact corporate treasury professionals'
3 behavior in the context of minimizing the WACC. It would be a
4 counterproductive distraction for a utility treasury department to make
5 financial leverage decisions that would increase financing costs based on the
6 Commission's use of credit ratings for ROE analysis. A decision to alter
7 financial leverage for some regulatory purposes would be like the tail
8 wagging the dog and may lead to inefficient cost increases.

9 In my experiences as both a corporate finance professional in the Sprint
10 treasury department that issued debt securities for both regulated entities and
11 unregulated entities, as well as a utility investor at UBS engaged in meetings
12 with the Chief Financial Officers of most North American utilities, corporate
13 treasury departments have the appropriate focus on attempting to minimize
14 the WACC. The optimal capital structure concept drives financial leverage
15 decisions and credit ratings serve as an objective evaluation of management
16 financing decisions. If a corporation operating in a conventional leverage
17 range were to significantly increase debt leverage, it would decrease its credit
18 rating and increase the risk and cost of both its debt and equity. The
19 conventional WACC relationship is graphically depicted in Attachment 3.
20 Moving from left to right on this graph, as more debt is added in proportion
21 to equity, the cost of equity increases, and the cost of debt increases. The
22 combined, or weighted, cost is a shallow dish-shaped WACC curve that
23 shows that the optimal debt/equity ratio operates in a relatively wide range
24 and demonstrates the futility that would be expected from manipulating
25 financial leverage to move along the curve.

1 If utilities operated in the perverse manner contemplated by Question D5
2 in order to somehow favorably impact regulator-authorized ROEs, the result
3 would be higher costs and lower credit ratings for the utility and I would
4 expect to see many sub-investment grade, speculative, junk-rated utilities.
5 Attachment 3 is a summary of S&P credit ratings compiled by the Edison
6 Electric Institute (“EEI”) that demonstrates, as of fourth quarter 2018, the 47
7 EEI member companies were all investment grade with ratings ranging from
8 “A+” to “BBB-.” There were no sub-investment grade utilities.
9 Subsequently in 2019, one utility did slip into the sub-investment grade
10 category due to catastrophic circumstances but did not achieve that status by
11 issuing more debt for regulatory purposes. The preponderance of investment
12 grade ratings for the utility industry demonstrates that the debt-increasing
13 behavior contemplated by Question D5 does not occur.

VI. NOI SECTION E QUESTIONS – INVESTORS USE MULTIPLE FINANCIAL MODELS AND THE COMMISSION APPROPRIATELY INCLUDED THE EXPECTED EARNINGS APPROACH IN ITS ROE METHODOLOGY

14 **Q20. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTION E1.**
15 A20. In NOI Question E1, the Commission seeks information about what models
16 are used by investors to evaluate utility equities. Based on my experience in
17 the investment community, I observe that equity investors use multiple
18 models, including approaches such as the Capital Asset Pricing Model
19 (“CAPM”), the DCF model, evaluations of Expected Earnings, and Risk
20 Premium analyses, the four methods proposed in the 2018 *Coakley* Order.
21 Investors seek models that have conceptual and intuitive appeal, a vetted
22 pedigree, and demonstrably useful practical results. These four models have
23 withstood the test of time and continue to be used by investors. The 2018

1 *Coakley Order* portfolio of four models is reasonable because it is a balanced
2 representative group of models that investors use when making investment
3 decisions. Moreover, the Coakley portfolio of models covers a diverse,
4 thorough, and reasonably comprehensive set of models that investors use.
5 Not all investors will necessarily use all four models, but relying on the four
6 models captures a fair representation of the models that investors use in
7 aggregate. Each model views the investment landscape in a somewhat
8 different way.

9 As context to investors' use of these models, I emphasize that: 1) the end
10 goal of equity investors when using financial models is to make buy/sell
11 equity investment decisions based on valuation; 2) the cost of capital
12 estimation process is thus not the end goal of investors, but an intermediate
13 step; 3) because the end goal of utility regulation is to determine the ROE
14 based on the cost of equity, it is sometimes easy to conjecture that cost of
15 equity estimates are an end goal of investors when they are not; 4) the cost
16 of capital estimation process facilitates the equity valuation process of
17 investors; 5) the models and inputs that investors actually use are
18 unobservable and not publicly revealed; 6) investor consensus valuations in
19 the marketplace are observable; and 7) by combining cost of equity models
20 that investors are known to use with data that investors are known to access
21 along with observed market values, it is possible to back into cost of capital
22 estimates that investors may be using in aggregate. In this context, the
23 Coakley Methodology includes an appropriately balanced set of four models
24 that are diverse, thorough, and reasonably comprehensive.

1 **Q21. WHAT DID THE COMMISSION CONCLUDE ABOUT MULTIPLE
2 FINANCIAL MODELS IN THE 2018 *COAKLEY ORDER*?**

3 A21. In Paragraph 33 of the 2018 *Coakley* Order, the Commission justified the use
4 of multiple financial models by concluding that “in determining what ROE
5 to award a utility we must look to how investors analyze and compare their
6 investment opportunities.” Moreover, the Commission observed in
7 Paragraph 35 that “While some investors may give some weight to a DCF
8 analysis, it is clear that other investors place greater weight on one or more
9 of the other methods for estimating the expected returns from a utility
10 investment, as well as taking other factors into account.” I agree with the
11 Commission on both points. Clearly, the Commission provided sound
12 reasoning to justify the consideration of the results of multiple ROE
13 methodologies.

14 **Q22. HOW DO INVESTORS VIEW MODEL RISK?**

15 A22. Investors use many valuation approaches to avoid the pitfalls of sole reliance
16 on one method. A variety of versions of the DCF, CAPM, Expected
17 Earnings, and Risk Premium methods, are among the most prevalent.
18 However, investors do not have homogeneous expectations. Not all investors
19 use the same tools or inputs. Differing expectations, financial forecasts, and
20 valuation models result in investors placing different valuations on the same
21 investment, thus creating an investment marketplace.

22 While I was at UBS, all global investment analysts incorporated DCF and
23 CAPM methodologies and also created and considered expected earnings per
24 share forecasts. To enhance investment comparisons across industries, all
25 UBS analysts covering diverse industries used a specific type of multi-stage
26 DCF model, but I know that other large institutional investors used different

1 and simpler single-stage or two-stage DCF models. My expected earnings
2 per share forecasts, my DCF growth rate estimates, and my CAPM beta
3 estimates often differed from those of other institutional investors. But I and
4 others, regardless of model differences and different inputs to the models,
5 applied judgment to the results of financial models in making investment
6 decisions, because we all were aware that models are imperfect and subject
7 to model risk.

8 **Q23. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION E2.**
9 A23. In NOI Question E2, the Commission asks what role do current capital
10 market conditions play in the choice of models used by investors to evaluate
11 equity securities and how do investors determine and evaluate those
12 conditions. In my experience, investors will continually monitor the results
13 of a stable portfolio of models through different capital market conditions.
14 Prevailing capital market conditions can and do influence the weight that
15 investors place on the results of various models as well as the input
16 assumptions used in applying those financial models. Investors exercise
17 judgment and temper their interpretation of model results based on factors
18 such as current and forecasted capital market conditions rather than totally
19 rejecting models and then flip-flopping between entirely different models
20 based on shifting capital market conditions. Investors will view the results
21 of a portfolio of models and perhaps emphasize or de-emphasize certain
22 model results based on prevailing capital market conditions. For instance,
23 the anomalous capital market conditions resulting from unprecedented
24 central bank intervention in response to the recent global financial crisis led
25 some investors to recognize the model risk challenge and de-emphasize the
26 use of certain models such as the DCF model, which is consistent with the

1 Commission's conclusions in Opinion Nos. 531 and 551. It is not possible
2 for investors to anticipate all potential capital market conditions; thus, they
3 are likely to remain flexible and make judgments in evaluating model results
4 based on factors such as current and forecasted capital market conditions.
5 Investors do not attempt to pre-identify capital market conditions that would
6 disqualify or enhance certain models. Likewise, the Commission cannot be
7 expected to conceive of all possible capital market conditions in advance.
8 However, by utilizing four models in accordance with the 2018 *Coakley*
9 Order, the Commission will mitigate model risk from capital market
10 conditions that may affect one model more than others. The Commission
11 need not pre-identify specific capital market conditions that would disqualify
12 each model. Rather, the Commission can review case-specific evidence
13 when deciding whether the underlying facts and circumstances of the case at
14 hand warrant consideration.

15 Finally, I view the Expected Earnings approach as less susceptible to
16 shifting capital market conditions. As will be described in response to NOI
17 Questions E4, E5, and E7, the variables used in the Expected Earnings model
18 are not as exposed to shifts in capital market conditions as the CAPM, DCF,
19 and Risk Premium methods.

20 **Q24. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTIONS E3
21 AND E6.**

22 A24. In NOI Questions E3 and E6, the Commission asks if any models are thought
23 to be superior or inferior to others, and should multiple models be combined
24 in the Commission's analysis or is there a "best" model that would apply in
25 all market conditions. All financial models have implicit assumptions,
26 strengths, and weaknesses concerning how they reflect reality over time.

1 Thus, all financial models are exposed to model risk. None are inherently
2 superior or inferior. There is no best model for all market conditions. The
3 benefit of multiple models is diversity and resilience. The relative
4 attractiveness of different models shifts over time. No model is perfect and
5 all models are susceptible to model risk and measurement error. Relying on
6 only one “best” model would amplify exposure to model risk. Exclusive
7 reliance on one or a limited set of models for an extended time period
8 followed by dramatic swapping to another model for another time period is
9 undesirable and disruptive. Rather, using a representative set of diverse
10 models provides an opportunity to calculate, observe, and interpret model
11 results over time. For these reasons, investors prefer to rely on multiple
12 models in their valuation of equities and in making investment decisions.
13 The 2018 *Coakley* Order portfolio of models are useful because they provide
14 that opportunity. In the absence of a well-founded, compelling, case-specific
15 reason to deviate from the equal weighting proposed in the 2018 *Coakley*
16 Order, it is appropriate for the Commission to give equal weight to each of
17 the models in the Coakley Methodology.

18 **Q25. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTIONS E4,
19 E5, AND E7.**

20 A25. In NOI Questions E4, E5, and E7, the Commission asks how are alternative
21 models redundant or complementary with each other and/or the DCF model,
22 to what extent do alternative models avoid any deficiencies of the DCF
23 model and/or operate better in diverse capital market conditions, and how the
24 Commission should weigh multiple models. All four models in the 2018
25 *Coakley* Order portfolio are complementary. All are different. All are useful
26 to investors. All are simplified versions of reality. The Expected Earnings

1 model is the most distinct, and thus the most complementary, of the four
2 models given that the other three models are based on market information.
3 The DCF model is based on stock price information. The CAPM is based on
4 market interest rates and betas derived from stock prices. The Risk Premium
5 model is based on market interest rates. The Expected Earnings approach is
6 an accounting-based approach that relies on analyst estimates of returns on
7 book value. Accordingly, the Expected Earnings approach is the least
8 dependent on capital market conditions among the four models, is reflective
9 of investor valuation approaches, and is appropriately included in the
10 Commission's portfolio of ROE methodologies.

11 In the absence of a reason to deviate, equal weighting of model results is
12 appropriate. Placing equal weight on the results of each of the models as
13 called for in the 2018 *Coakley* Order for the presumptive screening in Step 1
14 of the Commission's FPA Section 206 analysis is appropriate where the goal
15 is to determine whether or not to proceed with the complaint, and is also
16 appropriate for Step 2 of the FPA Section 206 analysis in the absence of any
17 circumstance to deviate that is identified through a case-by-case deep dive
18 analysis. The Commission should avoid averaging calculations whose sole
19 purpose appears to be a results-driven attempt to artificially compress the
20 zone of reasonableness and reduce the upper end of the zone in order to
21 trigger more ROE complaints and constrain incentives on needed electric
22 transmission investment. Investors would view a switch to an unorthodox
23 averaging calculation as an attempt to torture the data into attesting that more
24 ROE complaints and reduced transmission incentives are the appropriate
25 outcome.

1 **Q26. PLEASE ELABORATE ON YOUR UNDERSTANDING OF THE**
2 **COMMISSION'S EXPECTED EARNINGS APPROACH.**

3 A26. In Paragraph 34 of the 2018 *Coakley* Order, the Commission describes that
4 “The Expected Earnings methodology provides an accounting-based
5 approach that uses investment analyst estimates of return (net earnings) on
6 book value (the equity portion of a company’s overall capital, excluding
7 long-term debt).” Thus, the two data components needed to implement the
8 Expected Earnings methodology are: 1) a measure of expected earnings (or
9 earnings per share (“EPS”)); and 2) book value of equity (or book value per
10 share (“BVPS”)).

11 **Q27. DO INVESTORS SIGNIFICANTLY UTILIZE EXPECTED**
12 **EARNINGS PER SHARE IN THE INVESTMENT DECISION-**
13 **MAKING PROCESS?**

14 A27. Yes, they do. Investors place significant weight on expected EPS when
15 making investment decisions. Companies generally report EPS on a
16 quarterly basis and hold earnings calls four times per year. The quarterly
17 earnings calls are generally preceded by a press release and other supporting
18 materials announcing and describing the results. Company management
19 further describes the earnings results during the earnings call and investors
20 are provided the opportunity to ask questions. Both buy-side investors and
21 sell-side analysts devote a significant amount of time to preparing for and
22 participating in quarterly earnings calls. After an earnings call is complete,
23 investors will update their financial models not only for the recently released
24 earnings numbers but will also incorporate qualitative information provided
25 during the call that might impact expected earnings. Stock prices sometimes

1 react significantly to information released with the quarterly earnings report
2 as investors update their valuation models.

3 When I covered companies at UBS, I regularly prepared for and
4 participated in earnings calls and then subsequently revised my financial
5 models. Investors refer to “earnings season” which is generally a five to
6 seven-week period of time, depending on the reporting pattern of their
7 covered companies, when investment analysts concentrate on earnings
8 reports and calls. For example, doing the preparatory work for an earnings
9 call, participating in the earnings call, and then updating financial models
10 after the call for any needed changes would consume several hours per
11 company. Participating in the earnings call process for my covered
12 companies represented a significant time commitment, but was necessary to
13 understand the corresponding significant stock price movements.

14 Investor estimates of expected EPS are prepared for internal investment
15 decision-making, and are thus unobservable. However, sell-side analysts
16 publish their expected earnings estimates that are observable. As mentioned
17 previously, while at UBS, I prepared year-by-year expected earnings for the
18 next five-year period for internal consumption. The published expected
19 earnings of sell-side analysts generally cover a two-to-three-year or three-to-
20 five-year⁵ outlook and are representative of the expected earnings estimates
21 that investors may be making over that time horizon. Moreover, some
22 investors may choose to directly utilize sell-side expected earnings in their
23 financial models rather than create their own. In either case, it is clear that
24 equity investors commit significant time and resources to evaluate expected

⁵ As noted below, my experience is that when investors deal with multiple years of expected earnings, they prefer to focus on the most distant available out-year of expected earnings.

1 earnings. It is essential to not underestimate the importance of earnings to
2 equity investors.

3 **Q28. DO INVESTORS SIGNIFICANTLY UTILIZE BOOK VALUE PER**
4 **SHARE (“BVPS”) IN THE INVESTMENT DECISION-MAKING**
5 **PROCESS?**

6 A28. Yes, they do. As noted by the Commission, BVPS is an accounting-based
7 balance sheet concept. The three major components of the balance sheet are
8 the book value of assets, the book value of liabilities (including debt) and the
9 book value of equity. Investors recognize that accounting principles,
10 standards, and procedures, including Generally Accepted Accounting
11 Principles (“GAAP”) promulgated by the Financial Accounting Standards
12 Board (“FASB”), ensure a level of consistency in the calculation of BVPS
13 that makes it easier for investors to analyze and extract useful information
14 from financial statements. For jurisdictional utilities, investors recognize
15 that the Commission’s Uniform System of Accounts (“USofA”) provides
16 requirements that ensure additional consistency in the calculation of BVPS.
17 The Commission’s USofA enhances uniformity, comparability, accuracy,
18 reliability, and consistency for reporting, cross-company benchmarking
19 comparisons, rate regulation, rate studies, cost-of-service studies,
20 depreciation studies, market oversight, and financial audits. Although part
21 of an investment analysts’ duty is to scrutinize the financial statements, the
22 existence of GAAP and the Commission’s USofA provide a solid foundation
23 for book value analysis.

24 While I was at UBS, investment analysts were required to model the entire
25 balance sheet year-by-year for the next five years for all covered companies.
26 This modeling discipline forced the analysts to maintain consistency between

1 book value and equity valuation. UBS would not invest in an equity security
2 on behalf of clients unless the covering analyst had prepared this five-year
3 balance sheet outlook. The UBS financial models encouraged consistency
4 between earnings growth rates, dividend growth rates, cash flow per share
5 growth rates, and book value per share growth rates such that they tracked
6 each other over time in a sustainable manner. It is important to not ignore
7 the importance of GAAP and USofA accounting principles and book value
8 to equity investors.

9 **Q29. DO INVESTORS RECOGNIZE THAT EXPECTED EARNINGS FOR**
10 **A REGULATED UTILITY WILL BE DEPENDENT ON RATE BASE,**
11 **WHICH IS A BOOK VALUE CONCEPT?**

12 A29. Yes. In conventional ratemaking, the rate base is the book value of the
13 property used by a regulated utility in providing service to customers. The
14 rate base is typically calculated based on original cost of assets less
15 accumulated depreciation. Both the original cost of assets and the
16 depreciation practices that determine accumulated depreciation are book
17 value concepts. Investors recognize that expected earnings will generally
18 grow as rate base grows. Investors expect that as capital is invested in a
19 regulated utility in excess of book value depreciation, expected earnings will
20 increase. It is apparent that investors recognize the extreme importance of
21 the book value of rate base in cost of service regulation.

22 **Q30. DO INVESTORS RECOGNIZE THAT BOOK VALUE CAPITAL**
23 **STRUCTURE RATIOS ARE USED FOR REGULATED UTILITY**
24 **RATEMAKING?**

25 A30. Yes. In conventional ratemaking, the base ROE is combined with a cost of
26 debt using book value capital structure ratios to determine an overall rate of

1 return (“ROR”). The book value capital structure ratios are determined with
2 the balance sheet accounts of debt, preferred stock, and common equity. The
3 ROR is multiplied by the book value rate base to determine the return
4 component that is intended for investors. That return component is combined
5 with book value income statement expenses such as operating expenses,
6 depreciation, and taxes to determine the revenue requirement for a regulated
7 utility. In my view, investors are keenly aware of the importance of book
8 value to their valuation of regulated utilities.

9 **Q31. DO REPRESENTATIVE SELL-SIDE RESEARCH REPORTS
10 DEMONSTRATE THE IMPORTANCE OF EXPECTED EPS AND
11 BVPS?**

12 A31. Yes. In my March 8 Reply Affidavit, I provided recent representative sell-
13 side research reports that demonstrate the importance of expected EPS and
14 BVPS. *See* Reply Affidavit of John D. Quackenbush, CFA, Attachment B to
15 Reply Paper Hearing Brief of the NETOs, Docket No. EL11-66-001, *et al.*,
16 at Attachments 2-3 (filed Mar. 8, 2019). These sell-side reports contain data
17 that investors review and often use in the investment decision-making
18 process and make clear that investors are extremely cognizant of expected
19 earnings and book value data.

20 **Q32. PLEASE DESCRIBE HOW INVESTORS COMBINE AND UTILIZE
21 EXPECTED EARNINGS AND BOOK VALUE DATA.**

22 A32. Similar to the Commission’s Expected Earnings approach, some investors
23 directly utilize the sell-side expected EPS and BVPS data and directly
24 combine them to calculate the ratio of expected EPS to BVPS. Alternatively,
25 investors can adjust the sell-side data in some manner meaningful to their
26 analysis or can utilize their own expected EPS and BVPS estimates to

1 calculate the ratio of expected EPS to BVPS while referencing the sell-side
2 data as a useful comparison. Some investors will undoubtedly make this
3 expected earnings-to-book value calculation while others will not. The
4 Expected Earnings approach is an available, significant, and commonly used
5 method in an investor's toolbox.

6 **Q33. BASED ON YOUR REVIEW OF THE COMMISSION'S EXPECTED
7 EARNINGS APPROACH, WOULD ITS USE POTENTIALLY
8 MITIGATE THE COMMISSION'S STATED CONCERNS ABOUT
9 MODEL RISK?**

10 A33. Yes. The 2018 *Coakley* Order accurately concludes in Paragraph 40 that
11 "investors have increasingly used a diverse set of data sources and models to
12 inform their investment decisions," and "the DCF model alone no longer
13 captures how investors view utility returns." The Commission enumerated
14 several reasons that led to its conclusion in Paragraphs 45-48, including a
15 reference to model risk in Paragraph 46. Part of the Commission's reasoning
16 is described in Paragraph 46 in which it states: "It appears that, for whatever
17 the reason, investors during this period have seen greater value in utility
18 stocks than the DCF methodology would predict." The Expected Earnings
19 approach, with its focus on book value rather than the market value of utility
20 stocks, is free of the concern expressed by the Commission in Paragraph 46.
21 As a result, the Expected Earnings method is especially useful to include in
22 the Commission's ROE methodology because the Expected Earnings method
23 can serve as a stabilizing feature and a mitigating offset to other methods in
24 the portfolio.

1 Q34. **PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION E8.**

2 A34. In NOI Question E8, the Commission asks to what extent it is reasonable for
3 the Commission to use a simplified version of a model that does not reflect
4 all the variables that investors consider. Reality is complex. All financial
5 models, including the portfolio of four models in the Coakley Methodology,
6 are already simplified versions of reality and have limitations. These models
7 are readily implementable and do not need to be simplified further. The
8 Coakley Methodology already appropriately balances simplicity and reality.
9 The Commission should not require even more simplified models. Nor
10 should the Commission prohibit simplified models from being introduced
11 and considered in the future. Academicians and investment practitioners are
12 continually in search of new and/or improved financial models. Likewise,
13 the Commission should not require or prohibit new more complex models
14 like the Fama-French model from being considered, and should maintain
15 flexibility to consider them on a case-by-case basis in the future. New
16 simplifications or new models can be utilized if developed in the record of
17 future cases.

18 Q35. **PLEASE RESPOND TO THE COMMISSION'S NOI QUESTIONS E9
19 AND E10.**

20 A35. In NOI Questions E9 and E10, the Commission asks how, if at all, it should
21 consider state ROEs, why state ROEs vary by state, are certain state ROEs
22 more or less comparable to Commission ROEs, and should it use state ROEs
23 of delivery only companies or vertically integrated companies. The
24 Commission should continue to accept evidence on and consider state-
25 authorized ROE information on a case-by-case basis. Electric utility
26 investors pay attention to state-authorized ROEs. The Commission need not

1 require nor preclude state-authorized ROEs from evidence. Rather, the
2 Commission should retain the flexibility to consider state-authorized ROE
3 information, which can provide useful information about returns available to
4 a utility on alternative non-transmission investments.

5 Although the Commission did not utilize state-authorized ROEs to set the
6 composite zone of reasonableness or weight it with the four financial models
7 in establishing a new just and reasonable ROE in the 2018 *Coakley* Order,
8 state-authorized ROEs can serve as a useful benchmark for comparison.
9 State-authorized ROEs may serve to corroborate the results of the four
10 methods used in the Coakley Methodology. It is useful for the Commission
11 to know when state-authorized ROEs do not corroborate the results of strictly
12 applying the Coakley Methodology. For example, if the results of the
13 Coakley Methodology produce an ROE significantly below state-authorized
14 ROEs, the Commission can use its discretion to take that into account to
15 ensure that the result “accurately reflects the [ROE] necessary to meet the
16 [U.S. Supreme Court’s] *Hope* and *Bluefield* capital attraction standards.”⁶
17 An electric utility has the option to devote funds to grid modernization
18 investments or other distribution investments rather than transmission
19 investment if it can achieve a higher risk-adjusted return.

20 When considering state-authorized ROEs, the Commission should
21 continue to use vertically-integrated state ROEs that recognize, like Opinion
22 Nos. 531 and 551, that transmission risk is greater than distribution risk.
23 Investors recognize the risk continuum that competitive generation is riskier
24 than regulated generation, regulated generation is riskier than transmission,
25 and transmission is riskier than distribution. The use of vertically-integrated

⁶ Opinion No. 531 at P 145.

1 ROE data captures the components of regulated generation and distribution
2 while ignoring competitive generation, thus coming closest to replicating the
3 risk level of transmission. The use of distribution-only ROE data knowingly
4 reflects the lower risk of distribution investment, which the Commission has
5 acknowledged is lower than the risk of transmission investment.

6 Q36. WHY DO INVESTORS CONSIDER THE VERTICALLY
7 INTEGRATED ELECTRIC UTILITIES TO BE THE MOST
8 APPROPRIATE GROUP FOR THE COMPARISON OF
9 STATE-AUTHORIZED ROES?

10 A36. As discussed in my March 8 Reply Affidavit, Regulatory Research
11 Associates (RRA) reports state ROE decisions at several different levels of
12 aggregation, including separately for electric utilities and natural gas utilities,
13 and further separates the electric utility cases into vertically-integrated cases
14 and delivery-only cases. *See* Reply Affidavit of John D. Quackenbush, CFA,
15 Attachment B to Reply Paper Hearing Brief of the NETOs, Docket No.
16 EL11-66-001, *et al.*, at 30 (filed Mar. 8, 2019). Vertically integrated electric
17 utilities are electric utilities that own transmission, distribution, and regulated
18 generation assets. Nothing has changed to alter the Commission’s previous
19 conclusion that transmission investment is riskier than distribution
20 investment.

21 The Commission, in Opinion No. 531, properly recognized that
22 transmission investment is riskier than distribution investment. In fact, the
23 Commission found in Paragraph 149 of Opinion No. 531 that state-regulated
24 electric distribution investment has lower business risks than electric
25 transmission investment. Some of the risks that the Commission noted for
26 electric transmission that have not changed are:

1 For example, investors providing capital for electric transmission
2 infrastructure face risk including the following: long delays in
3 transmission siting, greater project complexity, environmental
4 impact proceedings, requiring regulatory approval from multiple
5 jurisdictions overseeing permits and rights of way, liquidity risk
6 from financing projects that are large relative to the size of a
7 balance sheet, and shorter investment history. We find that these
8 factors increase the NETOs' risk relative to the state-regulated
9 distribution companies.

10 In addition, the electric delivery-only utilities are generally regarded by
11 investors and state regulators as having lower business risk than vertically
12 integrated electric utilities and as such, are expected to have lower state-
13 authorized ROEs. The vertically integrated electric utilities group is the most
14 representative sample group for state-authorized ROE analysis because it is
15 the group most similar in risk to the investment in transmission infrastructure
16 of the NETOs.

17 **Q37. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION E11.**

18 A37. In NOI Question E11, the Commission asks to what extent, if any, it should
19 exercise judgment in using financial models to set ROEs under various
20 capital market conditions. The Commission struck an appropriate balance
21 between predictability and flexibility in the 2018 *Coakley* Order.
22 Nonetheless, the Commission should retain the discretion to exercise
23 judgment while recognizing that the Coakley Methodology includes four
24 models that are diverse, balanced and thorough, but are simplifications of
25 reality subject to model risk. For instance, the anomalous capital market
26 conditions resulting from unprecedented central bank intervention in
27 response to the recent global financial crisis led some investors to recognize
28 the model risk challenge and emphasize judgment more, similar to the
29 Commission's conclusions in Opinion Nos. 531 and 551. As noted in my
30 response to the Commission's NOI Questions E3 and E6, it is appropriate for

1 the Commission to give equal weight to each of the models in the Coakley
2 Methodology in the absence of a well-founded, compelling, case-specific
3 reason to deviate.

4 **Q38. DO INVESTORS, INVESTMENT BANKERS, AND CORPORATE
5 FINANCE PROFESSIONALS USE JUDGMENT, WHEN
6 EVALUATING THE COST OF EQUITY?**

7 A38. Yes, investors, investment bankers, investors, and corporate finance
8 professionals use judgment when evaluating the cost of equity with multiple
9 models. My experience as a corporate finance professional at Sprint and as
10 a senior investment analyst at UBS leads me to conclude that corporate
11 finance professionals and investors generally use multiple models and then
12 exercise informed judgment in interpreting the results from those models.

13 For example, when preparing cost of capital estimates for use as internal
14 risk-adjusted hurdle rates⁷ at Sprint, I utilized multiple methods and
15 exercised judgment in order to provide consistent, reliable, conceptually
16 appealing, and practical cost of equity recommendations to Sprint
17 management to make investment decisions across divisions. Sprint
18 management, in turn, exercised judgment and factored in model risk when
19 applying my hurdle rates in the business decision-making process.

20 When making investment decisions for clients at UBS, I utilized multiple
21 methods and exercised judgment to provide consistent, reliable, conceptually
22 appealing, and practical cost of equity estimates. At UBS, investment
23 analysts developed year-by-year earnings, balance sheet (book value), and

⁷ In evaluating whether to invest in capital projects, a corporation generally uses a risk-adjusted required rate of return, called a hurdle rate, to discount the expected cash flows from each project. A project is often accepted for investment if its internal rate of return equals or exceeds the hurdle rate.

1 cash flow projections for each covered company generally for the next five
2 years. The core UBS valuation model utilized the DCF and CAPM methods,
3 along with the five-year modeling results while model risk was partially
4 addressed by providing analysts with the discretion to tweak the default
5 parameters in the model and run numerous scenarios, as needed, to better
6 reflect reality with the potential for multiple outcomes. Additionally, UBS
7 management exercised judgment by not always investing in precisely the
8 stocks with the highest rank-ordering identified by the valuation model. Both
9 at Sprint and UBS, cost of equity models were viewed as tools to enhance
10 decision-making, not as dispensers of ultimate economic truth, so the
11 exercise of judgment was required.

VII. NOI SECTION F QUESTIONS – DUE TO THE PREVALENCE OF COST OF SERVICE RATEMAKING, THE PERCEIVED “MISMATCH” BETWEEN MARKET-BASED ROES AND BOOK VALUE RATE BASE IS NOT A PROBLEM

12 **Q39. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTION F1.**
13 A39. In NOI Question F1, the Commission asks if the “mismatch” between
14 market-based ROE determinations and a book value rate base supports
15 current market values, and is the “mismatch” a problem. I do not agree with
16 the characterization of the relationship between market-based ROE
17 determination and a book value rate base as a “mismatch.” Conventional
18 public utility cost of service ratemaking that combines book value rate base
19 with book value capital structures and market-based ROE determinations
20 evolved the way it did based on foundational Court cases including *Hope* and
21 *Bluefield*. As described in my Expected Earnings answers in response to
22 NOI Questions E4, E5, and E7, investors in the capital marketplace that set
23 market values are fully aware of the market-to-book ratios of investment

1 opportunities and how conventional public utility cost of service ratemaking
2 works and the historical precedent that supports it. In this context, I
3 characterize the combination of book value financial data with market-base
4 ROE determinations as entirely appropriate. Thus, this perceived
5 “mismatch” is not a problem to either investor valuation or Commission
6 regulation.

7 **Q40. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTION F2.**

8 A40. In NOI Question F2, the Commission asks why most or all utility market-to-
9 book ratios have consistently exceeded one. There are many factors that lead
10 investors to value utilities at levels different than book value, including
11 duration of the underlying assets, mergers, acquisitions, divestitures,
12 intangible assets, write-offs, and stock buy-backs. Market values reflect
13 economic/financial principles, while book values reflect accounting
14 principles. Investors do not expect that market values will equal book values.
15 Market values adjust much more frequently than book values, so timing is a
16 significant issue. There is no need to identify or determine these factors
17 because it is not a problem, as described in response to NOI Question F1.

18 **Q41. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTION F3.**

19 A41. In NOI Question F3, the Commission asks how the ROE level should be set
20 relative to the cost of equity. As in conventional cost-of-service ratemaking,
21 the base ROE should be set equal to the cost of equity without regard to the
22 market-to-book ratio.

23 **Q42. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTIONS F4
24 AND F5.**

25 A42. In NOI Questions F4 and F5, the Commission asks if it should revise its use
26 of models to account for the “mismatch” between market-based ROE

1 determinations and book-value rate base and should it consider adjusting
2 ROEs to account for market-to-book ratios above or below one. No, there is
3 absolutely no need for the Commission to revise the *Coakley* portfolio of
4 models or adjust ROE results for market-to-book ratios due to a perceived
5 “mismatch” that is inherent to public utility cost of service regulation. The
6 Coakley Methodology contains three models that emphasize market
7 information and one that emphasizes accounting information, thus striking
8 an appropriate balance. When implementing all four models in the Coakley
9 Methodology, investors make ratemaking projections. Investors are aware
10 of how cost of service ratemaking works and price equity securities
11 correspondingly. The financial models already recognize cost of service
12 ratemaking, and investors use inputs that reflect cost of service ratemaking.
13 This perceived “mismatch” is not a problem. The reason not to make a
14 market-to-book ratio adjustment is because it is unneeded, not due to
15 circularity concerns.

VIII. NOI SECTION H QUESTIONS – THE COMMISSION’S PORTFOLIO OF ROE METHODOLOGIES SET FORTH IN THE 2018 COAKLEY ORDER REPRESENTS AN APPROPRIATE BALANCE OF DIVERSE FINANCIAL MODELS

16 Q43. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTION
17 **H.1.2.**
18 A43. In NOI Question H.1.2, the Commission asks to what extent model risk
19 affects all ROE methodologies. The Commission cannot avoid model risk
20 but it can mitigate the impacts of model risk inherent in market-based models
21 by relying on multiple models, including the Expected Earnings approach in
22 its portfolio of models, and applying judgment on a case-by-case basis.
23 Model risk affects all ROE methodologies, but the Expected Earnings

1 approach is not subject to the same type of model risk as the other three
2 models in the Coakley Methodology, so the Expected Earnings approach
3 provides some diversity. The Commission is appropriately focused on
4 determining a just and reasonable ROE and is appropriately concerned, as
5 are investors, with balancing theory and practice. All financial models are
6 subject to model risk. Practitioners consider, and should continue to
7 consider, model risk when utilizing financial models. As with regulators,
8 investors are constantly balancing theory and practice in the real world.
9 Investors, investment bankers, and corporate finance professionals use
10 multiple methods when evaluating the cost of equity to address model risk.
11 Additionally, state regulators generally use multiple methods when
12 evaluating the cost of equity to address model risk. The Commission is fully
13 justified in using multiple financial models and judgment when determining
14 a just and reasonable ROE to address model risk.

15 **Q44. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION**
16 **H.1.3.**

17 A44. In NOI Question H.1.3, the Commission asks if the use of parent/holding
18 company data in the DCF model impacts the adjudication of case results that
19 apply to operating subsidiaries. The use of parent/holding company data is
20 unavoidable when estimating the cost of equity because market data and
21 published investor estimates needed to implement ROE models are only
22 available at the publicly-traded parent company level. As long as the proxy
23 companies, whether they are holding companies or not, are risk comparable,
24 the resulting ROE estimates are likely to be appropriate estimates of the cost
25 of equity for operating subsidiaries that are not market-traded. The Coakley
26 Methodology accomplishes risk comparability through the use of proxy

1 groups, a common technique in financial analysis. State regulators are
2 accustomed to using proxy groups. Investors use proxy groups in their own
3 analysis and are accustomed to the use of proxy groups by regulators.
4 Corporate financial analysts are accustomed to using proxy groups when
5 estimating cost of equity for different corporate divisions that are not market-
6 traded. Moreover, the need to use parent/holding company data is not limited
7 to the DCF model. CAPM betas are directly available for market-traded
8 parent/holding companies and not operating subsidiaries. Expected earnings
9 estimates are directly available from analysts for market-traded
10 parent/holding companies and not operating subsidiaries. Thus, the use of
11 risk-comparable proxy group data is common and does not negatively impact
12 the adjudication of case results for operating subsidiaries.

13 **Q45. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION**
14 **H.1.4.**

15 A45. In NOI Question H.1.4, the Commission asks if the Commission should
16 continue to rely on the efficient market hypothesis (“EMH”), which underlies
17 the DCF and CAPM models. The Commission should continue to rely on
18 the EMH. Nothing in the Coakley Methodology contradicts or challenges
19 the EMH. The Commission has previously concluded and is justified in re-
20 stating its conclusion that the existence of model risk is entirely compatible
21 with the EMH. It is imperative not to perceive a conflict where none exists
22 and the Commission has previously found that there is no such conflict. The
23 EMH is a financial theory that states that an asset’s price fully reflects all
24 available information. The EMH is harmonious with the Commission’s past
25 findings of the existence of model risk.

26 The Commission found in Paragraph 132 of Opinion No. 551 that:

1 The finding that mechanical application of the DCF methodology
2 may produce results inconsistent with *Hope* and *Bluefield* in
3 certain circumstances is not inconsistent with the efficient market
4 theory underlying the typical application of the DCF
5 methodology in normal circumstances.

6 I agree with the Commission that acknowledging the existence of model risk
7 is not inconsistent with the EMH. Mechanical application of any model, no
8 matter how theoretically robust, can entail risk of the model's ability to
9 reflect reality. It would be inappropriate to assume that theoretical models
10 do not have practical limitations, as judgment must always be applied to
11 assess how well the mechanical application of a theoretical model reflects
12 the real world.

13 Model risk is a practical consideration for both investors and regulators
14 and does not attack or invalidate the EMH. In fact, model risk and the lack
15 of a perfect cost of capital model explains the continual quest of academics
16 and practitioners to develop new financial models. Furthermore, a
17 theoretical financial model, by definition, is never a true reflection of all of
18 the parameters that investors consider when making investment decisions.
19 Any model abstracts from reality and makes simplifying assumptions to get
20 to a practicable result. It would be misleading to treat a simplified model as
21 the ultimate truth. The crux of the issue is that the Commission appropriately
22 found that outputs of multiple models were more representative of reality and
23 an improvement over sole reliance on one financial model, and its findings
24 are compatible with the EMH.

25 **Q46. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION**
26 **H.2.A.1.**

27 A46. In NOI Question H.2.a.1, the Commission asks if it should continue to use a
28 dividend DCF model or use a different DCF model, for example, one based

1 on “free cash flow.” Although free cash flow can serve as a crude substitute
2 for dividends in valuation modeling, there is no need to switch to free cash
3 flow in a DCF analysis for electric transmission providers. Some companies
4 do not pay dividends and some industries are dominated by companies that
5 do not pay dividends. Some investors may use free cash flow as an indirect
6 substitute for dividends for certain industries that do not pay dividends, such
7 as independent power producers. For regulated utilities, transmission
8 providers, and proxy companies that pay dividends, it is possible and
9 desirable to directly use dividends as a valuation input. The Commission
10 does not need to pursue an indirect substitute for dividends when virtually all
11 utilities pay dividends.

12 **Q47. PLEASE RESPOND TO THE COMMISSION’S NOI QUESTION**
13 **H.2.A.2.**

14 A47. In NOI Question H.2.a.2, the Commission asks if “terminal stock value”
15 could be used in place of long-term growth projections. Although terminal
16 stock value can serve as a substitute for the remaining present value of
17 dividends in a valuation analysis, there is no need to use terminal stock value
18 in a DCF analysis for electric transmission providers. The fundamental
19 principle of a DCF analysis is that today’s stock price is equal to the net
20 present value (“NPV”) of future dividends over the infinite future. The
21 concept of terminal stock value is raised if an investment analyst wishes to
22 separate the analysis into an initial fixed discrete time period and then a
23 subsequent infinite time period. In this context, the investor would project
24 dividends for only the initial discrete time period, then estimate a terminal
25 value at the end of the discrete time period. This valuation technique may
26 have the appearance of a short-cut, but does not relieve the analyst from a

1 thorough analysis of the future. Fundamentally, that terminal value must
2 represent the NPV of future dividends for the remaining infinite period
3 beyond the discrete time period. As a result, the analyst choosing this DCF
4 tool is again faced with estimating terminal value by estimating the NPV of
5 all future dividends from that point forward.

6 It would be daunting for the Commission to adopt a terminal value
7 approach because it would create an extra step of work and the Commission
8 would still be left with the same valuation challenge in determining the
9 terminal value, just like an investment analyst choosing a terminal stock
10 value approach. I know of no sources of investor estimates of terminal value
11 and no available consensus estimates. Even if it were known that two
12 investors were using the terminal stock value approach for a certain stock,
13 there is no assurance that the investors were using the same initial discrete
14 time period, thus making it impractical to combine their terminal value
15 estimates into a consensus. Simply due to lack of data availability, it would
16 be impractical for the Commission to rely on a terminal stock value approach.

17 **Q48. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION**
18 **H.2.B.4.**

19 A48. In NOI Question H.2.b.4, the Commission asks if it should employ more
20 sophisticated versions of the CAPM that consider more variables instead of
21 only beta, such as the Fama-French model. To begin with, investors value
22 conceptual appeal and practical usefulness. Investors already use the
23 traditional CAPM because it provides a balance between conceptual appeal
24 and practical usefulness. Thus, the traditional CAPM is an appropriate
25 method to include in the Coakley Methodology. However, academics and
26 practitioners are continually striving to improve financial models. The

1 Commission should remain open to the presentation of future evidence of
2 different versions of the CAPM. For example, the more complex Fama-
3 French model or other multi-factor models that currently have
4 implementational challenges may bear fruit in the future. The Commission
5 should not require Fama-French or multi-factor evidence, nor should it
6 preclude it, but should consider this supplemental evidence in the future on
7 a case-by-case basis if proposed by a stakeholder that purports to have solved
8 its implementational challenges.

9 **Q49. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION**
10 **H.2.C.1.**

11 A49. In NOI Question H.2.c.1, the Commission asks if the use of utilities in the
12 proxy group for the Expected Earnings model should be predicated on the
13 Expected Earnings analysis being forward-looking. Yes, the Expected
14 Earnings analysis should be forward-looking because investors are focused
15 on forward earnings expectations rather than historical earnings. The
16 Expected Earnings analysis is forward-looking by definition. As a result, if
17 the Commission predicates use of the Expected Earnings approach on the use
18 of forward-looking analysis, it would be re-affirming the definition of the
19 Expected Earnings model.

20 **Q50. PLEASE RESPOND TO THE COMMISSION'S NOI QUESTION**
21 **H2.C.2.**

22 A50. In NOI Question H.2.c.2, the Commission asks what concerns, if any, exist
23 regarding circularity when using Expected Earnings analysis to determine
24 the base ROE. The forward-looking nature of the Expected Earnings model
25 mitigates the concerns about the circularity of historical earnings. Also, to
26 the extent that there may be concerns of minimal remaining circularity of

1 projecting future rate cases, that circularity also exists in other models as well
2 and is not unique to the Expected Earnings model.

3 The circularity argument is misleading and has no merit when applied to
4 the Expected Earnings analysis. The circularity argument is appropriately
5 applied to the “Comparable Earnings” method, which is not included in the
6 Commission’s portfolio of methods proposed in the 2018 *Coakley* Order,
7 because it is based on historical earnings. However, the circularity argument
8 does not apply to the Expected Earnings method because it, by definition, is
9 based on expected earnings, not historical earnings. The circularity criticism
10 basically combines five steps of logic: 1) a regulated utility was allowed an
11 ROE in the past; 2) that regulated utility subsequently earned its allowed
12 return; 3) the next allowed ROE was set by a regulator that observed the
13 historically earned return and set the allowed return at that same level; 4) the
14 regulated utility again earned its allowed return; and 5) the cycle repeats itself
15 in a self-perpetuating circular loop that results in the utility always earning
16 the same ROE. Clearly, the Expected Earnings approach breaks this cycle
17 by eliminating step 3 in the Comparable Earnings logic chain. As a result, it
18 is misleading to project the circularity criticism applicable to a different
19 model to the Expected Earnings method.

20 Any minimal remaining circularity attributable to the Expected Earnings
21 method is common to other methods, especially the DCF method. For
22 example, the challenge of projecting year three earnings must necessarily
23 include a projection of when rate cases will occur during the next three years
24 as well as the outcome of those rate cases. This expected rate case cycle
25 could be characterized as circular because the investment analyst must
26 estimate the outcome of a future regulatory proceeding in which the

1 regulators might review the analyst's expectations. However, this analyst's
2 challenge is similar for the DCF model. Projected DCF growth rates, a key
3 input of the DCF model, also necessarily include a projection of when rate
4 cases will occur as well as the outcome of those rate cases. As a result, both
5 financial models incorporate a certain degree of circularity and the Expected
6 Earnings method is no more circular than the DCF method.

7 **Q51. DOES THIS CONCLUDE YOUR AFFIDAVIT?**

8 A51. Yes, it does.

QUALIFICATIONS OF JOHN D. QUACKENBUSH, CFA

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New Buffalo, MI 49117
Cell: (630) 865-3605
E-mail: jdquacken@gmail.com

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Office: (269) 586-3142
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Unique balanced combination of state regulatory leadership, investment sector knowledge, and financial experience in transitional industries including telecom

WORK EXPERIENCE

JQ RESOURCES, LLC
President

New Buffalo, MI
4/2016 - Present

Providing value to participants in regulated utility industries through consulting services that bridge the gap between the regulated and investment communities. Contributing regulatory insights to utilities and investors on regulatory issues including distributed energy resources, utility of the future, grid modernization, and electric transmission, while providing financial insights to regulators. Since January 2017, JQ Resources, LLC has a collaboration and services agreement with PricewaterhouseCoopers LLP to enable collaboration and joint marketing efforts with respect to professional consulting services.

MICHIGAN PUBLIC SERVICE COMMISSION
Chairman/Commissioner

Lansing, MI
10/2011 – 3/2016

Provided incentives for significant growth in cost-effective investment by Michigan electric and gas utilities, while driving substantial relative improvement in industrial customer rates and residential customer total bills and enhancing customer satisfaction.

Contributed to growing Michigan's economy and enhancing the quality of life of Michigan's communities through encouraging continuous improvement initiatives, balancing the interests of utility investors and customers, and incenting increased investment on utility safety and reliability.

Demonstrated leadership on states' approaches to the U.S. Environmental Protection Agency's Clean Power Plan by co-chairing the PJM Environmental and Energy Regulators and chairing the Midcontinent States Environmental and Energy Regulators modeling sub-group.

Re-aligned staff to enhance customer outreach and efficient case processing including the institution of lean process improvement initiatives.

UBS GLOBAL ASSET MANAGEMENT
Managing Director (after Executive Director, Director, Associate Director)
Senior Investment Analyst (after Investment Analyst, Associate Investment Analyst)

Chicago, IL
1/2001 – 10/2011

Primarily responsible for fundamental equity research of the transportation (railroads, airlines, parcel carriers, trucking, logistics), utilities (electric utilities, natural gas utilities, natural gas pipelines, water utilities, independent power producers), and coal industries in the United States and Canada.

Provided investment recommendations (primarily long) for 80 covered companies based on detailed five-year company financial models, regular CEO meetings, and thesis statements to domestic portfolio managers in the United States and Canada and global portfolio managers in London, Chicago, and Zurich.

Established a long-term track record for large capitalization clients of average annual performance over benchmark of more than 400 basis points.

In March 2011, named a Top Gun US Industrials Investment Mind by Brendan Wood International.

Participated on several global teams (industrials and utilities) to select investments for global portfolios and served as head of both the global utilities team and the global transportation sub-team (other analysts in London, Sydney, Tokyo, Singapore, and Zurich).

SPRINT CORPORATION TREASURY DEPARTMENT

Manager, Capital Markets

Westwood, KS

2/1995 – 12/2000

Raised more than \$10B of long-term debt (domestic and global) primarily to fund construction of Sprint's national wireless network after evaluating numerous innovative long-term funding structures.

Created economic value by actively managing \$17B of pre-existing outstanding debt / preferred stock, unwinding subsidiary indentures, and eliminating more than 40 issues with a face value exceeding \$7B through redemptions, tender offers, and other techniques to achieve net present value savings of more than \$700M.

Proactively managed the rating agency communication process with four rating agencies and prepared quarterly divisional Weighted Average Cost of Capital (WACC) estimates that reflect risk differences between divisions to use for capital investment, valuation, merger and acquisition, Economic Value Added (EVA), and product / service costing analysis.

Served as Treasurer of Central Telephone Company (operations in Nevada and North Carolina) and United Telephone Company of Ohio while supervising a team of financial analysts. Also served as SprintPAC Treasurer.

Participated in numerous corporate restructuring activities including the proposed WorldCom merger, numerous 1999 fixed wireless acquisitions, the 1998 PCS restructuring including the creation of FON Group and PCS Group tracking stock, the 1996 \$3.6B France Telecom / Deutsche Telekom equity investment, and the 1996 360 Communications spin-off.

SPRINT CORPORATION LOCAL TELECOM DIVISION

Manager, State Regulatory Matters

Westwood, KS

12/1991 – 2/1995

Manager, Rate of Return

5/1986 – 12/1991

Secured and retained revenues for rate-regulated local exchange carriers in 19 states by coordinating and directing all rate of return matters before state commissions and the Federal Communications Commission (FCC), testifying in numerous hearings and using complex financial models.

Participated in the formulation and articulation of industry positions during the transition to FCC price cap regulation as a member of the United States Telephone Association Rate of Return Task Force. Served as Sprint Quality Team Leader.

ILLINOIS COMMERCE COMMISSION

Chief Financial Analyst
Senior Financial Analyst
Financial Analyst

Springfield, IL
9/1984 – 5/1986
3/1984 – 9/1984
1/1982 – 3/1984

Testified as an expert financial witness on a variety of financial issues, supervised the five-member Rate of Return Section, and approved the testimony of other financial analysts. Directly briefed the commissioners on major issues and proceedings. Served as Governor James R. Thompson's representative on the National Governors' Association Task Force on Nuclear Power Plant Financing.

EDUCATION

MBA, Finance	Michigan State University	East Lansing, MI	9/1980 – 12/1981
BA, Business Economics	Calvin College	Grand Rapids, MI	9/1976 – 5/1980

PROFESSIONAL ACTIVITIES

Chartered Financial Analyst (CFA) achieved in September 1993
CFA Continuing Education Program completed for all years beginning with 1993-94
U.S. Department of Transportation Technical Hazardous Liquid Pipeline Safety Standards Committee, 2014-2016
National Association of Regulatory Utility Commissioners and its Committee on Gas, Committee on Consumer Affairs, and Subcommittee on Pipeline Safety, 2011-2016
Gas Technology Institute Public Interest Advisory Council, 2013-2016
CFA Institute and CFA Society of Chicago, 2001-present
Society of Utility and Regulatory Financial Analysts (Board Member 1998 through 2008)

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

Martha Coakley, Attorney General of the Commonwealth of Massachusetts, <i>et al.</i> , v.)))
Complainants,)	Docket Nos. EL11-66-001	
)	EL11-66-004	
)	EL11-66-005	
Bangor Hydro-Electric Company, <i>et al.</i> , Respondents.)))
ENE (Environment Northeast), <i>et al.</i> , v.)))
Complainants,)	Docket Nos. EL13-33-000	
)	EL13-33-002	
Bangor Hydro-Electric Company, <i>et al.</i> , Respondents.)))
Attorney General of the Commonwealth of Massachusetts, <i>et al.</i> , v.)))
Complainants,)	Docket No. EL14-86-000	
)		
Bangor Hydro-Electric Company, <i>et al.</i> , Respondents.)))
Belmont Municipal Light Department, <i>et al.</i> , v.)))
Complainants,)	Docket Nos. EL16-64-000	
)	EL16-64-002	
Bangor Hydro-Electric Company, <i>et al.</i> , Respondents.)))

REPLY AFFIDAVIT OF

JOHN D. QUACKENBUSH, CFA

**ON BEHALF OF
THE NEW ENGLAND TRANSMISSION OWNERS**

March 8, 2019

TABLE OF CONTENTS

I.	Introduction	3
II.	Summary and Conclusions.....	7
III.	The Commission Reached an Appropriate Conclusion in the Briefing Order When it Decided to Use Multiple Financial Models When Determining a Just and Reasonable Base ROE.....	7
IV.	The Commission's Expected Earnings Approach is Reflective of Investor Valuation Approaches and is Appropriately Included in the Commission's Portfolio of ROE Methodologies	15
V.	The Idiosyncratic Averaging Calculations Proposed by the CAPs and EMCOS Do Not Resemble Investor or State Regulatory Averaging Calculations and ave No Merit.....	26
VI.	The State-authorized ROEs Cited by Dr. Woolridge are Conceptually Dissimilar to, and Understate, the State Authorized ROEs Found Relevant by the Commission in Opinion Nos. 531 and 551	29

ATTACHMENTS TO REPLY AFFIDAVIT**Attachment No. Description**

- | | |
|---|---|
| 1 | Qualifications of John D. Quackenbush |
| 2 | Evercore ISI Utilities Comp Model, February 8, 2019 |
| 3 | Wolfe Research Utility Comps, February 14, 2019 |

I. INTRODUCTION

1 Q1. **PLEASE STATE YOUR NAME, BUSINESS ADDRESS, EMPLOYER, AND**
2 **TITLE.**

3 A1. My name is John D. Quackenbush. My business address is 46320 Station Road,
4 New Buffalo, Michigan 49117. I am President of JQ Resources, LLC.

5 Q2. **PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
6 **PROFESSIONAL EXPERIENCE.**

7 A2. A description of my background and qualifications, including a resume containing
8 the details of my experience, is included as Attachment 1 to this reply affidavit.

9 Q3. **WHAT IS THE PURPOSE OF YOUR REPLY AFFIDAVIT?**

10 A3. In *Emera Maine v. FERC*,¹ the United States Court of Appeals for the District of
11 Columbia Circuit (“D.C. Circuit”) vacated and remanded Opinion No. 531,² which
12 addressed the just and reasonable return on equity (“ROE”) for the New England
13 Transmission Owners (“NETOs”).³ In an October 16, 2018 order (the “Briefing
14 Order”), the Commission proposed a methodology for addressing the issues that
15 the D.C. Circuit remanded to the Commission in *Emera Maine* and established a
16 paper hearing to address how this methodology should apply to the proceedings
17 pending before the Commission involving the NETOs’ ROE.⁴ On January 11,
18 2019, parties to this proceeding filed Initial Briefs and attached Affidavits

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

² *Coakley Mass. Attorney Gen. v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 (2014), *order on paper hearing*, 149 FERC ¶ 61,032 (2014) (Opinion No. 531-A), *order on reh’g*, Opinion No. 531-B, 150 FERC ¶ 61,165 (2015).

³ For purposes of this reply affidavit, the New England Transmission Owners are: Emera Maine f/k/a Bangor Hydro-Electric Company, Central Maine Power Company, New England Power Company d/b/a National Grid, New Hampshire Transmission LLC, Eversource Energy Service Company (on behalf of its operating company affiliates: The Connecticut Light and Power Company, NSTAR Electric Company, and Public Service Company of New Hampshire, each of which is doing business as Eversource Energy), The United Illuminating Company, Utili Energy Systems, Inc., Fitchburg Gas and Electric Light Company, and Vermont Transco, LLC.

⁴ *Coakley Mass. Attorney Gen. v. Bangor Hydro-Elec. Co.*, Order Directing Briefs, 165 FERC ¶ 61,030 (2018).

1 addressing certain aspects of the Briefing Order. The purpose of this reply affidavit
2 is to respond to several comments provided in the January 11, 2019 initial briefs
3 and attached affidavits of Eastern Massachusetts Consumer-Owned Systems
4 (“EMCOS”), the Complainant-Aligned Parties (“CAPs”), the Commission Trial
5 Staff, and the Louisiana Public Service Commission (“LPSC”). Specifically, I will
6 comment on the value of utilizing multiple ROE models, the usefulness of the
7 Expected Earnings model, the idiosyncratic averaging calculations proposed by the
8 CAPS and EMCOS, and the state-authorized ROEs cited by the CAPs.

9 **Q4. WHAT IS THE BASIS FOR YOUR REPLY AFFIDAVIT?**

10 A4. My reply affidavit is based on my 37 years of experience working in the field of
11 utility regulation. My career includes: more than 4 years supporting state utility
12 regulators as a finance staff member of the Illinois Commerce Commission
13 (“ICC”); 14 years performing regulatory and treasury functions in the
14 telecommunications industry for Sprint Corporation, partially during the
15 application of utility cost of service regulation to incumbent local exchange carriers
16 and partially during the transition from cost of service regulation to price cap
17 regulation; 11 years in the investment community covering North American
18 companies in several industries including regulated utilities, building United States
19 (“U.S.”) and Canadian domestic portfolios, and leading the global utilities team in
20 building global utility portfolios for UBS Global Asset Management (“UBS”);
21 more than 4 years regulating utilities as a state utility regulatory commissioner at
22 the Michigan Public Service Commission; and most recently, for the last several
23 years, providing consulting services to participants in regulated utility industries.

24 In preparing my reply affidavit, I relied on my own knowledge of both U.S. and
25 global financial markets in which the NETOs and other U.S. electric transmission
26 providers compete against other investments for investor-supplied capital. Also, I
27 regularly meet and interact with buy-side institutional investors and sell-side

1 analysts that focus on the utility sector and I continue to monitor how investors
2 currently perceive and evaluate utility investment opportunities and risks.

3 **Q5. WHAT DO YOU MEAN WHEN YOU STATE THAT YOU COVERED**
4 **NORTH AMERICAN COMPANIES IN SEVERAL INDUSTRIES**
5 **INCLUDING REGULATED UTILITIES AT UBS?**

6 A5. My duties at UBS during 2001 through 2011 included performing quantitative and
7 qualitative analysis on each covered company that led to making equity investment
8 recommendations and decisions. The quantitative analysis included analyzing
9 financial statements and developing a set of five-year forecasted financial
10 statements including an income statement, balance sheet, and cash flow statement
11 for each covered company. The exact number of covered companies varied over
12 time with mergers, acquisitions, and divestitures, but I generally covered scores
13 of regulated electric utilities at any given time. As part of the qualitative analysis,
14 I met regularly with the senior management, customers, suppliers, and regulators
15 of the covered companies. During my time at UBS, I covered and directed
16 investment decisions with respect to several owners of the NETOs including
17 Northeast Utilities (a predecessor of Eversource Energy) in UBS' U.S. portfolio,
18 Emera (parent of Emera Maine) in UBS' Canadian portfolio, and NextEra Energy
19 and its predecessor FPL Group (owner of New Hampshire Transmission LLC) in
20 the U.S. portfolio. Additionally, I directed investment decisions with respect to
21 National Grid (parent of New England Power Company and covered by my UBS
22 European utility analyst colleague) in UBS' global portfolio. While at UBS, I
23 regularly interacted with utility sell-side analysts that published research reports on
24 electric utility equities and utility buy-side analysts who were my peers and
25 competitors.

1 Q6. **WHILE WORKING IN THE TELECOMMUNICATIONS INDUSTRY,
2 WHAT TREASURY DUTIES DID YOU PERFORM THAT ARE
3 RELEVANT TO THE PREPARATION OF YOUR AFFIDAVIT?**

4 A6. At Sprint Corporation, during the period from 1995 through 2000, I prepared risk-
5 adjusted cost of capital estimates on a quarterly basis that were used for capital
6 investment, valuation, mergers and acquisitions, Economic Value Added, and
7 product/service costing analysis across divisions. These risk-adjusted cost of
8 capital estimates varied by division and were utilized as hurdle rates for capital
9 budgeting decisions across the Local, Long Distance, and Wireless Divisions.

10 Additionally, during 1995 through 2000, I was responsible for managing
11 Sprint's relationships with four credit rating agencies. In providing the quantitative
12 and qualitative information required by the credit rating agencies to rate the parent
13 and several separately-rated subsidiaries, I became familiar with how the rating
14 agencies differentiated risk among different companies and subsidiaries of the same
15 company.

16 Q7. **DURING YOUR TENURE ON THE MICHIGAN PUBLIC SERVICE
17 COMMISSION, DID YOU REVIEW ROE EVIDENCE AND AUTHORIZE
18 ROES FOR MICHIGAN ELECTRIC UTILITIES?**

19 A7. Yes, I did.

20 Q8. **ARE YOUR RECOMMENDATIONS FOR THE COMMISSION IN THIS
21 AFFIDAVIT SUBSTANTIALLY DIFFERENT FROM THE APPROACH
22 YOU UTILIZED TO ESTABLISH AUTHORIZED ROES WHILE ON THE
23 MICHIGAN PUBLIC SERVICE COMMISSION?**

24 A8. No, they are not.

II. SUMMARY AND CONCLUSIONS

1 **Q9. PLEASE SUMMARIZE YOUR CONCLUSIONS.**

2 A9. I provide four primary conclusions: 1) the Briefing Order appropriately decided to
3 rely on multiple ROE models; 2) the Expected Earnings approach is reflective of
4 investor valuation approaches and is appropriately included in the Commission's
5 portfolio of ROE methodologies; 3) the idiosyncratic averaging approach proposed
6 by the CAPs and EMCOS does not resemble investor or state regulatory ROE
7 averaging calculations and has no merit; and 4) the state-authorized ROEs cited by
8 Dr. Woolridge understate the state-authorized ROEs found relevant by the
9 Commission in Opinion Nos. 531 and 551.

**III. THE COMMISSION REACHED AN APPROPRIATE CONCLUSION IN
THE BRIEFING ORDER WHEN IT DECIDED TO USE MULTIPLE
FINANCIAL MODELS WHEN DETERMINING A JUST AND
REASONABLE BASE ROE**

10 **Q10. WHAT DID THE COMMISSION CONCLUDE ABOUT MULTIPLE
11 FINANCIAL MODELS IN THE BRIEFING ORDER?**

12 A10. In Paragraph 33 of the Briefing Order, the Commission justified the use of multiple
13 financial models by concluding that "in determining what ROE to award a utility
14 we must look to how investors analyze and compare their investment
15 opportunities."⁵ Moreover, the Commission continued by observing in Paragraph
16 35 that "While some investors may give some weight to a DCF analysis, it is clear
17 that other investors place greater weight on one or more of the other methods for
18 estimating the expected returns from a utility investment, as well as taking other
19 factors into account." Clearly, the Commission provided sound reasoning to justify
20 the consideration of the results of multiple ROE methodologies.

⁵ Briefing Order at P 33.

1 **Q11. DO YOU AGREE WITH THE COMMISSION'S DECISION TO USE
2 MULTIPLE FINANCIAL MODELS WHEN DETERMINING A JUST AND
3 REASONABLE ROE?**

4 A11. Yes, I do. Investors, investment bankers, and corporate finance professionals use
5 multiple methods when evaluating the cost of equity. Additionally, state regulators
6 use multiple methods when evaluating the cost of equity. The Commission is fully
7 justified in using multiple financial models when determining a just and reasonable
8 ROE. Moreover, the Commission is fully justified in exercising its judgment when
9 determining a zone of reasonableness and the placement of the base ROE within
10 the zone of reasonableness, just as state utility regulators do.

11 The Commission is appropriately focused on determining a just and reasonable
12 ROE and is appropriately concerned, as are investors, with balancing theory and
13 practice. All financial models are subject to model risk. Practitioners consider, and
14 should continue to consider, model risk when utilizing the financial models. An
15 ROE recommendation by a witness or an ROE decision by a regulator requires both
16 the application of financial models and the use of informed judgment. In my
17 experience as a utility regulator and utility investment analyst, it is common for
18 regulatory commissions to acknowledge that use of any theoretical model, no
19 matter how conceptually appealing and well-supported that model is, needs to be
20 supplemented with informed judgment, just as investors apply judgment to their
21 own model results in making investment decisions. Thoughtful investors do not
22 rely exclusively on mechanical application of a sole theoretical model. As with
23 regulators, investors are constantly balancing theory and practice in the real world.

24 **Q12. WHAT IS MODEL RISK?**

25 A12. Model risk is the risk that a model used to evaluate real-world situations will fail to
26 predict or to represent the real phenomenon that is being modeled.

1 **Q13. DID THE COMMISSION ADDRESS MODEL RISK IN OPINION NO. 531**
2 **AND OPINION NO. 551?**

3 A13. Yes. The Commission stated the following in Footnote 286 of Opinion No. 531:

4 As the NETOs' witness Lapson testified, "There is 'model risk'
5 associated with the excessive reliance or mechanical application of a
6 model when the surrounding conditions are outside of the normal
7 range. 'Model risk' is the risk that a theoretical model that is used to
8 value real-world transactions fails to predict or represent the real
9 phenomenon that is being modeled."⁶

10 The Commission also stated in Paragraph 125 of Opinion No. 551:

11 Consistent with Opinion No. 531, we find that the DCF methodology
12 is subject to model risk of providing unreliable outputs in the presence
13 of unusual capital market conditions.⁷

14 I agree with the Commission's finding that model risk exists and is a relevant
15 concern with respect to placing sole reliance on the DCF model. Clearly, the
16 Commission is concerned, as are investors, with balancing the theoretical and the
17 practical.

18 **Q14. HOW DO INVESTORS VIEW MODEL RISK?**

19 A14. Investors use many valuation approaches to avoid the pitfalls of sole reliance on
20 one method. A variety of versions of the Discounted Cash Flow ("DCF") method,
21 the Capital Asset Pricing Model ("CAPM") method, the Risk Premium method, and
22 evaluating Expected Earnings are among the most prevalent. However, investors
23 do not have homogeneous expectations. Not all investors use the same tools or
24 inputs. Differing expectations and differing financial forecasts as well as differing
25 valuation models result in investors placing different valuations on the same
26 investment, thus creating an investment marketplace.

27 While at UBS, we incorporated DCF and CAPM methodologies and also
28 considered expected earnings per share forecasts. To enhance investment

⁶ Opinion No. 531 at P 145 n.286 (citing Ex. NET-400 at 40).

⁷ *Ass'n of Buss. Advocating Tariff Equity. v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 551, 156 FERC ¶ 61,234 at P 125 (2016).

1 comparisons across industries, all UBS analysts covering different industries used
2 a specific type of multi-stage DCF model, but I know that other large institutional
3 investors used different and simpler single-stage or two-stage DCF models. My
4 expected earnings per share forecasts, my DCF growth rate estimates, and my
5 CAPM beta estimates often differed from those of other institutional investors. But
6 I and others, regardless of model differences and different inputs to the models,
7 applied judgment to the results of financial models in making investment decisions,
8 because we all know that models are imperfect and subject to model risk.

9 **Q15. CAN YOU PROVIDE AN EXAMPLE FROM YOUR EXPERIENCE ON**
10 **ICC STAFF WHERE MODEL RISK WAS AN IMPORTANT**
11 **CONSIDERATION?**

12 A15. Yes. When I joined the ICC staff in 1982, I was the second employee hired into a
13 new Rate of Return Section, which subsequently became a five-person section.
14 One of the section's initial major tasks was to identify the financial models on
15 which the section would rely to provide consistent, reliable, conceptually
16 appealing, and practical cost of equity recommendations to the ICC across the
17 electric, natural gas, telephone, and water utilities regulated by the ICC. We
18 realized that the use of multiple models was desirable because overreliance on any
19 one model would expose our results to model risk and render our cost of equity
20 estimates less useful to the ICC in authorizing a just and reasonable ROE for any
21 particular utility.

22 Also, the section recognized the merits of providing the ICC with an ROE range
23 rather than a singular value. We recognized that the cost of equity is truly
24 unobservable and its estimation involves judgment. One of our goals was to avoid
25 providing the ICC with a false sense of precision, while nonetheless recognizing
26 that new rates would be designed to achieve a specified ROE. In some proceedings,
27 the ICC staff witness was the only ROE witness with testimony on the record, but

1 in other cases there were multiple ROE witnesses representing multiple parties.
2 The ICC weighed the evidence and set the authorized ROE based on the unique
3 record of each proceeding.

4 There were many reasons why the ICC might be persuaded to gravitate toward
5 a certain portion of the ROE range in different proceedings, including preference
6 for a certain model for a particular industry at a particular time, preference for
7 certain inputs such as DCF growth rates or CAPM betas, and/or the relative
8 persuasiveness of the testimony of various witnesses.

9 **Q16. CAN YOU EXPLAIN HOW YOUR ICC STAFF EXPERIENCE INFORMED**
10 **YOUR VIEW ON MODEL RISK WHEN YOU SERVED AS THE**
11 **CHAIRMAN OF THE MICHIGAN PUBLIC SERVICE COMMISSION?**

12 A16. My ROE experience on the ICC staff in Illinois greatly influenced my approach to
13 authorizing ROEs years later when I served as Chairman of the Michigan Public
14 Service Commission. There we set authorized ROEs within the range provided by
15 the record evidence based on multiple models provided by multiple witnesses but
16 not at a mechanically predetermined measure of central tendency of a single model.

17 **Q17. DO INVESTORS, INVESTMENT BANKERS, AND CORPORATE**
18 **FINANCE PROFESSIONALS USE MULTIPLE VALUATION MODELS**
19 **AND TOOLS BESIDES THE DCF MODEL AS WELL AS JUDGMENT,**
20 **WHEN EVALUATING THE COST OF EQUITY?**

21 A17. Yes, investment bankers, investors, and corporate finance professionals use
22 multiple models and tools. My experience as a corporate finance professional at
23 Sprint and as a senior investment analyst at UBS leads me to conclude that
24 corporate finance professionals and investors generally use multiple models and
25 then exercise informed judgment in interpreting the results from those models.

1 For example, when preparing cost of capital estimates for use as internal risk-
2 adjusted hurdle rates⁸ at Sprint, I utilized multiple methods and exercised judgment
3 in order to provide consistent, reliable, conceptually appealing, and practical cost
4 of equity recommendations to Sprint management to make investment decisions
5 across divisions. Sprint management, in turn, exercised judgment and factored in
6 model risk when applying my hurdle rates in the business decision-making process.

7 When making investment decisions for clients at UBS, I utilized multiple
8 methods to provide consistent, reliable, conceptually appealing, and practical cost
9 of equity estimates. At UBS, investment analysts developed year-by-year earnings,
10 balance sheet (book value), and cash flow projections for each covered company
11 generally for the next five years. The core UBS valuation model utilized our
12 variation on the DCF and CAPM methods, along with the five-year modeling
13 results. Model risk was partially addressed by providing analysts with the
14 discretion to tweak the default parameters in the model and run numerous scenarios,
15 as needed, to better reflect reality with the potential for multiple outcomes.
16 Additionally, UBS management exercised judgment by not always investing in
17 precisely the stocks with the highest rank-ordering identified by the valuation
18 models. Both at Sprint and UBS, cost of equity models were viewed as tools to
19 enhance decision making, not as dispensers of ultimate economic truth.

⁸ In evaluating whether to invest in capital projects, a corporation generally uses a risk-adjusted required rate of return, called a hurdle rate, to discount the expected cash flows from each project. A project is often accepted for investment if its internal rate of return equals or exceeds the hurdle rate.

1 Q18. **WHAT POSITIONS ON MODEL RISK ARE TAKEN BY DR. LESSER AND
2 DR. WOOLRIDGE?**

3 A18. On page 82 of his affidavit, Dr. Lesser questions the Briefing Order's stated
4 concerns about model risk.⁹ Also on page 83, Dr. Lesser further calls the Briefing
5 Order's rationale "inconsistent."¹⁰ On page 3 of his affidavit, Dr. Woolridge states
6 that the Briefing Order's "supposition is wrong."¹¹ Dr. Woolridge continues on
7 page 4 by calling the Briefing Order "factually incorrect."¹²

8 Q19. **DO YOU AGREE WITH THE ATTEMPTS BY DR. LESSER AND DR.
9 WOOLRIDGE TO IGNORE MODEL RISK AND REHABILITATE THE
10 SOLE USE OF A SINGLE FINANCIAL MODEL?**

11 A19. No, I do not. The observations made by both Dr. Lesser and Dr. Woolridge are
12 flawed and lack the awareness of model risk that is shared by investors, investment
13 bankers, corporate finance professionals, state regulators, and the Commission. Dr.
14 Lesser and Dr. Woolridge create an aura of false precision by placing too much
15 focus on only one cost of equity method, rather than multiple methods. In contrast,
16 the Commission has indicated in the past that model risk is a valid consideration
17 and has acknowledged that the use of multiple methods reduces exposure to model
18 risk. Notwithstanding the Commission's recent acknowledgement of model risk,
19 Dr. Lesser and Dr. Woolridge recommend that the Commission return to sole
20 reliance on the DCF model. In addition, Dr. Lesser and Dr. Woolridge both fail to
21 acknowledge the challenges that generally face regulatory commissions that may
22 lead commissions to rely on multiple ROE methods.

⁹ See Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 89; Exhibit No. EMC-0300 (Complaints II & III) at 102.

¹⁰ Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 90; Exhibit No. EMC-0300 (Complaints II & III) at 102.

¹¹ Exhibit No. CAP-500.

¹² *Id.*

1 Dr. Lesser and Dr. Woolridge, in their obdurate adherence to sole reliance on a
2 DCF model, also refuse to acknowledge that there can be measurement problems
3 with financial models. Model risk captures the reality that model inputs and model
4 results may not accurately reflect the real-world situation being modeled. The
5 failure of modeling results to reflect the real world can be due to simplifications
6 within the model, poor choice of inputs, measurement challenges, inaccurate
7 estimates, flawed analyses, or user errors. Model risk is not mitigated by complex
8 proxy group screening or fine-tuning preferred inputs. Financial modelers,
9 investors, witnesses, and commissions should not engage in modeling and
10 interpreting modeling results without being cognizant of model risk. Dr. Lesser
11 and Dr. Woolridge treat the DCF model as representing economic truth regardless
12 of circumstances.

13 **Q20. DO YOU AGREE WITH DR. LESSER'S VIEW THAT THE BRIEFING
14 ORDER'S ARGUMENTS ARE INCONSISTENT WITH THE EFFICIENT
15 MARKET HYPOTHESIS?**

16 A20. No. On pages 95-98 of his affidavit, Dr. Lesser describes his perception of conflict
17 between the Briefing Order and the efficient markets hypothesis.¹³ However, Dr.
18 Lesser perceives a conflict where none exists and the Commission has previously
19 found that none exists. The efficient markets hypothesis is a financial theory that
20 states that an asset's price fully reflects all available information. The efficient
21 markets hypothesis is harmonious with the Commission's past findings of the
22 existence of model risk.

23 The Commission found in Paragraph 132 of Opinion No. 551 that:

24 The finding that mechanical application of the DCF methodology may
25 produce results inconsistent with *Hope* and *Bluefield* in certain

¹³ See Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 102-105; Exhibit No. EMC-0300 (Complaints II & III) at 116-119.

1 circumstances is not inconsistent with the efficient market theory
2 underlying the typical application of the DCF methodology in normal
3 circumstances.¹⁴

4 I agree with the Commission that acknowledging the existence of model risk is not
5 inconsistent with the efficient markets hypothesis. Mechanical application of any
6 model, no matter how theoretically robust, can entail model risk of the model's
7 ability to reflect reality. It would be inappropriate to assume that theoretical models
8 do not have practical limitations, as judgment must always be applied to assess how
9 well the mechanical application of a theoretical model reflects the real world.

10 Model risk is a practical consideration for both investors and commissions and
11 does not attack or invalidate the efficient markets hypothesis. In fact, model risk
12 and the lack of a perfect cost of capital model explains the continual quest of
13 academics and practitioners to discover new financial models.

14 Furthermore, a theoretical financial model, by definition, is never a true
15 reflection of all of the parameters that investors consider when making investment
16 decisions. Any model abstracts from reality and makes simplifying assumptions to
17 get to a practicable result. It would be misleading to treat a simplified model as the
18 ultimate truth. The crux of the issue is that the Commission appropriately found
19 that outputs of multiple models were more representative of reality and an
20 improvement over sole reliance on one financial model.

**IV. THE COMMISSION'S EXPECTED EARNINGS APPROACH IS
REFLECTIVE OF INVESTOR VALUATION APPROACHES AND IS
APPROPRIATELY INCLUDED IN THE COMMISSION'S PORTFOLIO
OF ROE METHODOLOGIES**

21 Q21. **WHAT IS YOUR UNDERSTANDING OF THE COMMISSION'S
EXPECTED EARNINGS APPROACH?**

23 A21. In Paragraph 34 of the Briefing Order, the Commission describes that "The
24 Expected Earnings methodology provides an accounting-based approach that uses

¹⁴ Opinion No. 551 at P 132.

1 investment analyst estimates of return (net earnings) on book value (the equity
2 portion of a company's overall capital, excluding long-term debt)."¹⁵ Thus, the two
3 data components needed to implement the Expected Earnings methodology are: 1)
4 a measure of expected earnings (or earnings per share ("EPS")); and 2) book value
5 of equity (or book value per share ("BVPS")).

6 **Q22. DO INVESTORS SIGNIFICANTLY UTILIZE EXPECTED EARNINGS
7 PER SHARE IN THE INVESTMENT DECISION-MAKING PROCESS?**

8 A22. Yes, they do. Investors place significant weight on expected EPS when making
9 investment decisions. Companies generally report EPS on a quarterly basis and
10 hold earnings calls four times per year. The quarterly earnings calls are generally
11 preceded by a press release and other supporting materials announcing and
12 describing the results. Company management further describes the earnings results
13 during the earnings call and investors are provided the opportunity to ask questions.
14 Both buy-side investors and sell-side analysts devote a significant amount of time
15 to preparing for and participating in quarterly earnings calls. After an earnings call
16 is complete, investors will update their financial models not only for the recently
17 released earnings numbers but will also incorporate qualitative information
18 provided during the call that might impact expected earnings. Stock prices
19 sometimes react significantly to information released with the quarterly earnings
20 report as investors update their valuation models.

21 When I covered companies at UBS, I regularly prepared for and participated in
22 earnings calls and then subsequently revised my financial models. Investors refer
23 to "earnings season" which is generally a five to seven-week period of time,
24 depending on the reporting pattern of their covered companies, when investment
25 analysts concentrate on earnings reports and calls. For example, doing the

¹⁵ Briefing Order at P 34.

1 preparatory work for an earnings call, participating in the one-hour earnings call,
2 then updating financial models after the call for any needed changes would
3 consume several hours per company. Participating in the earnings call process for
4 my covered companies represented a significant time commitment.

5 Investor estimates of expected EPS are prepared for internal investment
6 decision-making, and are thus unobservable. However, sell-side analysts publish
7 their expected earnings estimates, which are observable. As mentioned previously,
8 while at UBS, I prepared year-by-year expected earnings for the next five-year
9 period for internal consumption. The published expected earnings of sell-side
10 analysts generally cover a two-to-three-year or three-to-five-year¹⁶ outlook and are
11 representative of the expected earnings estimates that investors may be making over
12 that time horizon. Moreover, some investors may choose to directly utilize sell-
13 side expected earnings in their financial models rather than create their own. In
14 either case, it is clear that equity investors commit significant time and resources to
15 evaluate expected earnings.

16 **Q23. DO INVESTORS SIGNIFICANTLY UTILIZE BOOK VALUE PER SHARE
17 (“BVPS”) IN THE INVESTMENT DECISION-MAKING PROCESS?**

18 A23. Yes, they do. As noted by the Commission, BVPS is an accounting-based balance
19 sheet concept. The three major components of the balance sheet are the book value
20 of assets, the book value of liabilities (including debt) and the book value of equity.
21 Investors recognize that accounting principles, standards, and procedures,
22 including Generally Accepted Accounting Principles (“GAAP”) promulgated by
23 the Financial Accounting Standards Board (“FASB”), ensure a level of consistency
24 in the calculation of BVPS that makes it easier for investors to analyze and extract
25 useful information from financial statements. For jurisdictional utilities, investors

¹⁶ As noted below, my experience is that when investors deal with multiple years of expected earnings, they prefer to focus on the most distant available out-year of expected earnings.

1 recognize that the Commission's Uniform System of Accounts ("USoA") provides
2 requirements that ensure additional consistency in the calculation of BVPS.
3 Although part of an investment analysts' duty is to scrutinize the financial
4 statements, the existence of GAAP and the Commission's USoA provide a solid
5 foundation for book value analysis.

6 While I was at UBS, investment analysts were required to model the entire
7 balance sheet year-by-year for the next five years for all covered companies. This
8 modeling discipline forced the analysts to maintain consistency between book value
9 and equity valuation. UBS would not invest in one of my covered companies unless
10 I had prepared this five-year balance sheet outlook. The UBS financial models
11 encouraged consistency between earnings per share growth rates, dividend per
12 share growth rates, cash flow per share growth rates, and book value per share
13 growth rates such that they tracked each other over time in a sustainable manner.

14 Q24. **DO INVESTORS RECOGNIZE THAT EXPECTED EARNINGS FOR A
15 REGULATED UTILITY WILL BE DEPENDENT ON RATE BASE, WHICH
16 IS A BOOK VALUE CONCEPT?**

17 A24. Yes. In conventional ratemaking, the rate base is the book value of the property
18 used by a regulated utility in providing service to customers. The rate base is
19 typically calculated based on original cost of assets less accumulated depreciation.
20 Investors recognize that expected earnings will generally grow as rate base grows.
21 Investors expect that as capital is invested in a regulated utility in excess of book
22 value depreciation, expected earnings will increase. It is apparent that investors
23 recognize the extreme importance of the book value of rate base in cost of service
24 regulation.

1 **Q25. DO INVESTORS RECOGNIZE THAT BOOK VALUE CAPITAL
2 STRUCTURE RATIOS ARE USED FOR REGULATED UTILITY
3 RATEMAKING?**

4 A25. Yes. In conventional ratemaking, the base ROE will be combined with a cost of
5 debt using book value capital structure ratios to determine an overall rate of return
6 ("ROR"). The ROR will be multiplied by the book value rate base to determine the
7 return component that is intended for investors. That return component will be
8 combined with income statement expenses such as operating expenses,
9 depreciation, and taxes to determine the revenue requirement for a regulated utility.
10 In my view, investors are keenly aware of the importance of book value to their
11 valuation of regulated utilities.

12 **Q26. CAN YOU PROVIDE SOME REPRESENTATIVE SELL-SIDE RESEARCH
13 REPORTS THAT DEMONSTRATE THE IMPORTANCE OF EXPECTED
14 EPS AND BVPS?**

15 A26. Yes, I am attaching two recent representative sell-side research reports that
16 demonstrate the importance of expected EPS and BVPS. Attachment 2 is the
17 Evercore ISI Utilities Comp Model of February 8, 2019. Attachment 3 is the Wolfe
18 Research Utility Comps of February 14, 2019. Both sell-side reports contain data
19 that a buy-side investor might review and use in the investment decision-making
20 process.

21 **Q27. SPECIFICALLY, WHAT DATA IN THESE REPORTS REVEALS THE
22 IMPORTANCE OF EXPECTED EPS AND BVPS TO INVESTORS?**

23 A27. Turning first to Attachment 2, the Evercore ISI report, I point to page 1. Columns
24 9 through 11 of page 1 contain expected EPS for 2018 through 2020, while the price
25 to book ratio is shown in column 16. Any investor who wishes to determine BVPS
26 can combine the column 16 price to book ratio data in conjunction with the market
27 prices shown in column 3.

1 In Attachment 3, the Wolfe Research report, I point to pages 2 and 5. Columns
2 3, 5, 7, and 9 on page 2 represent Wolfe Research expected earnings for 2018
3 through 2021, while columns 4, 6, 8, and 10 represent consensus expected earnings
4 for 2018 through 2021. On page 5, the price to book ratio is shown in column 13.
5 Any investor who wishes to determine BVPS can combine the column 13 price to
6 book ratio data in conjunction with the market prices shown in column 3.

7 These sell-side reports make clear that investors are extremely cognizant of
8 expected earnings and book value data.

9 **Q28. PLEASE DESCRIBE HOW INVESTORS COMBINE AND UTILIZE THIS
10 DATA.**

11 A28. Similar to the Commission's Expected Earnings approach, some investors directly
12 utilize the sell-side expected EPS and BVPS data and directly combine them to
13 calculate the ratio of expected EPS to BVPS. Alternatively, investors can adjust the
14 sell-side data in some manner meaningful to their analysis or can utilize their own
15 expected EPS and BVPS estimates to calculate the ratio of expected EPS to BVPS
16 while referencing the sell-side data as a useful comparison. Some investors will
17 undoubtedly make this expected earnings-to-book value calculation while others
18 will not. The Expected Earnings approach is an available, significant, and
19 commonly used tool in an investor's toolbox.

20 **Q29. PLEASE DESCRIBE THE VIEWS OF DR. LESSER, DR. WOOLRIDGE,
21 MR. KEYTON, AND THE LOUISIANA PUBLIC SERVICE COMMISSION
22 ON THE COMMISSION'S EXPECTED EARNINGS APPROACH.**

23 A29. All four of these commenters propose to exclude the Expected Earnings approach
24 from the Commission's portfolio of ROE methodologies. A claim common to all
25 four of these commenters is that the Expected Earnings approach involves some
26 degree of circularity. On pages 71-81 of his affidavit, Dr. Lesser states and restates
27 his claim of circularity in several different ways, including a quote from Roger

1 Morin on page 75.¹⁷ On pages 47-60 of his affidavit, Dr. Woolridge addresses the
2 Expected Earnings approach and makes similar circularity claims on pages 52-53,
3 including essentially the same Roger Morin quote on page 52.¹⁸ On page 10 of his
4 affidavit, Mr. Keyton references the circularity argument and provides a quote from
5 Eugene Brigham.¹⁹ On pages 2-5 of its initial brief, the LPSC summarizes its views
6 on the Expected Earnings method and references the circularity quotes from both
7 Eugene Brigham (page 2) and Roger Morin (page 3).²⁰ All four commenters claim
8 that circularity is a flaw of the Expected Earnings method. Additionally, on page
9 74 of his affidavit, Dr. Lesser mentions accounting differences between companies
10 as another reason to avoid the expected earnings approach.²¹

11 **Q30. DO YOU AGREE WITH THE VIEWS OF DR. LESSER, DR.**
12 **WOOLRIDGE, MR. KEYTON, AND THE LPSC ON THE EXPECTED**
13 **EARNINGS METHOD?**

14 A30. No. These views ignore the importance of accounting principles and book value to
15 investors, and ignore the importance of book value ratemaking. Additionally, the
16 circularity argument is misleading and has no merit.

¹⁷ See Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 75-85; Exhibit No. EMC-0300 (Complaints II & III) at 90-100 (citing Roger Morin, *New Regulatory Finance*, at 383).

¹⁸ See Exhibit No. CAP-500 (citing Roger Morin, *New Regulatory Finance*, at 383).

¹⁹ See Trial Staff Affidavit 1; accord Trial Staff Affidavit 2 at 8-9; Trial Staff Affidavit 3 at 9; Trial Staff Affidavit 4 at 9 (citing Eugene F. Brigham *et al.*, *Cost of Capital Estimation, The Risk Premium Approach to Measuring a Utility's Cost of Equity* (Spring 1985)).

²⁰ See LPSC Initial Brief at 2-5.

²¹ See Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 78; Exhibit No. EMC-0300 (Complaints II & III) at 93.

1 Q31. **WHY DO YOU SAY THAT THE CIRCULARITY ARGUMENT IS
2 MISLEADING AND LACKS MERIT WHEN APPLIED TO THE
3 EXPECTED EARNINGS METHOD?**

4 A31. The circularity argument applies to the Comparable Earnings method, which is not
5 included in the Commission's portfolio of methods proposed in the Briefing Order,
6 because it is based on historical earnings. However, the circularity argument, as
7 articulated by Dr. Lesser, Dr. Woolridge, Mr. Keyton, and the LPSC, does not apply
8 to the Expected Earnings method because it, by definition, is based on expected
9 earnings, not historical earnings. The circularity criticism basically combines five
10 steps of logic: 1) a regulated utility was allowed an ROE in the past; 2) that
11 regulated utility subsequently earned its allowed return; 3) the next allowed ROE
12 was set by a regulator that observed the historically earned return and set the
13 allowed return at that same level; 4) the regulated utility again earned its allowed
14 return; and 5) the cycle repeats itself in a self-perpetuating circular loop that results
15 in the utility always earning the same ROE. Clearly, the Expected Earnings
16 approach breaks this cycle by eliminating step 3 in the Comparable Earnings logic
17 chain. A careful reading of the cited Brigham and Morin quotes reveals that their
18 circularity criticism was being directed at the Comparable Earnings method, not the
19 Expected Earnings method. As a result, it is misleading to project the circularity
20 criticism applicable to a different model to the Expected Earnings method.

21 Any minimal remaining circularity attributable to the Expected Earnings method
22 is common to other methods, especially the DCF method. For example, the
23 challenge of projecting year three earnings must necessarily include a projection of
24 when rate cases will occur during the next three years as well as the outcome of
25 those rate cases. This expected rate case cycle could be characterized as circular
26 because the investment analyst must estimate the outcome of a future regulatory
27 proceeding in which the regulators might review the analyst's expectations.

1 However, this analyst's challenge is similar for the DCF model. Projected DCF
2 growth rates, a key input of the DCF model, also necessarily include a projection
3 of when rate cases will occur as well as the outcome of those rate cases. As a result,
4 both financial models incorporate a certain degree of circularity and the Expected
5 Earnings method is no more circular than the DCF method.

6 **Q32. DO YOU AGREE WITH DR. LESSER'S CRITICISMS OF ACCOUNTING
7 DIFFERENCES BETWEEN COMPANIES?**

8 A32. No, I do not. On page 74 of his affidavit, Dr. Lesser misleadingly claims that there
9 is no single accounting method to calculate book earnings.²² He ignores the
10 consistency provided by GAAP and the Commission's USoA. Dr. Lesser mentions
11 book value write-downs as negatively impacting comparative BVPS.²³ In doing
12 so, he ignores that investment analysts can and do make adjustments to book value
13 for write-downs, both write-downs that have occurred and expected write-downs.
14 Dr. Lesser thus overstates the accounting differences between companies.

15 **Q33. WOULD THE COMMISSION'S EXPECTED EARNINGS APPROACH BE
16 IMPROVED BY USING A SHORTER EXPECTED EARNINGS PERIOD AS
17 PROPOSED BY MR. KEYTON?**

18 A33. No. On pages 29-30 of his affidavit, Mr. Keyton suggests that the Commission
19 supplement the Value Line three- to five-year expected earnings projections with
20 Value Line one- to two-year expected earnings projections.²⁴ My experience is that
21 when investors deal with multiple years of expected earnings, they prefer to focus
22 on the most distant available out-year of expected earnings. The near-term years
23 are viewed as a steppingstone to get to the out-years, with the most distant out-year

²² See Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 78; Exhibit No. EMC-0300 (Complaints II & III) at 93.

²³ See Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 78; Exhibit No. EMC-0300 (Complaints II & III) at 93.

²⁴ See Trial Staff Affidavit 1; accord Trial Staff Affidavit 2 at 27-28; Trial Staff Affidavit 3 at 27-28; Trial Staff Affidavit 4 at 28-29.

1 providing the most meaningful informational content. Value Line's three to five
2 year time horizon generally reflects a typical investor time horizon. While at UBS,
3 more investment decision-making emphasis was placed on the most distant out-
4 year of my expected earnings forecasts—that is, year five—than the near-term years
5 one, two, three, and four of my expected earnings forecasts. As such, Mr. Keyton's
6 suggestion to shorten the expected earnings period runs counter to investor
7 behavior.

8 **Q34. WOULD THE COMMISSION'S EXPECTED EARNINGS APPROACH BE
9 IMPROVED BY MIXING IN SOME HISTORICAL "BUSINESS CYCLE"
10 EARNINGS AS PROPOSED BY DR. WOOLRIDGE?**

11 A34. No, not at all. On pages 54-55 of his affidavit, Dr. Woolridge proposes to alter the
12 Commission's Expected Earnings approach by mixing in some historical "business
13 cycle" earnings into expected earnings.²⁵ This return to history would severely
14 cripple the results and ensure the very circularity that he criticizes. If investors
15 thought their estimates of expected earnings were unusable because they did not
16 represent a full business cycle, investors would be more likely to remedy the
17 situation by projecting out more years of expected earnings into the future, rather
18 than intermingling historical earnings from the past. Indeed, looking to the past
19 would transform the Expected Earnings approach into the Comparable Earnings
20 approach, thus introducing an exposure to circularity as noted by the quotes from
21 Morin and Brigham.

²⁵ Exhibit No. CAP-500.

1 **Q35. WOULD THE COMMISSION'S EXPECTED EARNINGS APPROACH BE
2 IMPROVED BY INCLUDING A LONGER FORECASTED TIME PERIOD
3 INTO THE FUTURE AS PROPOSED BY DR. LESSER?**

4 A35. From a purely theoretical or conceptual perspective, a longer forecasted time period
5 would be an improvement, but this suggestion has little practical value in the real
6 world. On page 80 of his affidavit, Dr. Lesser suggests that a three-to-five-year
7 time period is not long-term enough for expected earnings estimates.²⁶ However, I
8 am not aware of any publicly available report or financial publication that provides
9 expected earnings estimates for longer than Value Line's three to five year period.
10 As demonstrated by Attachment 2 and 3, Value Line's three-to-five-year expected
11 earnings period exceeds that of sell-side analysts, which generally forecast
12 expected EPS out two to three years. While at UBS, I prepared my own expected
13 EPS estimates year-by-year for the next five years. I was aware of very few
14 competitors that did so, and no sell-side analysts that published expected earnings
15 out that far. As a result, Dr. Lesser's suggestion is impractical and unrepresentative
16 of the data publicly available to investors. Moreover, this suggestion would become
17 counter-productive if it were perverted by forcing a generic and unsound proxy,
18 such as forecasted long-term GDP growth rates, into the analysis. While theoretical
19 improvements are always possible, the possibility of improvement should not
20 undermine reliance on the reliable EPS estimates for the time horizons that are
21 available.

²⁶ See Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 84; Exhibit No. EMC-0300 (Complaints II & III) at 99.

1 Q36. **BASED ON YOUR REVIEW OF THE COMMISSION'S EXPECTED
2 EARNINGS APPROACH, WOULD ITS USE POTENTIALLY MITIGATE
3 THE COMMISSION'S STATED CONCERNS ABOUT MODEL RISK?**

4 A36. Yes. The Briefing Order accurately concludes in Paragraph 40 that "investors have
5 increasingly used a diverse set of data sources and models to inform their
6 investment decisions," and "the DCF methodology alone no longer captures how
7 investors view utility returns."²⁷ The Commission enumerated several reasons that
8 led to its conclusion in Paragraphs 45-48, including a reference to model risk in
9 Paragraph 46.²⁸ Part of the Commission's reasoning is described in Paragraph 46
10 in which it states: "It appears that, for whatever the reason, investors during this
11 period have seen greater value in utility stocks than the DCF methodology would
12 predict."²⁹ The Expected Earnings approach, with its focus on book value rather
13 than the value of utility stocks, is free of the concern expressed by the Commission
14 in Paragraph 46. As a result, the Expected Earnings method is especially useful to
15 include in the Commission's portfolio of methods because the Expected Earnings
16 method can potentially serve as a stabilizing feature and a mitigating offset to other
17 methods in the Commission's portfolio.

**V. THE IDIOSYNCRATIC AVERAGING CALCULATIONS PROPOSED BY
THE CAPS AND EMCOS DO NOT RESEMBLE INVESTOR OR STATE
REGULATORY AVERAGING CALCULATIONS AND HAVE NO MERIT**

18 Q37. **WHAT IS YOUR UNDERSTANDING OF THE AVERAGING
19 CALCULATIONS PROPOSED BY THE CAPS AND EMCOS?**

20 A37. When it comes to combining multiple cost of equity results, the CAPs and EMCOS
21 take issue with the Commission's computational sequence. Dr. Woolridge

²⁷ Briefing Order at P 40.

²⁸ See *id.* at PP 45-48.

²⁹ *Id.* at P 46.

describes his proposed computational sequence on pages 72 and 75 of his affidavit.³⁰ On page 72, Dr. Woolridge claims that the Commission's averaging approach "discards the valuable information that would be preserved by a different order of arithmetic operations."³¹ Dr. Woolridge continues on page 75 that "[I]dentification of each proxy's equity cost is improved if the multiple methods are combined in identifying that proxy's equity cost. That is, the right computational sequence is: (i) determine each proxy's cost of equity under each of the methods, (ii) average those results to get a single cost of equity for each member of the proxy group, and (iii) create a composite proxy group distribution and range using these averaged results for each proxy group member."³²

Dr. Lesser describes his similar averaging proposal on pages 70-71 of his affidavit.³³ On page 70, Dr. Lesser recommends "first averaging the results of individual proxy group company DCF and CAPM values."³⁴ Dr. Lesser then claims on pages 70-71 that "the influence of potential anomalies associated with the individual methodology estimates is reduced, and the resulting zone of reasonableness will better reflect overall market conditions."³⁵

Q38. DO YOU AGREE WITH THE AVERAGING CALCULATIONS PROPOSED BY THE CAPS AND EMCOS?

A38. No, not at all. I would describe Dr. Woolridge's and Dr. Lesser's unorthodox proposals as averaging proxy company-by-proxy company across models, in contrast to the widely accepted averaging model-by-model across proxy companies

³⁰ See Exhibit No. CAP-500.

³¹ *Id.*

³² *Id.* (emphasis omitted).

³³ See Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 74-75; Exhibit No. EMC-0300 (Complaints II & III) at 89-90.

³⁴ Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 74; Exhibit No. EMC-0300 (Complaints II & III) at 89.

³⁵ Exhibit No. EMC-0400 (Complaint IV); accord Exhibit No. EMC-0200 (Complaint I) at 74; Exhibit No. EMC-0300 (Complaints II & III) at 89.

1 used in the Briefing Order. The Commission's averaging approach is logical,
2 reflects how investors prepare their averaging calculations, does not dismiss any
3 valuable information as claimed by Dr. Woolridge, and is not influenced by
4 potential anomalies as claimed by Dr. Lesser. Investors have no need to separately
5 identify a cost of equity estimate for each proxy company, which appears to be a
6 goal of Dr. Woolridge and Dr. Lesser. Investors care more about the results of each
7 method, not the results for each proxy company. The use of a proxy group is a
8 means to identify the cost of equity for a target company or companies of
9 comparable risk, in this case the NETOs, and calculating separate results for each
10 proxy company provides no incremental value. Likewise, I know of no state
11 regulatory commission that has chosen to average multiple ROE method results in
12 this manner. In my view, state regulators would perceive no incremental value from
13 doing so.

14 Additionally, the proposed averaging calculations of Dr. Lesser and Dr.
15 Woolridge distort the end result by overweighting the results of a particular model
16 for a proxy company that has no data available for the other models. For example,
17 a proxy company with only a CAPM result, but no DCF or Expected Earnings
18 results due to a lack of data availability, would be carried forward with the same
19 weight as a proxy company that had results for all three models, thus overweighting
20 the CAPM result. This distortion is introduced by the proposed averaging
21 calculations of Dr. Lesser and Dr. Woolridge and does not exist in the Briefing
22 Order averaging calculations.

23 The sole purpose of the Lesser and Woolridge averaging calculations appears to
24 be manipulation as they would artificially compress the zone of reasonableness and
25 reduce the upper end of the zone in order to trigger more ROE complaints and
26 constrain incentives on needed electric transmission investment. Investors would
27 view a switch to this unorthodox averaging calculation as an attempt to torture the

1 data into attesting that more ROE complaints and reduced transmission incentives
2 are the appropriate outcome.

3 Placing equal weight on the results of each model as done in the Briefing Order
4 for the presumptive screening in Step 1 is appropriate, and is also appropriate for
5 the Step 2 analysis in the absence of any circumstance to deviate that is identified
6 through a case-by-case deep dive analysis.

VI. THE STATE-AUTHORIZED ROES CITED BY DR. WOOLRIDGE ARE CONCEPTUALLY DISSIMILAR TO, AND UNDERSTATE, THE STATE AUTHORIZED ROES FOUND RELEVANT BY THE COMMISSION IN OPINION NOS. 531 AND 551

7 **Q39. WHAT IS YOUR UNDERSTANDING OF THE STATE-AUTHORIZED
8 ROES CITED BY DR. WOOLRIDGE?**

9 A39. On page 73 of his affidavit, Dr. Woolridge states that “Investors do consider state-
10 allowed ROEs.”³⁶ Dr. Woolridge cites state-authorized ROE data from a reputable
11 source, RRA, the same source used by the Commission in Opinion Nos. 531 and
12 551.³⁷ However, Dr. Woolridge cites state-authorized ROEs only for delivery-only
13 utilities in Figure 10 instead of the vertically integrated state-authorized ROEs that
14 the Commission found useful in Opinion Nos. 531 and 551.³⁸ Dr. Woolridge
15 justifies this arbitrary selection by stating that electric delivery-only utilities “are
16 most comparable utilities to transmission companies.”³⁹

17 **Q40. DO YOU AGREE THAT INVESTORS CONSIDER STATE-AUTHORIZED
18 ROES?**

19 A40. Yes, I do. Electric utility investors pay attention to state-authorized ROEs.
20 However, in the case of companies that own electric transmission, investors are

³⁶ Exhibit No. CAP-500.

³⁷ See *id.* at 73.

³⁸ *Id.* at 74.

³⁹ *Id.*

1 focused on the state-authorized ROEs for vertically integrated utilities which they
2 view as having comparable risk to transmission providers, rather than the delivery-
3 only data that Dr. Woolridge cites.

4 **Q41. WHY DO INVESTORS CONSIDER THE VERTICALLY INTEGRATED
5 ELECTRIC UTILITIES TO BE THE MOST APPROPRIATE GROUP FOR
6 THE COMPARISON OF STATE-AUTHORIZED ROES?**

7 A41. As discussed in my testimony earlier in this proceeding, RRA reports ROE
8 decisions at several different levels of aggregation, including separately for electric
9 utilities and natural gas utilities, and further separates the electric utility cases into
10 vertically integrated cases and delivery-only cases.⁴⁰ Vertically integrated electric
11 utilities are electric utilities that own transmission, distribution, and regulated
12 generation assets. Despite Dr. Woolridge's comparability assertion to the contrary
13 on page 74 of his affidavit,⁴¹ no evidence supports and nothing has changed to alter
14 the Commission's previous conclusion that transmission investment is more risky
15 than distribution investment.

16 The Commission, in Opinion No. 531, properly recognized that transmission
17 investment is riskier than distribution investment. In fact, the Commission found
18 in Paragraph 149 of Opinion No. 531 that state-regulated electric distribution
19 investment has lower business risks than electric transmission investment. Some
20 of the risks that the Commission noted for electric transmission that have not
21 changed are:

22 For example, investors providing capital for electric transmission
23 infrastructure face risk including the following: long delays in
24 transmission siting, greater project complexity, environmental impact
25 proceedings, requiring regulatory approval from multiple jurisdictions
26 overseeing permits and rights of way, liquidity risk from financing

⁴⁰ Exhibit No. NET-02300 at 46; *accord* Exhibit No. NET-03000 at 15-16.

⁴¹ Exhibit No. CAP-500 at 74.

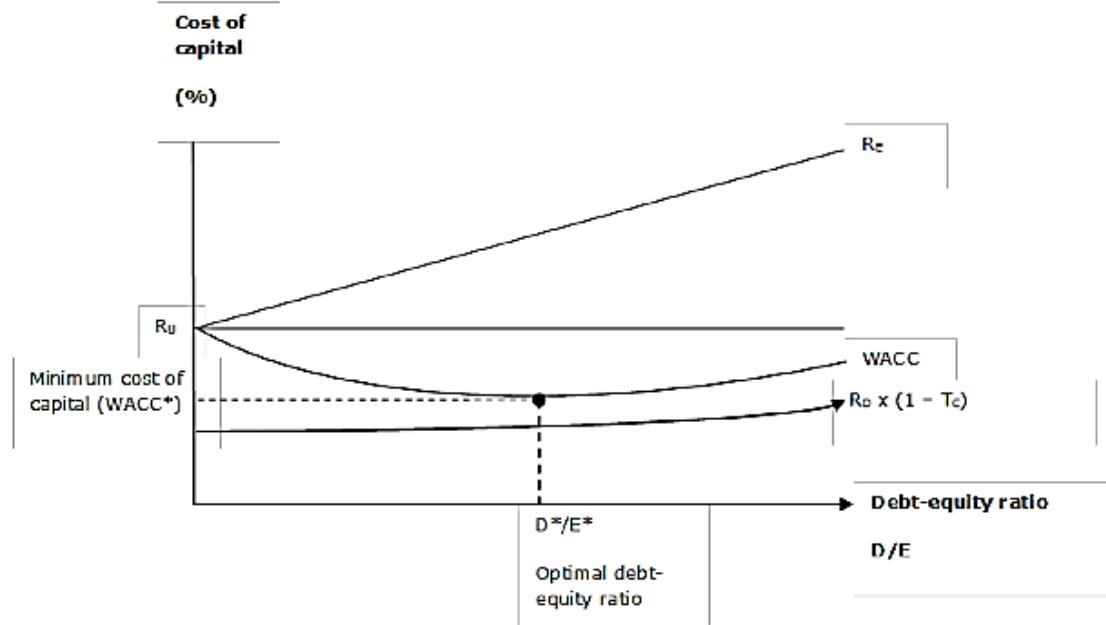
1 projects that are large relative to the size of a balance sheet, and shorter
2 investment history. We find that these factors increase the NETOs' risk
3 relative to the state-regulated distribution companies.⁴²

4 In addition, the electric delivery-only utilities are generally regarded by
5 investors and state regulators as having lower business risk than vertically
6 integrated electric utilities and as such, are expected to have lower state-authorized
7 ROEs. The vertically integrated electric utilities group is the most representative
8 sample group for state-authorized ROE analysis because it is the group most similar
9 in risk to the investment in transmission infrastructure of the NETOs. By ignoring
10 vertically integrated state-authorized ROEs, Dr. Woolridge understates the results.

11 Q42. **DOES THIS CONCLUDE YOUR REPLY AFFIDAVIT?**

12 A42. Yes, it does.

⁴² Opinion No. 531 at P 149.

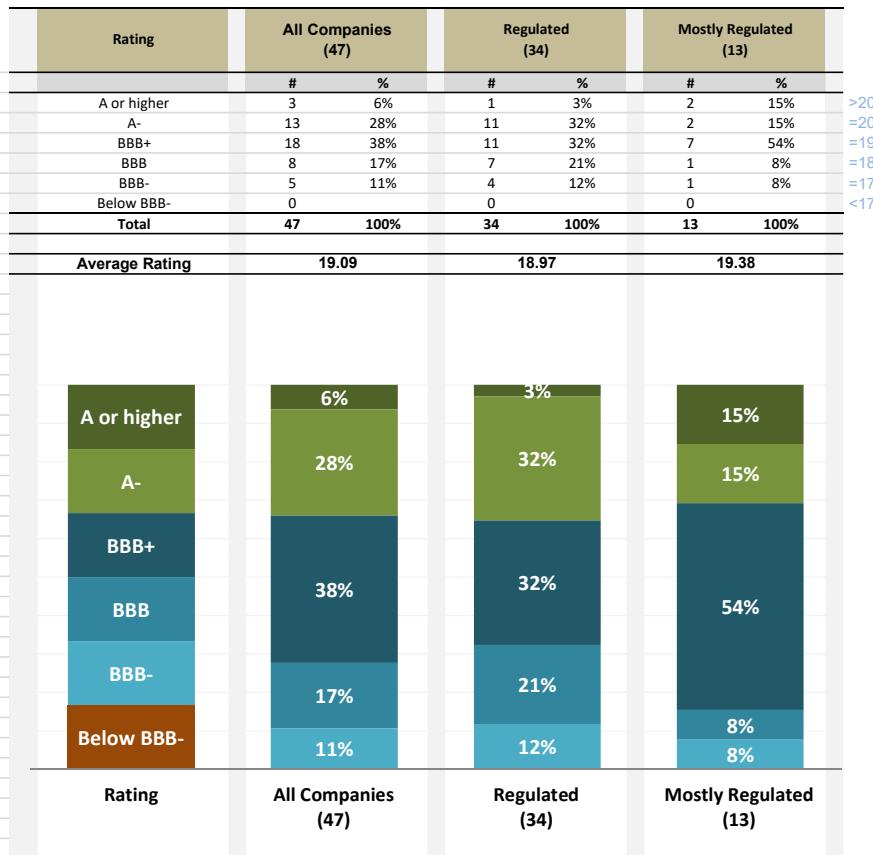
Weighted Average Cost of Capital Curve

I. S&P Utility Credit Ratings Distribution -- 2018 Q4

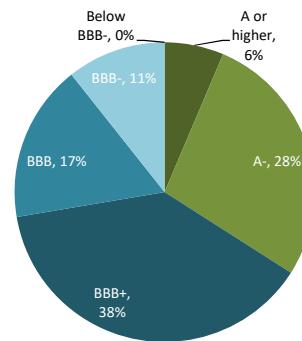
Company Name	2018 Q4	Score	Category	
			All Companies (47)	Regulated (34)
Eversource Energy	A+	22	ES	R
Berkshire Energy Holdings Company	A	21	**BRK	MR
Alliant Energy Corporation	A-	20	LNT	R
American Electric Power Company, Inc.	A-	20	AEP	R
CenterPoint Energy, Inc.	A-	20	CNP	MR
Consolidated Edison, Inc.	A-	20	ED	R
Duke Energy Corporation	A-	20	DUK	R
Evergy, Inc.	A-	20	EVRG	R
NextEra Energy, Inc.	A-	20	NEE	MR
Pinnacle West Capital Corporation	A-	20	PNW	R
PPL Corporation	A-	20	PPL	R
Southern Company	A-	20	SO	R
Vectren Corporation	A-	20	VVC	R
Wisconsin Energy Corporation	A-	20	WEC	R
Xcel Energy Inc.	A-	20	XEL	R
ALLETE, Inc.	BBB+	19	ALE	MR
Ameren Corporation	BBB+	19	AEE	R
AVANGRID, Inc.	BBB+	19	AGR	MR
Black Hills Corporation	BBB+	19	BKH	R
CMS Energy Corporation	BBB+	19	CMS	R
Dominion Energy, Inc.	BBB+	19	D	MR
DTE Energy Company	BBB+	19	DTE	MR
Edison International	BBB+	19	EIX	R
Entergy Corporation	BBB+	19	ETR	R
MDU Resources Group, Inc.	BBB+	19	MDU	MR
NiSource Inc.	BBB+	19	NI	R
OGE Energy Corp.	BBB+	19	OGE	R
PNM Resources, Inc.	BBB+	19	PNM	R
Portland General Electric Company	BBB+	19	POR	R
Public Service Enterprise Group Incorporated	BBB+	19	PEG	MR
SCANA Corporation	BBB+	19	SCG	R
Sempra Energy	BBB+	19	SRE	MR
UtiliCorporation	BBB+	19	UTL	R
Avista Corporation	BBB	18	AVA	R
El Paso Electric Company	BBB	18	EE	R
Exelon Corporation	BBB	18	EXC	MR
FirstEnergy Corp.	BBB	18	FE	R
IDACORP, Inc.	BBB	18	IDA	R
IPALCO Enterprises, Inc.	BBB	18	**IPALCO	R
NorthWestern Corporation	BBB	18	NWE	R
Otter Tail Corporation	BBB	18	OTTR	R
Cleco Corporation	BBB-	17	**CNL	R
DPL Inc.	BBB-	17	**DPL	R
Hawaiian Electric Industries, Inc.	BBB-	17	HE	MR
PG&E Corporation	BBB-	17	PCG	R
Puget Energy, Inc.	BBB-	17	**PSD	R
<hr/>				
MGE Energy, Inc.	AA-	23	*MGEE	MR
<hr/>				
Average	BBB+	19.09		

Attachment 4

Page 1 of 1



Source: Standard & Poor's, S&P Global Market Intelligence, and EEI Finance Dept.



Notes:
* For the following companies, EEI includes the subsidiary rating because parent/holding company ratings are not available:
MGE Energy: Using Madison Gas and Electric Co.; MGE Energy long-term issuer credit rating not available.
Companies in green/red were upgraded/downgraded by S&P at the parent level in the most recent quarter.

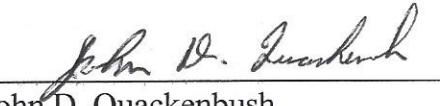
**Companies that are not publicly traded

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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

AFFIDAVIT OF JOHN D. QUACKENBUSH

John D. Quackenbush, being first duly sworn, deposes and says that he is the John D. Quackenbush referred to in the foregoing Affidavit, that he has read such Affidavit and is familiar with the contents thereof and that the answers therein are true and correct to the best of his knowledge, information, and belief.


John D. Quackenbush

Subscribed and sworn to before me this 24 day of June, 2019, by John D. Quackenbush, proved to me on the basis of satisfactory evidence to be the person who appeared before me.


Notary Public

STACIA M SCHABLE
Notary Public, State of Michigan
County Of Berrien
My Commission Expires 05-25-2023
Acting in the County of Berrien

Commission Expires on: 5/25/2023

Document Content(s)

NETOs Initial Comments to NOI.PDF.....1-229