

171 FERC ¶ 61,155  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Docket No. PL19-4-000

Inquiry Regarding the Commission's Policy for Determining Return on Equity

(Issued May 21, 2020)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Policy Statement on Determining Return on Equity for Natural Gas and Oil Pipelines

SUMMARY: On March 21, 2019, the Federal Energy Regulatory Commission issued a notice of inquiry seeking information and stakeholder views regarding whether, and if so how, it should modify its policies concerning the determination of the return on equity (ROE) to be used in designing jurisdictional public utility rates and whether any changes to the Commission's policies concerning public utility ROEs should be applied to interstate natural gas and oil pipelines. Concurrently with this Policy Statement, the Commission is issuing Opinion No. 569-A adopting changes to its policies concerning public utility ROEs. The Commission finds that, with certain exceptions to account for the statutory, operational, organizational and competitive differences among the industries, the policy changes adopted in Opinion No. 569-A should be applied to natural gas and oil pipelines. Accordingly, the Commission revises its policy and will determine natural gas and oil pipeline ROEs by averaging the results of the Discounted Cash Flow model and the Capital Asset Pricing Model, but will not use the Risk Premium model. In addition, the Commission clarifies its policies governing the formation of proxy groups

and the treatment of outliers in proceedings addressing natural gas and oil pipeline ROEs. Finally, the Commission encourages oil pipelines to file revised FERC Form No. 6, page 700s for 2019 reflecting the revised ROE policy.

DATE: This Policy Statement will become effective [date of publication in the *Federal Register*].

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SUPPLEMENTARY INFORMATION:

171 FERC ¶ 61,155  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;  
Richard Glick, Bernard L. McNamee,  
and James P. Danly.

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

POLICY STATEMENT ON DETERMINING RETURN ON EQUITY FOR NATURAL  
GAS AND OIL PIPELINES

(Issued May 21, 2020)

1.        On March 21, 2019, the Commission issued a Notice of Inquiry (NOI) seeking information and stakeholder views to help the Commission explore whether, and if so how, it should modify its policies concerning the determination of the return on equity (ROE) to be used in designing jurisdictional rates charged by public utilities.<sup>1</sup> The Commission also sought comment on whether any changes to its policies concerning public utility ROEs should be applied to interstate natural gas and oil pipelines.<sup>2</sup> On November 21, 2019, the Commission issued Opinion No. 569<sup>3</sup> establishing a revised methodology for determining just and reasonable base ROEs for public utilities under the

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<sup>1</sup> *Inquiry Regarding the Commission's Policy for Determining Return on Equity*, 166 FERC ¶ 61,207, at P 1 (2019).

<sup>2</sup> *Id.*

<sup>3</sup> *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019).

Federal Power Act (FPA). Concurrently with the issuance of this Policy Statement, the Commission is issuing Opinion No. 569-A adopting changes to the base ROE methodology established in Opinion No. 569.<sup>4</sup>

2. As explained below, we revise our policy for analyzing interstate natural gas and oil pipeline ROEs to adopt the methodology established for public utilities in Opinion Nos. 569 and 569-A, with certain exceptions to account for the statutory, operational, organizational and competitive differences among the industries. Specifically, we will determine just and reasonable natural gas and oil pipeline ROEs by averaging the results of Discounted Cash Flow model (DCF) and Capital Asset Pricing Model (CAPM) analyses, according equal weight to both models. In contrast to our methodology for public utilities, we retain the existing two-thirds/one-third weighting for the short-term and long-term growth projections in the DCF and will not use the risk premium model discussed in Opinion No. 569 and modified in Opinion No. 569-A (Risk Premium). In addition, we clarify our policies governing the formation of proxy groups and the treatment of outliers in natural gas and oil pipeline proceedings. Finally, as discussed below, we encourage oil pipelines to file updated FERC Form No. 6, page 700 data for 2019 to reflect the revised ROE policy established herein.

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<sup>4</sup> *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569-A, 171 FERC ¶ 61,154 (2020).

## I. Background

### A. Natural Gas and Oil Pipeline ROE Policy

3. The Supreme Court has stated that “the return to the equity owner should be commensurate with the return on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.”<sup>5</sup>

4. Since the 1980s, the Commission has determined natural gas and oil pipeline ROEs using the DCF model.<sup>6</sup> The DCF model is based on the premise that “a stock’s price is equal to the present value of the infinite stream of expected dividends discounted at a market rate commensurate with the stock’s risk.”<sup>7</sup> The Commission uses the DCF model to estimate the return necessary for the pipeline to attract capital based upon the range of returns that the market provides investors in a proxy group of publicly traded entities with similar risk profiles. The Commission estimates the required rate of return for each member of the proxy group using the following formula:

$$k = D/P(1 + .5g) + g$$

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<sup>5</sup> *Fed. Power Comm’n v. Hope Nat. Gas Co.*, 320 U.S. 591, 603 (1944) (citing *Missouri ex rel. Sw. Bell Tel. Co. v. Pub. Serv. Comm’n of Mo.*, 262 U.S. 276, 291 (1923) (Brandeis, J., concurring)).

<sup>6</sup> *Composition of Proxy Groups for Determining Gas and Oil Pipeline Return on Equity*, 123 FERC ¶ 61,048, at P 3 (2008) (2008 Policy Statement).

<sup>7</sup> *Canadian Ass’n of Petroleum Producers v. FERC*, 254 F.3d 289, 293 (D.C. Cir. 2001) (*CAPP v. FERC*).

where  $k$  is the discount rate (or investors' required return),  $D$  is the current dividend,  $P$  is the price of stock at the relevant time, and  $g$  is the expected growth rate in dividends based upon the weighted averaging of short-term and long-term growth estimates (referred to as the two-step procedure). The Commission multiplies the dividend yield (dividends divided by stock price or  $D/P$ ) by the expression  $(1+.5g)$  to account for the fact that dividends are paid on a quarterly basis. For purposes of the  $(1+.5g)$  adjustment, the Commission uses only the short-term growth projection.<sup>8</sup>

5. In the two-step DCF model, the Commission computes the expected growth rate ( $g$ ) by giving two-thirds weight to a short-term growth projection and one-third weight to a long-term growth projection.<sup>9</sup> For the short-term growth projection, the Commission uses security analysts' five-year forecasts for each company in the proxy group, as published by the Institutional Brokers Estimated System (IBES).<sup>10</sup> The long-term growth projection is based on forecasts, drawn from three different sources,<sup>11</sup> of long-term growth of the economy as a whole as reflected in the Gross Domestic Product (GDP).<sup>12</sup>

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<sup>8</sup> *Seaway Crude Pipeline Co. LLC*, Opinion No. 546, 154 FERC ¶ 61,070, at PP 198-200 (2016).

<sup>9</sup> 2008 Policy Statement, 123 FERC ¶ 61,048 at P 6.

<sup>10</sup> *Id.*

<sup>11</sup> The three sources used by the Commission are Global Insight: *Long-Term Macro Forecast – Baseline (U.S. Economy 30-Year Focus)*; Energy Information Agency, *Annual Energy Outlook*; and the Social Security Administration.

<sup>12</sup> 2008 Policy Statement, 123 FERC ¶ 61,048 at P 6 (citing *Nw. Pipeline Co.*, Opinion No. 396-B, 79 FERC ¶ 61,309, at 62,383 (1997); *Williston Basin Interstate*

For proxy group members that are master limited partnerships (MLPs), the Commission adjusts the long-term growth projection to equal 50% of GDP.<sup>13</sup>

6. Because most natural gas and oil pipelines are wholly owned subsidiaries and their common stocks are not publicly traded, the Commission must use a proxy group of publicly traded firms with corresponding risks to set a range of reasonable returns.<sup>14</sup> The firms in the proxy group must be comparable to the pipeline whose ROE is being determined, or, in other words, the proxy group must be “risk-appropriate.”<sup>15</sup> The range of the proxy group’s returns produces the zone of reasonableness in which the pipeline’s ROE may be set based on specific risks. Absent unusual circumstances showing that the pipeline faces anomalously high or low risks, the Commission sets the pipeline’s cost-of-service nominal ROE at the median of the zone of reasonableness.<sup>16</sup>

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*Pipeline Co.*, 79 FERC ¶ 61,311, at 62,389 (1997), *aff’d*, *Williston Basin Interstate Pipeline Co. v. FERC*, 165 F.3d 54, 57 (D.C. Cir. 1999)).

<sup>13</sup> *Id.* P 96.

<sup>14</sup> *Petal Gas Storage, L.L.C. v. FERC*, 496 F.3d 695, 697 (D.C. Cir. 2007) (explaining that the purpose of a DCF proxy group is to “provide market-determined stock and dividend figures from public companies comparable to a target company for which those figures are unavailable. Market-determined stock figures reflect a company’s risk level and when combined with dividend values, permit calculation of the ‘risk-adjusted expected rate of return sufficient to attract investors.’” (quoting *CAPP v. FERC*, 254 F.3d at 293)).

<sup>15</sup> *Id.* at 699; *see also Portland Nat. Gas Transmission Sys.*, Opinion No. 524, 142 FERC ¶ 61,197, at P 302 (2013), *reh’g denied*, Opinion No. 524-A, 150 FERC ¶ 61,107 (2015).

<sup>16</sup> *El Paso Nat. Gas Co.*, Opinion No. 528, 145 FERC ¶ 61,040, at P 592 (2013), *order on reh’g*, Opinion No. 528-A, 154 FERC ¶ 61,120 (2016), *order on compliance & reh’g*, Opinion No. 528-B, 163 FERC ¶ 61,079 (2018) (citing *Transcontinental Gas Pipe*

## B. Other Financial Models

7. In the NOI, the Commission sought comment on other financial models the Commission has considered when determining ROE for public utilities, including the CAPM, Risk Premium model, and an expected earnings analysis (Expected Earnings).<sup>17</sup>

### 1. CAPM

8. Investors use CAPM analysis as a measure of the cost of equity relative to risk.<sup>18</sup> The CAPM is based on the theory that the market-required rate of return for a security is equal to the “risk-free rate” plus a risk premium associated with that security. The CAPM estimates cost of equity by adding the risk-free rate to the “market-risk premium” multiplied by “beta.” The formula for the CAPM is as follows:

$$R = r_f + \beta_a(r_m - r_f)$$

$r_f$  = risk free rate (such as yield on 30-year U.S. Treasury bonds)

$r_m$  = expected market return

$\beta_a$  = beta, which measures the volatility of the security compared to the rest of the market.

The risk-free rate is represented by a proxy, typically the yield on 30-year U.S. Treasury bonds. The market-risk premium is calculated by subtracting the risk-free rate from the

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*Line Corp.*, Opinion No. 414-A, 84 FERC ¶ 61,084 (1998), *reh'g denied*, Opinion No. 414-B, 85 FERC ¶ 61,323 (1998), *aff'd*, *CAPP v. FERC*, 254 F.3d 289).

<sup>17</sup> NOI, 166 FERC ¶ 61,207 at PP 35, 38.

<sup>18</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 229.



“expected return,” which, in a forward-looking CAPM analysis, is based on a DCF analysis of a large segment of the market, such as the dividend paying companies in the S&P 500.<sup>19</sup> Betas measure the volatility of a particular stock relative to the market and are published by several commercial sources.<sup>20</sup> An entity may also seek to apply a size premium adjustment to the CAPM zone of reasonableness to account for the difference in size between itself and the dividend paying companies in the S&P 500.<sup>21</sup>

## 2. Risk Premium

9. Risk premium methodologies are “based on the simple idea that since investors in stocks take greater risk than investors in bonds, the former expect to earn a return on a stock investment that reflects a ‘premium’ over and above the return they expect to earn on a bond investment.”<sup>22</sup> This difference reflects the greater risk of a stock investment.<sup>23</sup> The risk premium return is calculated as follows:

$$R = I + RP$$

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<sup>19</sup> *Id.*

<sup>20</sup> NOI, 166 FERC ¶ 61,207 at P 14.

<sup>21</sup> See Opinion No. 569, 169 FERC ¶ 61,129 at P 298; see also *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531-B, 150 FERC ¶ 61,165, at P 117 (2015) (citing Roger A. Morin, *New Regulatory Finance*, 187 (Public Utilities Reports, Inc. 2006) (Morin) (finding that use of a size premium adjustment is “a generally accepted approach to CAPM analyses”)).

<sup>22</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 304 (quoting *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234, at P 147 (2014)).

<sup>23</sup> *Ass’n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, 165 FERC ¶ 61,118, at P 36 (2018) (MISO Briefing Order).

where  $I$  represents current applicable bond yield and  $RP$  represents the risk premium, which consists of the difference between (a) applicable annual common equity premiums and (b) applicable bond yields.

10. Although there are multiple approaches to determining an entity's equity risk premium ( $RP$ ), the Risk Premium model addressed in Opinion Nos. 569 and 569-A "examin[es] the risk premiums implied in the returns on equity allowed by regulatory commissions for utilities over some past period relative to the contemporaneous level of the long-term U.S. Treasury bond yield."<sup>24</sup> This approach develops the equity risk premium using Commission-allowed ROEs for public utilities minus the long-term bond yield.

### 3. Expected Earnings

11. A comparable earnings analysis is a method of calculating the earnings an investor expects to receive on the book value of a particular stock.<sup>25</sup> The analysis can be either backward-looking using the company's historical earnings on book value, as reflected on the company's accounting statements, or forward-looking using estimates of earnings on book value, as reflected in analysts' earnings forecasts for the company. The latter approach is often referred to as an "Expected Earnings analysis." The Expected Earnings analysis provides an accounting-based approach that uses investment analyst estimates of return (net earnings) on book value (the equity portion of a company's overall capital,

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<sup>24</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 305.

<sup>25</sup> *Id.* P 172.

excluding long-term debt).<sup>26</sup> Algebraically, Expected Earnings can be expressed as follows:

$$R = E/B$$

*E* = Earnings during Current Year

*B* = Book Value at the End of the Prior Year

### C. Public Utility ROE Proceedings Following *Emera Maine v. FERC*

#### 1. Briefing Orders and *Trailblazer*

12. Following the decision of the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) in *Emera Maine v. FERC*,<sup>27</sup> the Commission issued two briefing orders<sup>28</sup> in the fall of 2018 proposing a new methodology for analyzing public utility ROEs under FPA section 206.<sup>29</sup> The Commission preliminarily found that “in light of current investor behavior and capital market conditions, relying on the DCF methodology alone will not produce a just and reasonable ROE.”<sup>30</sup> The Commission

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<sup>26</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 172.

<sup>27</sup> 854 F.3d 9 (D.C. Cir. 2017).

<sup>28</sup> MISO Briefing Order, 165 FERC ¶ 61,118; *Coakley v. Bangor Hydro-Elec. Co.*, 165 FERC ¶ 61,030 (2018) (*Coakley* Briefing Order, and together with MISO Briefing Order, Briefing Orders).

<sup>29</sup> 16 USC 824e (2018).

<sup>30</sup> *Coakley* Briefing Order, 165 FERC ¶ 61,030 at P 32; MISO Briefing Order, 165 FERC ¶ 61,118 at P 34.

found that investors appear to base their decisions on numerous financial models<sup>31</sup> and may give greater weight to models other than the DCF in estimating the expected returns from a utility investment.<sup>32</sup> As such, the Commission proposed to determine ROE for public utilities by averaging the results of DCF, CAPM, Expected Earnings, and Risk Premium analyses, giving equal weight to each analysis. The Commission established paper hearings and directed the parties in those proceedings to file briefs in response.

13. On February 21, 2019, while the paper hearings were pending, the Commission found in *Trailblazer Pipeline Company LLC* that “investor reliance upon multiple methodologies presumably applies to investments in natural gas pipelines” as well as public utilities.<sup>33</sup> The Commission therefore permitted parties in that natural gas pipeline cost-of-service rate proceeding to address the four alternative financial models at hearing.<sup>34</sup>

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<sup>31</sup> *Coakley* Briefing Order, 165 FERC ¶ 61,030 at P 40; MISO Briefing Order, 165 FERC ¶ 61,118 at P 42.

<sup>32</sup> *Coakley* Briefing Order, 165 FERC ¶ 61,030 at P 35; MISO Briefing Order, 165 FERC ¶ 61,118 at P 37.

<sup>33</sup> 166 FERC ¶ 61,141, at P 48 (2019).

<sup>34</sup> Thereafter, participants in natural gas pipeline rate proceedings in Docket Nos. RP19-352-000, RP19-1353-000, RP19-1523-000, and RP20-131-000 filed testimony applying the alternative models.

## 2. Opinion No. 569

14. On November 21, 2019, the Commission issued Opinion No. 569 adopting the proposal from the Briefing Orders, with several revisions.<sup>35</sup> The Commission explained that it would use the DCF model and CAPM in its ROE analyses under FPA section 206<sup>36</sup> and give equal weight to both models.<sup>37</sup> However, contrary to the proposal in the Briefing Orders, the Commission declined to use either the Expected Earnings analysis or Risk Premium model.<sup>38</sup> The Commission also made findings as to the DCF model and the CAPM and adopted specific low and high-end outlier tests.

## 3. Opinion No. 569-A

15. In Opinion No. 569-A, the Commission modified the methodology established in Opinion No. 569 in several respects. First, as to the DCF model, the Commission reduced the weighting of the long-term growth projection from one-third to 20% and modified the high-end outlier test adopted in Opinion No. 569.<sup>39</sup> Second, as to the CAPM, the Commission clarified that it will modify the high-end outlier test adopted in Opinion No. 569<sup>40</sup> and that it will consider, based on evidence provided in future

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<sup>35</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 18.

<sup>36</sup> *Id.* PP 1, 18.

<sup>37</sup> *Id.* PP 276, 425.

<sup>38</sup> *Id.* PP 18, 31, 200, 340.

<sup>39</sup> Opinion No. 569-A, 171 FERC ¶ 61,154 at PP 57, 154.

<sup>40</sup> *Id.* P 154.

proceedings, use of *Value Line* data, instead of IBES data, as the source of the short-term growth projection in the DCF component of the CAPM.<sup>41</sup> Third, the Commission adopted a modified version of the Risk Premium model.<sup>42</sup> The Commission explained that it would afford equal weighting to the DCF, CAPM, and Risk Premium analyses and denied requests for rehearing of its decision to exclude Expected Earnings.<sup>43</sup>

**D. NOI**

16. In the NOI, the Commission requested comment on whether uniform application of the Commission's base ROE policy across the electric, natural gas pipeline, and oil pipeline industries is appropriate and advisable<sup>44</sup> and whether the Commission, if it departed from its sole use of a two-step DCF methodology for public utilities, should also use its new method or methods to determine natural gas and oil pipeline ROEs.<sup>45</sup> The Commission also sought comment on its guidelines for proxy group formation, including proxy group screening criteria and appropriate high and low-end outlier tests.<sup>46</sup>

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<sup>41</sup> *Id.* P 78.

<sup>42</sup> *Id.* PP 104-114.

<sup>43</sup> *Id.* P 141.

<sup>44</sup> NOI, 166 FERC ¶ 61,207 at P 29.

<sup>45</sup> *Id.* P 32.

<sup>46</sup> *Id.* P 34.

17. Numerous entities and individuals submitted comments in response to the NOI. Below, we discuss the comments that are relevant to the revised policy for natural gas and oil pipeline ROE methodologies that we adopt herein.

## **II. Discussion**

18. Upon review of the comments and based on the Commission's findings in Opinion Nos. 569 and 569-A, we revise our policy for determining natural gas and oil pipeline ROEs. Under this revised policy, we will (1) determine ROE by averaging the results of DCF and CAPM analyses while retaining the existing two-thirds/one-third weighting of the short and long-term growth projections in the DCF; (2) give equal weight to the DCF and CAPM analyses; (3) consider using *Value Line* data as the source of the short-term growth projection in the CAPM; (4) consider proposals to include Canadian companies in pipeline proxy groups while continuing to apply our proxy group criteria flexibly until sufficient proxy group members are obtained; (5) exclude Risk Premium and Expected Earnings analyses; and (6) continue to address outliers in pipeline proxy groups on a case-by-case basis and refrain from applying specific outlier tests.

19. We are not persuaded to adopt any additional policy changes at this time and will address all other issues concerning the determination of natural gas and oil pipeline ROEs as they arise in future proceedings.

**A. Revised Policy for Determining Natural Gas and Oil Pipeline ROEs**

**1. Use of the DCF and CAPM**

**a. Background**

20. In the Briefing Orders, the Commission preliminarily found that since it began relying primarily on the DCF model to determine ROE in the 1980s, investors have increasingly used a diverse set of data sources and models to inform their investment decisions.<sup>47</sup> Because investors consider more than one financial model when making investment decisions, the Commission reasoned that relying on multiple models makes it more likely that the Commission's decision will accurately reflect how investors are making their investment decisions.<sup>48</sup> The Commission later determined in *Trailblazer* that investor reliance on multiple methodologies presumably applies to investments in natural gas pipelines as well as public utilities.<sup>49</sup>

21. The Commission departed from sole reliance on the DCF model for public utilities in Opinion No. 569, finding that investors have varying preferences as to which of the various methods for determining cost of equity they may use to inform their investment decisions and that the DCF and CAPM are among the primary methods that investors use

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<sup>47</sup> *Coakley* Briefing Order, 165 FERC ¶ 61,030 at P 40; MISO Briefing Order, 165 FERC ¶ 61,118 at P 42.

<sup>48</sup> *See Coakley* Briefing Order, 165 FERC ¶ 61,030 at PP 36, 44; MISO Briefing Order, 165 FERC ¶ 61,118 at PP 38, 46.

<sup>49</sup> *Trailblazer*, 166 FERC ¶ 61,141 at P 48.



for this purpose.<sup>50</sup> Thus, the Commission concluded that expanding its methodology for determining public utility ROEs to use the CAPM in addition to the DCF model will make it more likely that its decisions will accurately reflect how investors make their investment decisions and produce cost-of-equity estimates that more accurately reflect what ROE a utility must offer to attract capital.<sup>51</sup> The Commission further explained that using the CAPM will also mitigate the model risk that the DCF model may perform poorly in certain circumstances.<sup>52</sup>

**b. NOI Comments**

22. Commenters are divided on whether the Commission should expand its methodology for determining natural gas and oil pipeline ROEs to consider multiple models. Commenters representing natural gas and oil pipeline shipper interests<sup>53</sup> urge the Commission to continue relying solely on the DCF model to determine pipeline ROEs.<sup>54</sup>

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<sup>50</sup> Opinion No. 569, 169 FERC ¶ 61,129 at PP 34, 171.

<sup>51</sup> *Id.* PP 31, 34, 452.

<sup>52</sup> *Id.* PP 39, 171.

<sup>53</sup> These commenters include: Airlines for America; Liquids Shippers Group; Natural Gas Supply Association (NGSA); American Public Gas Association (APGA); Process Gas Consumers Group and American Forest & Paper Association (PGC/AF&PA); and the Canadian Association of Petroleum Producers (CAPP).

<sup>54</sup> Airlines for America Initial Comments at 5-7; Liquids Shippers Group Initial Comments at 12-17, 22-25; NGSA Initial Comments at 3-6, 25, 27; APGA Comments at 3; PGC/AF&PA Joint Comments at 1-2, 6-8; *see also* CAPP Initial Comments at 27-28 (lauding the DCF as superior and stating that investors most likely view the CAPM as a supplementary model).

These commenters contend that the DCF model is a standardized approach that promotes predictability for pipelines and shippers and assert that there is no reason to consider additional models.<sup>55</sup>

23. In contrast, natural gas and oil pipelines and trade associations<sup>56</sup> argue that it would be reasonable to consider other models in addition to the DCF, subject to modifications in recognition of the unique risks and regulatory framework applicable to the natural gas and oil pipeline industries.<sup>57</sup> Generally, these entities contend that the Commission's findings that investors rely upon multiple financial models in making investment decisions also apply to investors in pipelines.<sup>58</sup>

**c. Commission Determination**

24. Based on the Commission's findings in Opinion No. 569, we revise our methodology for determining natural gas and oil pipeline ROEs to rely on multiple financial models, rather than relying solely on the DCF model. Specifically, we will

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<sup>55</sup> Airlines for America Initial Comments at 1-2, 5-7; Liquids Shippers Group Initial Comments at 12-17; NGSAA Initial Comments at 3-4, 10, 25; PGC/AF&PA Joint Comments at 6-8.

<sup>56</sup> These commenters include: Association of Oil Pipe Lines (AOPL); Interstate Natural Gas Association of America (INGAA); Magellan Midstream Partners, L.P., Plains Pipeline L.P.; SFPP, L.P. and Calneve Pipe Line LLC; and Tallgrass Energy, LP.

<sup>57</sup> AOPL Initial Comments at 3, 8-9, 11-12; INGAA Initial Comments at 40-41; Magellan Initial Comments at 8-13; Plains Comments at 3-4; SFPP-Calneve Comments at 3-4; Tallgrass Initial Comments at 1, 11.

<sup>58</sup> *E.g.*, AOPL Initial Comments at 4, 11; Tallgrass Initial Comments at 2.

determine pipeline ROEs using the DCF model and CAPM, but in contrast to our methodology for public utilities, we will not use the Risk Premium model.

25. As an initial matter, we note that the D.C. Circuit has repeatedly observed that the Commission is not required to rely upon the DCF model alone or even at all.<sup>59</sup> As such, the Commission may “change its past practices,” such as relying exclusively on the DCF model, “with advances in knowledge in its given field or as its relevant experience and expertise expands,” provided that it supplies “a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored.”<sup>60</sup>

26. In *Hope*, the Supreme Court held that “the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.”<sup>61</sup> Thus, a key consideration in determining just and reasonable utility ROEs is determining what ROE

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<sup>59</sup> *E.g.*, *Tenn. Gas Pipeline Co. v. FERC*, 926 F.2d 1206, 1211 (D.C. Cir. 1991) (explaining that the Commission is free to reject the DCF, provided that it adequately explains its reasons for doing so); *NEPCO Mun. Rate Comm. v. FERC*, 668 F.2d 1327, 1345 (D.C. Cir. 1981) (“FERC is not bound ‘to the service of any single formula or combination of formulas.’” (quoting *FPC v. Nat. Gas Pipeline Co. of Am.*, 315 U.S. 575, 586 (1942))).

<sup>60</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 32 (quoting *Nuclear Energy Inst., Inc. v. EPA*, 373 F.3d 1251, 1296 (D.C. Cir. 2004) (per curiam)) (internal citations and quotation marks omitted).

<sup>61</sup> *Hope*, 320 U.S. at 603; *see also CAPP v. FERC*, 254 F.3d at 293 (“In order to attract capital, a utility must offer a risk-adjusted expected rate of return sufficient to attract investors.”).

an entity must offer in order to attract capital, i.e., induce investors to invest in the entity in light of its risk profile.<sup>62</sup> As the Commission stated in Opinion No. 414-B,<sup>63</sup> “the cost of common equity to a regulated enterprise depends upon what the market expects not upon precisely what is going to happen.”<sup>64</sup> Thus, in determining what ROE to award a utility, we must look to how investors analyze and compare their investment opportunities.

27. We find that the rationale set forth in the Briefing Orders and Opinion No. 569 for relying on CAPM in addition to the DCF applies equally to natural gas and oil pipelines. In those proceedings, the Commission found that investors employ various methods for determining cost of equity and that the DCF and CAPM are among the primary methods investors use for this purpose.<sup>65</sup> In addition, the Commission found in Opinion No. 569 that both record evidence and academic literature<sup>66</sup> indicated that CAPM is widely used

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<sup>62</sup> See *Bluefield Waterworks & Improvement Co. v. Pub. Serv. Comm’n of W. Va.*, 262 U.S. 679, 692-93 (1923) (discussing factors an investor considers in making investment decisions).

<sup>63</sup> *Transcontinental Gas Pipe Line Corp.*, Opinion No. 414-B, 85 FERC ¶ 61,323 (1998).

<sup>64</sup> Opinion No. 414-B, 85 FERC at 62,268; see also *Kern River Gas Transmission Co.*, Opinion No. 486-B, 126 FERC ¶ 61,034, at P 120 (2009), *order on reh’g and compliance*, Opinion No. 486-C, 129 FERC ¶ 61,240 (2009).

<sup>65</sup> Opinion No. 569, 169 FERC ¶ 61,129 at PP 34, 236; *Coakley* Briefing Order, 165 FERC ¶ 61,030 at P 35; *MISO* Briefing Order, 165 FERC ¶ 61,118 at P 37.

<sup>66</sup> See, e.g., Jonathan B. Berk and Jules H. van Binsbergen, *Assessing Asset Pricing Models Using Revealed Preference*, 119(1) *Journal of Financial Economics* 1, 2 (2016) (“We find that the CAPM is the closest model to the model that investors use to make their capital allocation decisions . . . investors appear to be using the CAPM to

by investors.<sup>67</sup> These findings apply to investors generally, and we do not see, nor do the NOI comments identify, any basis for distinguishing between investors in public utilities and investors in natural gas and oil pipelines in this context. We therefore find that investors in pipelines, like investors in public utilities, consider multiple models for measuring cost of equity, including the DCF model and CAPM, in making investment decisions.<sup>68</sup>

28. Accordingly, under the rationale set forth in Opinion No. 569, we will expand our methodology for determining natural gas and oil pipeline ROEs and will consider the CAPM in addition to the DCF model.<sup>69</sup> We conclude that as with public utilities,

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make their investment decisions.”); Brad M. Barber, et al., *Which Factors Matter to Investors? Evidence from Mutual Fund Flows*, 29(10) *The Review of Financial Studies* 2600, 2639 (2016) (“[W]hen we ran a horse race between six asset-pricing models, the CAPM is able to best explain variation in flows across mutual funds.”); *id.* at 2624 (“[T]he CAPM does the best job of predicting fund-flow relations.”); *see also* John R. Graham and Campbell R. Harvey, *The Theory and Practice of Corporate Finance: Evidence from the Field*, 60(2) *Journal of Financial Economics* 187, 201 (2001) (explaining that “the CAPM is by far the most popular method of estimating the cost of equity capital.”).

<sup>67</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 236.

<sup>68</sup> *See Trailblazer*, 166 FERC ¶ 61,141 at P 48 (citing *Coakley* Briefing Order, 165 FERC ¶ 61,030 at PP 34-36). We note that with the exception of commenters supporting sole reliance on the DCF model, commenters generally do not oppose use of the CAPM for natural gas and oil pipelines. *See* CAPP Initial Comments at 28; INGAA Initial Comments at 41 (supporting use of DCF, CAPM, and Expected Earnings); AOPL Initial Comments at 8-9 (endorsing use of the proposed four-model methodology, which includes CAPM, as a reasonable approach for oil pipelines); Plains Comments at 4 (same); SFPP-Calnev Comments at 4 (same).

<sup>69</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 236.

expanding the methodology we use to determine ROE for natural gas and oil pipelines to include the CAPM in addition to the DCF model will better reflect how investors in those industries measure cost of equity while tending to reduce the model risk associated with relying on the DCF model alone. This should result in our ROE analyses producing cost-of-equity estimates for natural gas and oil pipelines that more accurately reflect what ROE a pipeline must offer in order to attract capital.

## 2. DCF

29. We decline to adopt any changes to the two-step DCF model that we apply to natural gas and oil pipelines under our existing policy. We will therefore continue to base the long-term growth projection on forecasts of long-term growth of GDP, adjust the long-term growth projection of MLPs to equal 50% of GDP consistent with the 2008 Policy Statement,<sup>70</sup> and use only the short-term growth projection for purposes of the (1+.5g) adjustment to dividend yield. As discussed below, in contrast to our revised base ROE methodology for public utilities as adopted in Opinion No. 569-A, we will retain the existing two-thirds/one-third weighting for the short and long-term growth projections.

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<sup>70</sup> The Commission adopted the 50% long-term growth rate adjustment for MLPs in the 2008 Policy Statement in part because MLPs have limited investment opportunities and face pressure to maintain a high payout ratio. *See* 2008 Policy Statement, 123 FERC ¶ 61,048 at PP 95-96. Commenters state that MLPs no longer face the same pressure to maintain a high payout ratio and often now generate growth internally through retained earnings, which will cause their growth rates to increase. *See, e.g.*, INGAA Initial Comments at 58-59. While the Commission continues to favor the 50% long-term growth adjustment for MLPs, parties may present empirical evidence for an alternative adjustment in cost-of-service rate proceedings. Natural gas and oil pipelines that are MLPs may not use alternative adjustments to support their annual forms.

**a. NOI Comments**

30. Commenters that address the weighting of the growth projections in the DCF model are divided on whether the Commission should retain the existing weighting, with AOPL and NGSA not proposing any adjustments<sup>71</sup> and CAPP and INGAA proposing alternative weighting schemes. CAPP contends that the Commission should accord the growth projections equal weighting.<sup>72</sup> INGAA, on the other hand, proposes to increase the weighting of the short-term projection to four-fifths and reduce the weighting of the long-term projection to one-fifth.<sup>73</sup>

**b. Commission Determination**

31. The D.C. Circuit has recognized that the Commission has discretion regarding its growth projection weighting choices.<sup>74</sup> Although the Commission is reducing the weighting of the long-term growth projection in public utility proceedings to one-fifth, we find that distinctions between public utilities and natural gas and oil pipelines support exercising this discretion to continue affording one-third weighting to the long-term growth projections in our analyses of pipeline ROEs.

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<sup>71</sup> AOPL Initial Comments at 41; NGSA Initial Comments at 32-33; *see also* Magellan Initial Comments at 23-24 (supporting two-thirds/one-third weighting should Commission retain existing two-step DCF).

<sup>72</sup> CAPP Initial Comments at 40.

<sup>73</sup> INGAA Initial Comments at 55.

<sup>74</sup> *See CAPP v. FERC*, 254 F.3d at 297 (holding that the Commission did not abuse its discretion in reducing the weighting of the long-term growth projection from one-half to one-third).

32. The Commission adopted the existing two-thirds/one-third weighting scheme in Opinion No. 414-A.<sup>75</sup> As explained in Opinion No. 569-A, reducing the weighting of the long-term growth projection in DCF analyses of public utilities is appropriate because the short-term growth projections of public utilities have declined relative to GDP since the issuance of Opinion No. 414-A.<sup>76</sup> As a result, investors may reasonably consider current public utility short-term growth projections to be more sustainable than when the Commission adopted the existing weighting policy in 1998. It is therefore reasonable to afford greater weight to the short-term growth projection and lesser weight to the long-term growth projection in determining cost of equity for public utilities.<sup>77</sup>

33. This reasoning does not apply with equal force to natural gas and oil pipelines. Although the short-term growth projections of natural gas and oil pipelines are lower than in 1998, they have not declined to the same extent as those of public utilities.<sup>78</sup> As such,

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<sup>75</sup> Opinion No. 414-A, 84 FERC ¶ 61,084 (1998).

<sup>76</sup> In Opinion No. 414-A, the short-term growth projections of the proxy group members averaged 11.33%, almost twice the long-term GDP growth projection of 5.45%. *See id.* at app. A. As explained in Opinion No. 569-A, the average short-term growth projections for the proxy group in one of the public utility proceedings addressed therein had declined to 5.03%, as compared to a long-term GDP growth projection in that proceeding of 4.39%. Opinion No. 569-A, 171 FERC ¶ 61,154 at P 57.

<sup>77</sup> Opinion No. 569-A, 171 FERC ¶ 61,154 at PP 57-58.

<sup>78</sup> For example, using data from February 2020, the short-term growth projections of a hypothetical natural gas pipeline proxy group consisting of Enbridge Inc., TC Energy, National Fuel Gas Company, Kinder Morgan Inc., and Williams Companies, Inc., average 5.92% relative to a GDP growth projection of 4.22%. By comparison, in one of the public utility proceedings addressed in Opinion No. 569-A, the short-term



investors could reasonably view pipelines' short-term growth projections as less sustainable than the projections of public utilities. Moreover, the shale gas revolution has caused the natural gas and oil pipeline industries to become more dynamic and less mature, which could undermine the reliability of pipelines' short-term growth projections.

34. For these reasons, we exercise our discretion to maintain our existing weighting scheme and will continue to accord two-thirds weighting to the short-term growth projection and one-third weighting to the long-term growth projection in natural gas and oil pipeline proceedings.

### 3. CAPM

35. We now turn to how we will apply the CAPM to natural gas and oil pipelines. As discussed below, with regard to the calculation of the market risk premium and the use of *Value Line* adjusted betas in pipeline proceedings, we adopt the policy established in Opinion No. 569.

#### a. Calculation of Market Risk Premium

36. As described above, the CAPM market risk premium is calculated by subtracting the risk-free rate, which is typically represented by a proxy such as the yield on 30-year U.S. Treasury bonds, from the expected market return. The expected market return can be estimated either using a backward-looking approach based upon realized market returns during a historical period, a forward-looking approach applying the DCF model to

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growth projections of the proxy group averaged 5.03% relative to a projected growth in GDP of 4.39%. *Id.* P 57.

a representative market index, such as the S&P 500, or a survey of academic and investment professionals.<sup>79</sup>

**i. Background**

37. In Opinion No. 569, the Commission adopted the use of the 30-year U.S. Treasury average historical bond yield over a six-month period as the risk-free rate.<sup>80</sup> The Commission explained that the six-month period should correspond as closely as possible to the six-month financial study period used to produce the DCF study in the applicable proceeding.<sup>81</sup> For the expected market return, the Commission adopted a forward-looking approach based upon a one-step DCF analysis of the dividend paying members of the S&P 500.<sup>82</sup> The Commission rejected proposals to use a two-step DCF analysis for this purpose, finding that the rationale for incorporating a long-term growth projection in conducting a two-step DCF analysis of a specific group of utilities does not apply when conducting a DCF study of the companies in the S&P 500 because (i) the S&P 500 is regularly updated to ensure that it only includes companies with high market

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<sup>79</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 239 (citing Morin at 155-162).

<sup>80</sup> *Id.* P 237.

<sup>81</sup> *Id.* PP 237-238.

<sup>82</sup> *Id.* P 260. Because the rationale for including a long-term growth estimate in the DCF analysis of a specific utility does not apply to the DCF analysis of a broad, representative market index with a wide variety of companies that is regularly updated, the Commission held that the DCF analysis of the dividend paying members of the S&P 500 should be a one-step DCF analysis that uses only short-term growth projections. *Id.* PP 261-266.

capitalization and remains representative of the industries in the economy of the United States and (ii) the dividend paying members of the S&P 500 constitute a large portfolio of stocks and therefore include companies at all stages of growth.<sup>83</sup> Furthermore, the Commission found that S&P 500 companies with growth rates that are negative or in excess of 20% should be excluded from the CAPM analysis<sup>84</sup> and approved the use of a size premium adjustment in the CAPM analysis.<sup>85</sup> The Commission affirmed these conclusions on rehearing.<sup>86</sup>

**ii. NOI Comments**

38. INGAA, CAPP, and NGSA address how the Commission should determine the CAPM market risk premium in pipeline proceedings. Regarding the risk-free rate, INGAA states that although the Commission could use either the 20-year or 30-year U.S. Treasury bond rate, it supports using the 20-year rate.<sup>87</sup> As to the expected market return, INGAA supports using a one-step DCF analysis of dividend paying companies in the

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<sup>83</sup> *Id.* PP 263-265.

<sup>84</sup> *Id.* PP 267-268.

<sup>85</sup> *Id.* PP 296-303.

<sup>86</sup> Opinion No. 569-A, 171 FERC ¶ 61,154 at PP 75-77, 85.

<sup>87</sup> INGAA Initial Comments at 61. INGAA states that unlike 30-year bonds, which were not issued for a period of time, 20-year bond yields are available back to 1926 and will therefore allow the use of a full historical data set covering a longer period. *Id.*

S&P 500.<sup>88</sup> CAPP and NGSAs, by contrast, support using a two-step DCF analysis that uses both short-term and long-term growth rates.<sup>89</sup>

**iii. Commission Determination**

39. We adopt the policy established in Opinion No. 569. Thus, in determining the CAPM market risk premium for natural gas and oil pipelines, we will (1) use, as the risk-free rate, the 30-year U.S. Treasury average historical bond yield over a six-month period corresponding as closely as possible to the six-month financial study period used to produce the DCF study in the applicable proceeding, (2) estimate the expected market return using a forward-looking approach based on a one-step DCF analysis of all dividend paying companies in the S&P 500,<sup>90</sup> and (3) exclude S&P 500 companies with growth rates that are negative or in excess of 20%.

40. First, as the Commission recognized in Opinion No. 531-B, 30-year U.S. Treasury bond yields are a generally accepted proxy for the risk-free rate in a CAPM analysis.<sup>91</sup> We are not persuaded to adopt INGAA's proposal to use the 20-year U.S. Treasury bond yield for this purpose. The Commission determined in Opinion No. 569 that factors supporting the use of the 30-year U.S. Treasury average historical bond yield over a six-

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<sup>88</sup> *Id.* (citing *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 551, 156 FERC ¶ 61,234, at PP 166-168 (2016)).

<sup>89</sup> CAPP Initial Comments at 41; NGSAs Initial Comments at 33.

<sup>90</sup> The appropriate data source for the short-term growth projection in the DCF component of the CAPM is addressed *infra*.

<sup>91</sup> Opinion No. 531-B, 150 FERC ¶ 61,165 at P 114 (citing Morin at 151-152).

month period outweigh factors supporting the use of the 20-year U.S. Treasury yield, including any potential benefit that may come from using a data set covering a longer period.<sup>92</sup> We affirm that conclusion here.

41. Second, we will determine the expected market return using a one-step DCF analysis of the dividend paying members of the S&P 500. As explained in Opinion No. 569, using a DCF analysis of the dividend paying members of the S&P 500 is a well-recognized method of estimating the expected market return for purposes of the CAPM,<sup>93</sup> and we find that this method is likewise reasonable for purposes of applying the CAPM to natural gas and oil pipelines. We also find that the reasons set forth in Opinion No. 569 for using a one-step DCF analysis, instead of a two-step analysis, in estimating the expected market return are equally valid in the context of natural gas and oil pipelines.<sup>94</sup> Accordingly, for the reasons stated in Opinion No. 569,<sup>95</sup> we will use a one-step DCF analysis of the dividend paying companies in the S&P 500 as the expected market return in applying the CAPM under our revised ROE methodology for natural gas and oil pipelines.

42. Third, consistent with Opinion No. 569, we will screen from the CAPM analysis of natural gas and oil pipelines S&P 500 companies with growth rates that are negative or

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<sup>92</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 237.

<sup>93</sup> *Id.* P 260.

<sup>94</sup> *Id.* PP 262-266.

<sup>95</sup> *See id.* PP 260-276.

in excess of 20%. The Commission has explained that such low or high growth rates are highly unsustainable and unrepresentative of the growth rates of public utilities.<sup>96</sup> We find that these growth rates are likewise not representative of sustainable growth rates for companies in pipeline proxy groups. We will therefore apply this growth rate screen as part of the CAPM analysis in natural gas and oil pipeline proceedings.

**b. Betas and Size Premium**

**i. Background**

43. The Commission found in Opinion Nos. 569 and 569-A that *Value Line* adjusted betas are reasonable for use in the CAPM analysis for public utilities.<sup>97</sup> The Commission explained that there was substantial evidence that investors rely on *Value Line* betas and observed that Dr. Morin supports the use of adjusted betas in the CAPM.

44. Moreover, the Commission also accepted the use of a size premium adjustment derived using Duff & Phelps raw betas based on a regression of the monthly returns on the stock index that are in excess of a 30-year U.S. Treasury yield over the period of 1926 through the most recent period.<sup>98</sup> The Commission affirmed that the use of such an adjustment was “a generally accepted approach to CAPM analyses” and determined that application of size premium adjustments based on the New York Stock Exchange

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<sup>96</sup> *Id.* P 268.

<sup>97</sup> *Id.* P 297; Opinion No. 569-A, 171 FERC ¶ 61,154 at PP 75-76.

<sup>98</sup> Opinion No. 569, 169 FERC ¶ 61,129 at PP 279, 296.

(NYSE) to dividend paying members of the S&P 500 is acceptable.<sup>99</sup> The Commission acknowledged that there is imperfect correspondence between the size premia being developed with different betas, but concluded that the size premium adjustments improve the accuracy of CAPM results and cause the CAPM to better correspond to the cost-of-capital estimates used by investors.<sup>100</sup> The Commission also found that sufficient academic literature exists to indicate that many investors rely on size premia.<sup>101</sup>

**ii. NOI Comments**

45. A variety of commenters, including AOPL, INGAA, Magellan, CAPP, and NGSAs, support use of *Value Line* adjusted betas in applying the CAPM.<sup>102</sup> INGAA adds that although *Value Line* betas, which are based on five years of historical data, may be appropriate in most cases, it is possible that using betas based on five years of data may not reflect more recent events that have substantially changed the risk characteristics of

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<sup>99</sup> *Id.* P 296 (quoting Opinion No. 531-B, 150 FERC ¶ 61,165 at P 117).

<sup>100</sup> *Id.* P 298.

<sup>101</sup> *Id.* PP 299-300.

<sup>102</sup> AOPL Initial Comments at 42; INGAA Initial Comments at 62; Magellan Initial Comments at 27; CAPP Initial Comments at 42; NGSAs Comments at 34; *see also* Maryland Office of People’s Counsel (Maryland OPC) Initial Comments at 21-22 (“Value Line is the most detailed and most trusted investment source currently available in the industry. The Value Line beta is calculated over a long-term time period that dampens volatility and, as such, is the most representative source now available in the marketplace.”).

the natural gas pipeline industry. INGAA therefore states that in such circumstances, the Commission should consider beta estimates calculated over shorter periods.<sup>103</sup>

**iii. Commission Determination**

46. We adopt the reasoning in Opinion Nos. 569 and 569-A and find reasonable the use of *Value Line* adjusted betas in the CAPM analysis as applied to natural gas and oil pipelines. As the Commission has explained, there is substantial evidence indicating that investors rely on *Value Line* betas in making their investment decisions, and this finding presumably applies equally to investors in natural gas and oil pipelines. Although we recognize that the distinct risks facing interstate natural gas and oil pipelines may in some cases bear upon whether an alternative beta source would be more appropriate, we will address such issues as they arise in specific proceedings.

47. Likewise, we find reasonable the use of the size premium adjustment based on the NYSE, as discussed in Opinion Nos. 531-B<sup>104</sup> and 569.<sup>105</sup> The use of such adjustments is “a generally accepted approach to CAPM analyses” that improves the accuracy of the CAPM results and causes such results to better correspond to the cost-of-capital estimates that investors use in making investment decisions.<sup>106</sup> As such, we find that use of these

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<sup>103</sup> INGAA Initial Comments at 62.

<sup>104</sup> Opinion No. 531-B, 150 FERC ¶ 61,165 at P 117.

<sup>105</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 296.

<sup>106</sup> *Id.* PP 296-297 (quoting Opinion No. 531-B, 150 FERC ¶ 61,165 at P 117).



adjustments will improve the accuracy of cost-of-equity estimates for natural gas and oil pipelines under our revised ROE methodology.

#### 4. **Weighting of Models**

##### a. **Background**

48. In Opinion No. 569, the Commission held that it would give equal weight to the DCF model and CAPM in analyzing ROE for public utilities.<sup>107</sup> The Commission found that the evidence indicated that neither model was conclusively superior to the other and reasoned that giving each model equal weight will reduce the model risk associated with any particular model more than giving one model greater weight than the other.<sup>108</sup> After expanding its public utility base ROE methodology in Opinion No. 569-A to include the Risk Premium model, the Commission held that it would accord equal weight to all three models.<sup>109</sup>

##### b. **NOI Comments**

49. Commenters propose various approaches to weighting the models used to determine ROE. CAPP states that the Commission should give the DCF model at least 50% weighting while giving the remaining weight to any other models the Commission decides to use.<sup>110</sup> The Maryland OPC states that if the Commission uses multiple

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<sup>107</sup> *Id.* PP 425, 427.

<sup>108</sup> *Id.* P 426.

<sup>109</sup> Opinion No. 569-A, 171 FERC ¶ 61,154 at P 141.

<sup>110</sup> CAPP Initial Comments at 30.

models, it should accord the DCF model the majority of the weighting while giving the other models a minority weighting.<sup>111</sup> INGAA and Tallgrass oppose equal weighting and assert that the Commission should adopt a flexible weighting approach that allows it to exclude or give appropriate weight to any model in light of prevailing financial conditions and the facts and circumstances of each case.<sup>112</sup> The New York State Public Service Commission (NYPSC) submits that the Commission should give two-thirds weighting to the DCF model and one-third weighting to the CAPM.<sup>113</sup>

**c. Commission Determination**

50. We adopt the rationale of Opinion Nos. 569 and 569-A and will give equal weight to the DCF model and CAPM in determining natural gas and oil pipeline ROEs. As stated in Opinion No. 569, we find that neither the DCF model nor the CAPM is conclusively superior and that giving both models equal weight will mitigate the risks associated with the potential errors or flaws in any one model. The comments proposing alternative weighting schemes do not refute these concerns and are therefore unpersuasive.

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<sup>111</sup> Maryland OPC Initial Comments at 12.

<sup>112</sup> INGAA Initial Comments at 8-9; Tallgrass Initial Comments at 12.

<sup>113</sup> NYPSC Initial Comments at 18.

## 5. Data Sources

### a. Background

51. The Commission has historically preferred IBES data as the source of the short-term growth projection in the DCF model.<sup>114</sup> By contrast, because less precision was required of the CAPM when the Commission used it only to corroborate the results of the DCF analysis, the Commission allowed parties to average IBES and *Value Line* growth projections in the DCF component of the CAPM.<sup>115</sup>

52. In Opinion 569, the Commission affirmed that it would use IBES projections as the sole source of the short-term growth projections in the DCF model.<sup>116</sup> The Commission also required the sole use of IBES projections for the DCF component of the CAPM, explaining that because it would be weighting the CAPM equally with the DCF model in setting just and reasonable ROEs, the CAPM must be implemented with the same degree of precision as the DCF model.<sup>117</sup> The Commission explained that IBES data was preferable to *Value Line* data because unlike *Value Line* projections, which represent the estimates of a single analyst at a single institution, IBES projections generally represent consensus growth estimates by a number of analysts from different

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<sup>114</sup> *E.g., Nw. Pipeline Corp.*, 92 FERC ¶ 61,287, at 62,001-02 (2000) (quoting Opinion No. 396-B, 79 FERC at 62,385).

<sup>115</sup> Opinion No. 551, 156 FERC ¶ 61,234 at P 169.

<sup>116</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 120.

<sup>117</sup> *Id.* P 276.

firms.<sup>118</sup> In addition, the Commission noted that IBES growth projections are generally timelier than the *Value Line* projections because IBES updates its database on a daily basis as participating analysts revise their forecasts, whereas *Value Line* publishes its projections on a rolling quarterly basis.<sup>119</sup>

53. In Opinion No 569-A, the Commission affirmed its preference for IBES data for the short-term growth projection in the DCF model but granted rehearing of its decision to require sole use of IBES data for the DCF component of the CAPM.<sup>120</sup>

Acknowledging its concerns about *Value Line* data as discussed in Opinion No. 569, the Commission nonetheless concluded that use of these estimates will bring value to its revised ROE methodology. The Commission found that although *Value Line* estimates come from a single analyst, they include the input of multiple analysts because they are vetted through internal processes including review by a committee composed of peer analysts. Similarly, the Commission found that there is value in including *Value Line* estimates because they are updated on a more predictable basis than IBES estimates. The Commission therefore concluded that IBES and *Value Line* growth estimates both have advantages and that it is appropriate to consider both data sources in determining public utility ROEs. In light of the Commission's longstanding use of IBES data in the DCF

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<sup>118</sup> *Id.* P 125.

<sup>119</sup> *Id.* P 128.

<sup>120</sup> Opinion No. 569-A, 171 FERC ¶ 61,154 at PP 78-83.

model, the Commission determined that it was appropriate to consider using *Value Line* in the newly adopted CAPM.

**b. NOI Comments**

54. Commenters are divided on the data source the Commission should use for the short-term growth projection in pipeline proceedings. AOPL states that the Commission should allow oil pipelines to use *Value Line* projections because they do not overlap with or duplicate IBES projections.<sup>121</sup> INGAA likewise supports use of *Value Line* growth estimates to supplement the IBES three to five-year growth projections.<sup>122</sup> In contrast, Magellan, NGSA, and CAPP support the sole use of IBES growth forecasts, with CAPP asserting that *Value Line* is inferior to IBES because it reflects the estimate of a single analyst.<sup>123</sup>

**c. Commission Determination**

55. With regard to the short-term growth projections in our DCF and CAPM analyses of natural gas and oil pipelines, we adopt the policy set forth in Opinion No. 569-A. Therefore, in natural gas and oil pipeline proceedings we will (1) continue to prefer use of IBES three to five-year growth projections as the short-term growth projection in the two-step DCF analysis and (2) allow participants to propose using *Value Line* growth

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<sup>121</sup> AOPL Initial Comments at 38.

<sup>122</sup> INGAA Initial Comments, Attachment A at 28-33 (Affidavit of Dr. Michael J. Vilbert).

<sup>123</sup> Magellan Initial Comments at 20; NGSA Initial Comments at 29-30; CAPP Initial Comments at 36-37, 39.

projections as the source of the short-term growth projection in the one-step DCF analysis embedded within the CAPM.

56. We reiterate our belief that both IBES and *Value Line* growth estimates have advantages and that it is appropriate to include both data sources in determining ROEs. As in public utility proceedings, it is beneficial to diversify the data sources used in our revised natural gas and oil pipeline ROE methodology because doing so may better reflect the data sources that investors consider and mitigate the effect of any unusual data in either source. Although we have not previously used *Value Line* growth estimates in determining natural gas and oil pipeline ROEs, we believe that including these estimates in our methodology will bring value to our analysis because they are updated on a more predictable basis than IBES estimates and reflect the consensus growth estimates of multiple analysts. By contrast, IBES projections are updated on an irregular basis as analysts revise their forecasts.

57. Consistent with our policy for public utilities, we consider using *Value Line* growth estimates in our revised natural gas and oil pipeline ROE methodology in the CAPM while continuing our longstanding use of IBES three to five-year growth estimates as the source of the short-term growth projection in the DCF. As discussed in Opinion No. 569-A, because we are newly adopting the CAPM, we find that it is appropriate to consider using a new data source within the CAPM.

## 6. Proxy Group Construction

### a. Background

58. As discussed above, the companies included in a proxy group must be comparable in risk to the pipeline whose rate is being determined. To ensure that companies included in pipeline proxy groups are risk-appropriate, the Commission has required that each proxy group company satisfy three criteria: (1) the company's stock must be publicly traded; (2) the company must be recognized as a natural gas or oil pipeline company and its stock must be recognized and tracked by an investment information service such as *Value Line*; and (3) pipeline operations must constitute a high proportion of the company's business.<sup>124</sup> In determining whether a company's pipeline operations constitute a high proportion of its business, the Commission has historically applied a 50% standard requiring that the pipeline business account for, on average, at least 50% of the company's assets or operating income over the most recent three-year period.<sup>125</sup> Furthermore, in addition to the foregoing criteria, the Commission has declined to include Canadian companies in pipeline proxy groups.<sup>126</sup>

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<sup>124</sup> 2008 Policy Statement, 123 FERC ¶ 61,048 at P 8.

<sup>125</sup> Opinion No. 486-B, 126 FERC ¶ 61,034 at PP 8, 59.

<sup>126</sup> For example, in Opinion No. 486-B, the Commission excluded TransCanada Corporation from the proxy group in a natural gas pipeline proceeding based in part on the fact that its Canadian pipeline "was subject to a significantly different regulatory structure that renders it less comparable to domestic pipelines regulated by the Commission." *Id.* P 60. The Commission again affirmed the exclusion of TransCanada Corporation in Opinion No. 528, finding that it was "subject to the vagaries of Canadian

59. The Commission has explained that proxy groups “should consist of at least four, and preferably at least five members”<sup>127</sup> and that pipeline proxy groups should only exceed five members if each additional member satisfies the 50% standard.<sup>128</sup> At the same time, the Commission has also explained that although “adding more members to the proxy group results in greater statistical accuracy, this is true only if the additional members are appropriately included in the proxy group as representative firms.”<sup>129</sup>

60. The number of companies satisfying the Commission’s historical proxy group criteria in pipeline proceedings has declined in recent years, resulting in inadequately sized proxy groups. Consolidation in the natural gas and oil pipeline industries has resulted in the absorption of many natural gas and oil pipeline companies into larger, diversified energy companies that own a variety of energy-related assets in addition to interstate pipelines. In addition, major companies in the oil pipeline industry have recently acquired natural gas pipeline assets.<sup>130</sup> The proliferation of these diversified

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regulation and Canadian capital markets, thereby making it difficult to establish comparable risk.” Opinion No. 528, 145 FERC ¶ 61,040 at P 626.

<sup>127</sup> Opinion No. 486-B, 126 FERC ¶ 61,034 at P 104.

<sup>128</sup> See *Portland Nat. Gas Transmission Sys.*, Opinion No. 510, 134 FERC ¶ 61,129, at P 215 (2011) (declining to include company that failed 50% standard because proxy group had more than five members).

<sup>129</sup> Opinion No. 486-B, 126 FERC ¶ 61,034 at P 104.

<sup>130</sup> Examples of such transactions include Enbridge Inc.’s acquisition of Spectra Energy Corp., TC Energy Corporation’s acquisition of Columbia Pipeline Group, Inc., and IFM Investors’ acquisition of Buckeye Partners LP.



energy companies has reduced the number of companies satisfying the 50% standard. Recent acquisitions of pipeline companies by private equity firms have further reduced the number of eligible natural gas and oil pipeline proxy group members by converting those pipeline companies from publicly traded to privately held entities.

61. To address the problem of the shrinking natural gas and oil pipeline proxy groups, the Commission has relaxed the 50% standard when necessary to construct a proxy group of five members.<sup>131</sup> The Commission has emphasized, however, that it will only include firms not satisfying the 50% standard until five proxy group members are obtained.<sup>132</sup>

**b. NOI Comments**

62. Commenters recognize the ongoing difficulties in forming pipeline proxy groups of sufficient size and support the Commission's policy of relaxing the 50% standard when necessary to obtain five proxy group members.<sup>133</sup> AOPL, INGAA, and Tallgrass

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<sup>131</sup> *E.g.*, Opinion No. 528, 145 FERC ¶ 61,040 at P 635; Opinion No. 486-B, 126 FERC ¶ 61,034 at PP 67-75, 94-96 (including two firms not satisfying the 50% standard in natural gas pipeline proxy group after application of the Commission's traditional criteria resulted in a proxy group of only three members); *Williston Basin Interstate Pipeline Co.*, 104 FERC ¶ 61,036, at PP 35-37, 43 (2003), *order on reh'g and compliance*, 107 FERC ¶ 61,164 (2004).

<sup>132</sup> Opinion No. 528-A, 154 FERC ¶ 61,120 at P 236 (“[W]e will relax the [50 percent] standard only if necessary to establish a proxy group consisting of at least five members”); Opinion No. 510, 134 FERC ¶ 61,129 at P 167 (“[I]n order to achieve a proxy group of at least five firms, a diversified natural gas company not satisfying the historical [50 percent] standard could be included in the proxy group, but only if there is a convincing showing that an investor would view that firm as having comparable risk to a pipeline.”).

<sup>133</sup> *E.g.*, CAPP Initial Comments at 19; AOPL Initial Comments at 35; NGSAA Initial Comments at 11.

assert that the Commission should not apply the 50% standard as a rigid screen and continue to allow the inclusion of companies that do not satisfy the 50% standard but are nonetheless significantly involved in jurisdictional natural gas and oil pipeline operations.<sup>134</sup> NGSa and PGC/AF&PA likewise support continued flexibility in the construction of pipeline proxy groups.<sup>135</sup>

63. Other commenters urge the Commission to adopt more drastic changes to its proxy group formation policies. For example, Magellan states that the Commission should allow the inclusion of risk-appropriate non-energy companies in natural gas and oil pipeline proxy groups<sup>136</sup> while APGA recommends permitting the inclusion of natural gas distributors.<sup>137</sup> INGAA proposes several additional changes to the Commission's natural gas pipeline proxy group policy,<sup>138</sup> including allowing for the inclusion of risk-comparable Canadian companies with significant U.S. interstate natural gas pipeline

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<sup>134</sup> See AOPL Initial Comments at 15, 17-18, 35; INGAA Initial Comments at 24, 29-30; Tallgrass Initial Comments at 9.

<sup>135</sup> NGSa Initial Comments at 11, 17; PGC/AF&PA Joint Comments at 9-10.

<sup>136</sup> Magellan Initial Comments at 15; *see also* NextEra Transmission, LLC Initial Comments at 5-6. Most commenters oppose including non-energy companies in pipeline proxy groups. *E.g.*, AOPL Initial Comments at 32; Tallgrass Initial Comments at 9; CAPP Initial Comments at 21; NGSa Initial Comments at 19; PGC/AF&PA Joint Comments at 10.

<sup>137</sup> APGA Comments at 10.

<sup>138</sup> INGAA Initial Comments at 24-25, 29-37, 40; INGAA Reply Comments at 6-12.

assets in natural gas pipeline proxy groups.<sup>139</sup> NGSa also supports this proposal.<sup>140</sup>

Moreover, INGAA and Tallgrass propose using the financial metric “beta” to assist in determining whether potential proxy group members are comparable in risk to the pipeline at issue.<sup>141</sup>

**c. Commission Determination**

64. Based on our review of our current policy and upon consideration of the comments to the NOI, we will maintain a flexible approach to forming natural gas and oil pipeline proxy groups and continue to relax the 50% standard when necessary to obtain a proxy group of five members. In addition, we clarify that in light of continuing difficulties in forming sufficiently sized natural gas and oil pipeline proxy groups, we will consider proposals to include otherwise-eligible Canadian entities.<sup>142</sup> We recognize that difficulties in forming a proxy group of sufficient size may be enhanced under current market conditions, including those resulting from the COVID-19 pandemic. In light of these conditions, the Commission will consider adjustments to our ROE policies where necessary.<sup>143</sup>

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<sup>139</sup> INGAA Initial Comments at 30.

<sup>140</sup> NGSa Initial Comments at 11.

<sup>141</sup> INGAA Initial Comments at 24-25, 34-35; Tallgrass Initial Comments at 6-7.

<sup>142</sup> While the Commission has preferred screens and methods for selecting companies that will compose a proxy group, parties may continue to propose alternative screens and methods in cost-of-service rate proceedings.

<sup>143</sup> See, e.g., *SFPP, L.P.*, Opinion No. 511, 134 FERC ¶ 61,121, at P 209 (2011) (departing from the Commission’s general policy to determine ROE using the most

65. As discussed above, the problem of the shrinking pipeline proxy groups persists due to, among other issues, the consolidation of pure play natural gas and oil pipelines into diversified energy companies and acquisitions of pipeline companies by private firms. These developments have reduced the number of publicly traded companies eligible for inclusion in a proxy group under the Commission's historical criteria, making it difficult for the Commission to develop an adequate sample of representative firms to estimate a pipeline's required cost of equity. As such, we will continue to apply the 50% standard flexibly, based on the record evidence and in accordance with the Commission's past practice, when necessary to construct a proxy group of at least five members.

66. In addition, we find that the NOI comments advance credible reasons why it may be appropriate to permit the inclusion of Canadian entities in natural gas and oil pipeline proxy groups. Extending proxy group eligibility to such entities could alleviate the shrinking proxy group problem by adding new potential proxy group members. As explained above, the Commission has previously excluded companies from pipeline proxy groups based on concerns that the fact that such entities are subject to Canadian regulation and Canadian capital markets makes it difficult to establish whether they are

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recent data in the record and determining nominal ROE using earlier data where the most recent data reflected the collapse of the stock market in late 2008 and thus was not representative of the pipeline's long-term equity cost of capital), *order on reh'g*, Opinion No. 511-B, 150 FERC ¶ 61,096 (2015) *remanded on other grounds sub nom. United Airlines, Inc. v. FERC*, 827 F.3d 122 (D.C. Cir. 2016), *order on remand and compliance filing*, Opinion No. 511-C, 162 FERC ¶ 61,228, at PP 46-53 (2018); *see also Trunkline Gas Co.*, Opinion No. 441, 90 FERC ¶ 61,017, at 61,049 (2000) ("The Commission seeks to find the most representative figures on which to base rates.").

comparable in risk to Commission-regulated pipelines.<sup>144</sup> We note, however, that considerations underlying those decisions may have changed since the Commission established that policy.<sup>145</sup> Therefore, in future natural gas and oil pipeline proceedings, we will consider proposals to include in the proxy group risk-appropriate Canadian entities that otherwise satisfy the Commission's proxy group eligibility requirements.

**B. Excluded Financial Models**

**1. Risk Premium**

**a. Background**

67. In Opinion No. 569, the Commission excluded the Risk Premium model from its revised ROE methodology for public utilities.<sup>146</sup> The Commission found that the Risk

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<sup>144</sup> Opinion No. 528, 145 FERC ¶ 61,040 at P 626; Opinion No. 486-B, 126 FERC ¶ 61,034 at P 60.

<sup>145</sup> For instance, a 2009 rate case decision by the National Energy Board of Canada (NEB) may be instructive. National Energy Board of Canada, RH-1-2008 Reasons for Decision, Trans Québec & Maritimes Pipelines Inc., March 2009, available at [http://www.regie-energie.qc.ca/audiences/3690-09/RepDDRGM\\_3690-09/B-29\\_GM\\_Reasons-Decision-RH-1-2008\\_3690\\_30juin09.pdf](http://www.regie-energie.qc.ca/audiences/3690-09/RepDDRGM_3690-09/B-29_GM_Reasons-Decision-RH-1-2008_3690_30juin09.pdf) (*Trans Québec*). In that decision, the NEB revised its ratemaking policy by adopting an after-tax weighted average cost-of-capital approach to determining pipeline cost of capital. *Id.* at 18-19. The NEB also accepted evidence that the Canadian and U.S. financial markets are integrated and, as a result, Canadian pipelines and U.S. pipelines compete for capital. *Id.* at 66-68 (finding that “Canadian and U.S. pipelines operate in what the Board views as an integrated North American natural gas market.”). The NEB also found that although the risks facing U.S. and Canadian pipelines are not identical, those risks “are not so different as to make them inappropriate comparators” and in fact share “many similarities.” *Id.* at 68. As such, the NEB found that U.S. pipelines “have the potential to act as a useful proxy” for use in determining the appropriate ROE for Canadian pipelines. *Id.* at 67.

<sup>146</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 340.

Premium model is largely redundant with the CAPM because, although they rely on different data sources to determine the risk premium, both models use indirect measures (i.e., past Commission orders in the Risk Premium model and S&P 500 data in the CAPM) to ascertain the risk premium that investors require over the risk-free rate of return.<sup>147</sup> The Commission also found that the Risk Premium model is likely to provide a less accurate current cost-of-equity estimate than the DCF model or CAPM because whereas those models apply a market-based method to primary data, the Risk Premium model relies on previous ROE determinations whose resulting ROE may not necessarily be directly determined by a market-based method.<sup>148</sup>

68. In Opinion No. 569-A, the Commission granted rehearing and adopted a modified Risk Premium model for use in ROE analyses under FPA section 206. Unlike the Risk Premium model discussed in Opinion No. 569, the modified Risk Premium model excludes problematic cases from the analysis, such as those where an entity joined a Regional Transmission Organization (RTO), and the Commission, without reexamination, allowed adoption of the existing RTO-wide ROE. The Commission explained that, as modified, the Risk Premium model adds benefits to the ROE analysis through model diversity and reduced volatility that outweigh the disadvantages identified in Opinion No. 569.<sup>149</sup>

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<sup>147</sup> *Id.* P 341.

<sup>148</sup> *Id.* P 342.

<sup>149</sup> Opinion No. 569-A, 171 FERC ¶ 61,154 at PP 104-114.

**b. NOI Comments**

69. INGAA, AOPL, NGSAs, and CAPP assert that the Risk Premium model cannot be applied to natural gas and oil pipelines in light of the lack of stated allowed ROEs from settlements or Commission decisions in pipeline proceedings. Because the Risk Premium model relies upon Commission-allowed ROEs to estimate the equity risk premium, these commenters state that it would be difficult, if not impossible, to apply this model in pipeline cases.<sup>150</sup>

**c. Commission Determination**

70. We will not use the Risk Premium model in our revised ROE methodology. As commenters observe, there is insufficient data to apply the Risk Premium models considered in Opinion Nos. 569 and 569-A to natural gas or oil pipelines. That model relies upon stated ROEs approved in past Commission orders, such as orders on settlements, to ascertain the risk premium that investors require. In recent years, however, natural gas and oil pipeline cost-of-service rate proceedings have frequently resulted in “black box” settlements instead of a fully litigated Commission decision. Unlike public utility proceedings, where ROE may be addressed on a standalone basis as a component of formula rates, settlements in pipeline proceedings typically do not enumerate a stated ROE.

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<sup>150</sup> INGAA Initial Comments at 41-42; AOPL Initial Comments at 12, 27-28; NGSAs Initial Comments at 10-11, 24; CAPP Initial Comments at 11-12.

71. Consequently, for natural gas and oil pipelines, there is insufficient data to estimate cost of equity using the Risk Premium models discussed in Opinion Nos. 569 and 569-A. In light of this lack of data, we will not use these models in determining pipeline ROEs. While we do not adopt the Risk Premium model in our revised methodology here for the reasons discussed above, we do not necessarily foreclose its use in future proceedings if parties can demonstrate that the concerns discussed above have been addressed.

## 2. Expected Earnings

### a. Background

72. In Opinion No. 569, the Commission excluded the Expected Earnings model from its revised base ROE methodology for public utilities because the record did not support departing from the Commission's traditional use of market-based approaches to determine base ROE.<sup>151</sup> The Commission also found that the record did not demonstrate that investors rely on Expected Earnings when making investment decisions.<sup>152</sup>

73. The Commission explained that in determining a just and reasonable ROE under *Hope*, it must analyze the returns that are earned on "investments in other enterprises having corresponding risks."<sup>153</sup> In contrast to market-based models, the accounting-based Expected Earnings model uses estimates of return on an entity's book value to

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<sup>151</sup> Opinion No. 569, 169 FERC ¶ 61,129 at PP 200-201.

<sup>152</sup> *Id.* PP 212-218.

<sup>153</sup> *Id.* P 201 (quoting *Hope*, 320 U.S. at 603).



estimate the earnings an investor expects to receive on the book value of a particular stock.<sup>154</sup> As investors cannot invest in an enterprise at book value, the Commission concluded that the expected return on a utility's book value does not reflect "returns on investments in other enterprises" because in most circumstances book value does not reflect the value of any investment that is available to an investor in the market.<sup>155</sup> The Commission thus found that return on book value is not indicative of what return an investor requires to invest in the utility's equity or what return an investor receives on the equity investment.<sup>156</sup>

74. On rehearing, the Commission affirmed the exclusion of the Expected Earnings model in those proceedings for the reasons stated in Opinion No. 569.<sup>157</sup> The Commission found, moreover, that the Expected Earnings model does not accurately measure the returns that investors require to invest in public utilities because the current market values of utility stocks substantially exceed utilities' book value. As a result, a utility's expected earnings on its book value will inevitably exceed the return that investors require in order to purchase the utility's higher-value stock.<sup>158</sup>

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<sup>154</sup> *Id.* P 172.

<sup>155</sup> *Id.* P 201.

<sup>156</sup> *Id.* PP 202, 211.

<sup>157</sup> Opinion No. 569-A, 171 FERC ¶ 61,154 at PP 125-131.

<sup>158</sup> *Id.* P 127.

**b. NOI Comments**

75. Commenters that support expanding the Commission's pipeline ROE methodology to consider models in addition to the DCF<sup>159</sup> do not oppose using the Expected Earnings model. INGAA supports use of the Expected Earnings model to determine natural gas pipeline ROEs,<sup>160</sup> and AOPL states that the Expected Earnings model can be applied to oil pipelines if the Commission adopts an appropriate approach to outliers.<sup>161</sup> Among the commenters that oppose applying the Expected Earnings model to natural gas and oil pipelines, NGSA criticizes the Expected Earnings model for ignoring capital markets<sup>162</sup> while CAPP asserts that the Expected Earnings model appears to be confined to academic uses and, in any event, there is likely an insufficient number of pipelines to implement the Expected Earnings model.<sup>163</sup>

**c. Commission Determination**

76. We will not use the Expected Earnings model to determine ROE for natural gas and oil pipelines for the reasons stated in Opinion No. 569. We conclude that the

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<sup>159</sup> As noted above, several commenters, including Airlines for America, Liquids Shippers Group, NGSA, APGA, and PGC/AF&PA assert that the Commission should continue relying solely on the DCF model in analyzing pipeline ROEs.

<sup>160</sup> INGAA Initial Comments at 8, 41, 63; INGAA Reply Comments at 1-2.

<sup>161</sup> AOPL Initial Comments at 281; *see also* Plains Initial Comments at 4; Magellan Initial Comments at 12-13, 28-29 (stating that Expected Earnings should be used only in conjunction with other models such as the DCF, CAPM, and Risk Premium).

<sup>162</sup> NGSA Initial Comments at 34.

<sup>163</sup> CAPP Initial Comments at 13, 27.

findings underlying the Commission's decision to exclude the Expected Earnings model from our analysis of public utility ROEs also support excluding that model from our analysis of natural gas and oil pipeline ROEs.

77. As discussed above, the Commission must ensure that the “return to the equity owner” is “commensurate with returns on investments in other enterprises having corresponding risks.”<sup>164</sup> As with public utilities, under the market-based approach the Commission performs this analysis by setting a pipeline's ROE to equal the estimated return that investors would require in order to purchase stock in the pipeline at its current market price. However, the return on book value measured under the Expected Earnings model does not permit such an analysis. Like investors in utilities, investors in natural gas and oil pipelines cannot invest at the pipeline's book value and must instead pay the prevailing market price. As such, the expected return on the pipeline's book value does not reflect the value of an investment that is available to an investor in the market and thus does not reflect the “returns on investments in other enterprises having corresponding risks” that we must analyze under *Hope*.<sup>165</sup> Likewise, the return on a pipeline's book value does not reflect “the return to the equity owner” that we must consider under *Hope* because the return that an investor requires to invest in the pipeline's equity and the return an investor receives on the equity investment are

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<sup>164</sup> *Hope*, 320 U.S. at 603.

<sup>165</sup> See Opinion No. 569, 169 FERC ¶ 61,129 at P 201.

determined based on the current market price the investor must pay in order to invest in the pipeline's equity.<sup>166</sup>

78. Accordingly, based on the record in this proceeding, we conclude that at this time relying on the Expected Earnings model to determine pipeline ROEs would not satisfy the requirements of *Hope*. We will therefore exclude the Expected Earnings model from our revised methodology for determining natural gas and oil pipeline ROEs. While we do not adopt the Expected Earnings model in our revised methodology here for the reasons discussed above, we do not necessarily foreclose its use in future proceedings if parties can demonstrate that the concerns discussed above have been addressed.

### C. Outlier Tests

#### 1. Background

79. Generally, the Commission has not applied a specific low-end or high-end outlier test in natural gas and oil pipeline proceedings. Rather, the Commission has used a fact-specific analysis to select proxy group members. In constructing pipeline proxy groups, the Commission excludes anomalous and illogical proxy group returns that do not provide meaningful indicia of the return a pipeline requires to attract capital.<sup>167</sup>

80. Conversely, the Commission has applied specific outlier screens to public utilities. Prior to Opinion No. 569, the Commission excluded as low-end outliers companies

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<sup>166</sup> See *id.* P 202.

<sup>167</sup> See Opinion No. 546, 154 FERC ¶ 61,070 at P 196; 2008 Policy Statement, 123 FERC ¶ 61,048 at P 79 (“[T]he Commission will continue to exclude an MLP from the proxy groups if its growth projection is illogical or anomalous.”).

whose ROEs failed to exceed the average 10-year bond-yield by approximately 100 basis points on the ground that investors generally cannot be expected to purchase a common stock if debt, which has less risk than a common stock, yields essentially the same expected return.<sup>168</sup> In the Briefing Orders, the Commission proposed to treat as high-end outliers any proxy company whose cost of equity estimated under the model in question is more than 150% of the median result of all of the potential proxy group members in that model before any high-end or low-end outlier test is applied.<sup>169</sup>

81. In Opinion No. 569, the Commission adopted a revised low-end outlier test that eliminates proxy group ROE results that are less than the yields of generic corporate Baa bond plus 20% of the CAPM risk premium.<sup>170</sup> The Commission explained that it was necessary to include a risk premium in the low-end outlier test to account for the fact that declining bond yields have caused the ROE that investors would consider to yield “essentially the same expected return as a bond” to increase.<sup>171</sup> The Commission concluded that the 20% risk premium was reasonable because it is sufficiently large to account for the additional risks of equities over bonds, but not so large as to

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<sup>168</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 379 (citing *Pioneer Transmission, LLC*, 126 FERC ¶ 61,281, at P 94 (2009), *reh’g denied*, 130 FERC ¶ 61,044 (2010); *S. Cal. Edison Co.*, 131 FERC ¶ 61,020, at PP 54-56 (2010)).

<sup>169</sup> MISO Briefing Order, 165 FERC ¶ 61,118 at P 54; *Coakley* Briefing Order, 165 FERC ¶ 61,030 at P 53.

<sup>170</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 387.

<sup>171</sup> *Id.*

inappropriately exclude proxy group members whose ROE is distinguishable from debt.<sup>172</sup>

82. In addition, Opinion No. 569 adopted the high-end outlier test proposed in the Briefing Orders.<sup>173</sup> The Commission reasoned that because the Commission will continue to use the midpoint as the measure of central tendency for region-wide public utility ROEs, a high-end outlier test was necessary to eliminate proxy group members whose ROEs are unreasonably high.<sup>174</sup>

83. The Commission explained that both the low-end and high-end outlier tests would be subject to a natural-break analysis, which determines whether proxy group companies screened as outliers, or those almost screened as outliers, truly reflect non-representative data and should thus be removed from the proxy group.<sup>175</sup> The Commission noted that the natural break analysis provides the Commission with flexibility to reach a reasonable result based on the particular array of ROEs presented in a particular case.<sup>176</sup>

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<sup>172</sup> *Id.* P 388.

<sup>173</sup> *Id.* P 375.

<sup>174</sup> *Id.*

<sup>175</sup> *Id.* P 396. Typically, this involves examining the distance between that proxy group company and the next closest proxy group company and comparing that to the dispersion of other proxy group companies. As explained in Opinion No. 569, the natural break analysis may justify excluding companies whose ROEs are a few basis points above the low-end outlier screen if their ROEs are far lower than other companies in the proxy group, and a similar analysis could apply with regard to high-end outliers. *Id.*

<sup>176</sup> *Id.* P 397.

84. In Opinion No. 569-A, the Commission denied requests for rehearing as to the low-end outlier test. The Commission rejected challenges to the threshold based on 20% of the CAPM risk premium and similarly rejected claims that the low-end outlier test is inconsistent with Commission precedent.<sup>177</sup>

85. Moreover, the Commission modified the high-end outlier test adopted in Opinion No. 569 to increase the exclusion threshold to 200% of the median result of all the potential proxy group members in the model in question before any high or low-end outlier test is applied. The Commission recognized that a high-end outlier test with a bright-line threshold could inappropriately exclude rational ROEs that are not anomalous for the subject utility and found that increasing the threshold to 200% will reduce the risk that such rational results are inappropriately excluded.<sup>178</sup>

## 2. NOI Comments

86. Most commenters agree that the outlier tests proposed in the Briefing Orders are not appropriate for natural gas or oil pipelines.<sup>179</sup> These commenters assert that outlier tests are unnecessary because the Commission sets natural gas and oil pipeline ROEs at the median of the proxy group results, which reduces the distortion that high-end cost of equity estimates may cause when the ROE is set at the midpoint of the proxy group

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<sup>177</sup> Opinion No. 569-A, 171 FERC ¶ 61,154 at P 161.

<sup>178</sup> *Id.* P 154.

<sup>179</sup> AOPL Initial Comments at 4, 15-17; INGAA Initial Comments at 10-11, 65-69; Plains Comments at 1-2, 5-6.

results.<sup>180</sup> CAPP, by contrast, states that the outlier tests proposed in the Briefing Orders would be useful in forming proxy groups.<sup>181</sup> Similarly, although it opposes use of a high-end outlier test, INGAA states that there is theoretical support for applying a low-end outlier test.<sup>182</sup> However, INGAA opposes the proposed low-end outlier test's 20% threshold and proposes two alternative approaches.<sup>183</sup>

### 3. Commission Determination

87. We decline to adopt specific outlier tests for use in determining natural gas and oil pipeline ROEs. Rather, we will continue to address outliers in pipeline proxy groups on a case-by-case basis in accordance with our policy to remove “anomalous” or “illogical” cost-of-equity estimates that do not provide meaningful indicia of the returns that a pipeline needs to attract capital from the market.<sup>184</sup>

88. We believe that rigid outlier screens are unnecessary for natural gas and oil pipelines for two reasons. First, as commenters observe, the Commission's use of the proxy group median in setting pipeline ROEs reduces the effect that low and high-end

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<sup>180</sup> AOPL Initial Comments at 16; INGAA Initial Comments at 67; Plains Comments at 5-6; NGSA Comments at 20. Magellan states that it may be unreasonable to apply an outlier test to oil pipelines because removing outlying results could reduce the number of proxy group companies to an unacceptable level. Magellan Initial Comments at 17-18

<sup>181</sup> CAPP Initial Comments at 21-22.

<sup>182</sup> INGAA Initial Comments at 69.

<sup>183</sup> *Id.*

<sup>184</sup> *E.g.*, Opinion No. 546, 154 FERC ¶ 61,070 at P 196.



outliers may exert on the ROE result. When the Commission sets an ROE at the midpoint, as it does for RTO-wide ROEs in the public utility context, the ROE is set at the average of the highest and lowest ROEs of the proxy group members.<sup>185</sup> The low and high-end returns are therefore direct inputs into the calculation of the midpoint the Commission uses to determine the ROE. In contrast, when the Commission uses the median to determine the ROE of a pipeline, the presence of an outlier has a much smaller effect.<sup>186</sup>

89. Second, as discussed above, the pool of entities eligible for inclusion in natural gas and oil pipeline proxy groups has declined in recent years and remains small. Adopting rigid outlier screens could further reduce the number of potential proxy group members and make it difficult to form pipeline proxy groups with at least four or five members.

90. We also clarify that we do not anticipate applying a natural break analysis in pipeline ROE proceedings. Unlike in the public utility context, we are concerned that a natural break analysis could exacerbate the difficulties in forming pipeline proxy groups by further reducing the number of potential proxy group members. Moreover, we believe that the natural break analysis is less useful in pipeline proceedings. As explained in Opinion No. 569, the purpose of the natural break analysis is to provide the Commission

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<sup>185</sup> *E.g., Midwest Indep. Transmission Sys. Operator, Inc.*, 106 FERC ¶ 61,302, at PP 8-10 (2004).

<sup>186</sup> Although the decision whether to include or remove an outlier may affect which member of the proxy group is the median result, the outlier is not a direct part of the ROE calculation as it is when the Commission uses the midpoint.

with flexibility to determine whether a proxy group company ROE is truly an outlier or contains useful information.<sup>187</sup> Because there are so few members of pipeline proxy groups, the natural break analysis is less likely to identify outliers as this typically involves examining the distance between a given proxy group result and the next closest result, and comparing that to the dispersion of other proxy group results.<sup>188</sup>

91. We will continue to apply the general principle that “anomalous” or “illogical” data should be excluded from the proxy group. Using this approach, the Commission will retain flexibility to determine whether a given proxy group company is truly an outlier or whether it contains useful information in light of the particular array of ROEs presented by the potential proxy group companies.<sup>189</sup>

**D. Oil Pipeline Page 700s**

92. In light of the impending five-year review of the oil pipeline index, we encourage oil pipelines to file updated FERC Form No. 6, page 700 data for 2019 reflecting the revised ROE methodology established herein. Although the Commission will address this issue further in the five-year review, reflecting the revised methodology in page 700 data for 2019 may help the Commission better estimate industry-wide cost changes for purposes of the five-year review. Pipelines that previously filed Form No. 6 for 2019 and choose to submit updated page 700 data should, in a footnote on the updated page 700,

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<sup>187</sup> Opinion No. 569, 169 FERC ¶ 61,129 at P 395.

<sup>188</sup> *Id.* P 390.

<sup>189</sup> *Id.* P 395.

either (a) confirm that their previously filed Form No. 6 was based solely upon the DCF model or (b) provide the real ROE and resulting cost of service based solely upon the DCF model as it was applied to oil pipelines prior to this Policy Statement.

93. As discussed below, the Paperwork Reduction Act (PRA)<sup>190</sup> requires each federal agency to seek and obtain the Office of Management and Budget's (OMB) approval before undertaking a collection of information directed to ten or more persons.

Following OMB approval of this voluntary information collection, the Commission will issue a notice affording pipelines two weeks to file updated page 700 data reflecting the revised ROE methodology.<sup>191</sup> Before that time, pipelines that have not filed Form No. 6 for 2019 (e.g., pipelines that have received an extension of the Form No. 6 filing deadline) should file page 700 data consistent with their previously-granted extensions and such filings should be based upon the DCF model, which was the Commission's oil pipeline ROE methodology as of April 20, 2020, the date such filings were due.<sup>192</sup>

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<sup>190</sup> 44 USC 3501-21.

<sup>191</sup> Following OMB approval of this information collection, the Commission will issue a notice specifying the date on which any updated page 700 should be filed.

<sup>192</sup> Upon OMB approval, these pipelines will have the opportunity to file updated page 700 data reflecting the Commission's revised oil pipeline ROE methodology.

### III. Information Collection Statement

94. The PRA requires each federal agency to seek and obtain OMB approval before undertaking a collection of information directed to ten or more persons.<sup>193</sup> Upon approval of a collection of information, OMB will assign an OMB Control Number and expiration date. The re-filing of page 700 of FERC Form No. 6 is being requested on a voluntary basis.

95. The Commission is submitting this voluntary information collection (the one-time re-filing of page 700 of FERC Form No. 6) to OMB for its review and approval under section 3507(d) of the PRA. The Commission solicits comments on the Commission's need for this information, whether the information will have practical utility, the accuracy of the burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected or retained, and any suggested methods for minimizing respondents' burden, including the use of automated information techniques.

96. Burden Estimate:<sup>194</sup> The estimated additional one-time burden and cost<sup>195</sup> for making a voluntary filing to update page 700 of the FERC Form No. 6 consistent with

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<sup>193</sup> OMB's regulations requiring approval of certain collections of information are at 5 CFR 1320.

<sup>194</sup> "Burden" is the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. For further explanation of what is included in the information collection burden, refer to 5 CFR 1320.3.

<sup>195</sup> Commission staff estimates that the industry's skill set and cost (for wages and benefits) for completing and filing FERC Form No. 6 is comparable to the Commission's

this Policy Statement is detailed in the following table. The first row includes the industry cost of performing cost-of-equity studies to develop an updated ROE estimate for the period ending December 31, 2019. The second row shows the cost of reflecting the updated ROE estimates and revised Annual Cost of Service on page 700 of the FERC Form No. 6.

<b>Estimated Annual Changes to Burden due to Docket No. PL19-4<sup>196</sup></b> <b>(Figures may be rounded)</b>						
	<b>Number of Potential Respondents (1)</b>	<b>Annual Number of Responses Per Respondent (2)</b>	<b>Total Number of Responses (1)*(2)= (3)</b>	<b>Average Burden Hours &amp; Cost (\$) Per Response (4)</b>	<b>Total Annual Burden Hours &amp; Total Annual Cost (\$) (3)*(4)= (5)</b>	<b>Cost per Respondent (\$) (5)÷(1)= (6)</b>
<b>Updated ROE Study</b>	244	1	244	187.5 hrs.; \$15,000	45,750 hrs.; \$3,660,000	\$15,000
<b>Refile FERC Form No. 6, page 700</b>	244	1	244	0.5 hrs.; \$40	122 hrs.; \$9,760	\$40
<b>Total Changes, Due to PL19-4</b>	244	1	244		\$3,669,760	\$15,040

skill set and average cost. The FERC 2019 average salary plus benefits for one FERC full-time equivalent (FTE) is \$167,091/year or \$80.00/hour.

<sup>196</sup> We have conservatively assumed a 100% voluntary response rate.

97. This additional one-time burden is expected to be imposed in Year 1.

98. Title: FERC Form No. 6, Annual Report of Oil Pipeline Companies

Action: Revision to FERC Form No. 6, page 700.

OMB Control No.: 1902-0022.

Respondents: Oil pipelines.

Frequency of Responses: One time.

Necessity of the Information: As established in Order No. 561,<sup>197</sup> oil pipelines may increase their existing transportation rates on an annual basis using an industry-wide index. The Commission reviews the index level every five years.<sup>198</sup> In the five-year review, the Commission establishes the index level based upon a methodology that calculates pipeline cost changes on a per barrel-mile basis based upon FERC Form No. 6, page 700 data.<sup>199</sup> Depending upon the record developed in the 2020 five-year review of the oil pipeline index, the Commission will consider using the updated FERC Form No. 6, page 700 data for 2019 in that proceeding.

99. Interested persons may obtain information on the reporting requirements by contacting the following: Federal Energy Regulatory Commission, 888 First Street NE,

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<sup>197</sup> *Revisions to Oil Pipeline Regulations Pursuant to the Energy Policy Act of 1992*, Order No. 561, FERC Stats. & Regs. ¶ 30,985 (1993), *order on reh'g*, Order No. 561-A, FERC Stats. & Regs. ¶ 31,000 (1994), *aff'd*, *Ass'n of Oil Pipelines v. FERC*, 83 F.3d 1424 (D.C. Cir. 1996).

<sup>198</sup> *Id.* at 30,941.

<sup>199</sup> *Five-Year Review of the Oil Pipeline Index*, 153 FERC ¶ 61,312, at PP 5, 12 (2015).

Washington, DC 20426 [Attention: Ellen Brown, Office of the Executive Director, e-mail: [DataClearance@ferc.gov](mailto:DataClearance@ferc.gov) and phone: (202) 502-8663].

100. Please send comments concerning the collection of information and the associated burden estimates to: Office of Information and Regulatory Affairs, Office of Management and Budget [Attention: Federal Energy Regulatory Commission Desk Officer]. Due to security concerns, comments should be sent directly to [www.reginfo.gov/public/do/PRAMain](http://www.reginfo.gov/public/do/PRAMain). Comments submitted to OMB should be sent within 30 days of publication of this notice in the Federal Register and refer to FERC Form No. 6 and OMB Control No. 1902-0022.

#### **IV. Document Availability**

101. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through the Commission's Home Page (<http://www.ferc.gov>). At this time, the Commission has suspended access to the Commission's Public Reference Room, due to the proclamation declaring a National Emergency concerning the Novel Coronavirus Disease (COVID-19), issued by the President on March 13, 2020.

102. From the Commission's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

103. User assistance is available for eLibrary and the Commission's website during normal business hours from the Commission's Online Support at (202) 502-6652 (toll free at 1-866-208-3676) or email at [ferconlinesupport@ferc.gov](mailto:ferconlinesupport@ferc.gov), or the Public Reference Room at (202) 502-8371, TTY (202) 502-8659. E-mail the Public Reference Room at [public.referenceroom@ferc.gov](mailto:public.referenceroom@ferc.gov).

**V. Effective Date**

104. This Policy Statement will become effective [date of publication in the *Federal Register*].

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.