STATE OF NEW HAMPSHIRE BEFORE THE PUBLIC UTILITIES COMMISSION

Docket No. DG 20-105

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Distribution Service Rate Case

REBUTTAL TESTIMONY

OF

JOHN COCHRANE

April 29, 2021



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TABLE OF CONTENTS

I.	INTRODUCTION AND BACKGROUND	1
II.	PURPOSE AND OVERVIEW OF TESTIMONY	1
III.	ISSUES COMMON TO STAFF AND OCA ROE TESTIMONY	
IV.	RESPONSE TO STAFF ROE TESTIMONY	17
V.	RESPONSE TO OCA ROE TESTIMONY	
VI.	CONCLUSIONS AND RECOMMENDATIONS	

ATTACHMENTS

Attachment	Title
JC-1	Response to OCA Data Request 3-1

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 1 of 36

1 I. INTRODUCTION AND BACKGROUND

2 Q. Please state your full name, position, and business address.

- 3 A. My name is John Cochrane. I am a Senior Managing Director and head of the Power &
- 4 Utilities practice at FTI Consulting, Inc. ("FTI"). My business address is 200 State St,
- 5 9th Floor, Boston, Massachusetts.

6 Q. On whose behalf are you submitting testimony?

- 7 A. I am submitting testimony on behalf of Liberty Utilities (EnergyNorth Natural Gas) Corp.
- 8 d/b/a Liberty ("EnergyNorth" or "the Company").

9 Q. Have you previously submitted testimony in this proceeding?

- 10 A. Yes. I submitted testimony as part of the Company's July 31, 2020, filing for an increase
- 11 in distribution rates. My educational background, professional background, and
- 12 qualifications are contained in that prior testimony.

13 II. <u>PURPOSE AND OVERVIEW OF TESTIMONY</u>

14 **Q.** What is the purpose of your testimony?

15 A. The purpose of my testimony is to respond to the direct testimony of Dr. Pradip

16 Chattopadhyay, who appears on behalf of the New Hampshire Office of Consumer

- 17 Advocate ("OCA"), and the direct testimony of Dr. J. Randall Woolridge, who appears
- 18 on behalf of the New Hampshire Public Utilities Commission Staff ("Staff"), regarding
- 19 EnergyNorth's proposed Return on Equity ("ROE") and capital structure.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 2 of 36

1	Q.	Please summarize your conclusions regarding the authorized ROE for the
2		Company.
3	A.	For reasons I discuss in detail later in my testimony, I conclude that the arguments
4		proposed by Dr. Woolridge and Dr. Chattopadhyay are seriously flawed and that
5		acceptance of their recommendations would result in the establishment of an authorized
6		ROE for EnergyNorth that is significantly below industry standards relevant to gas
7		utilities in New Hampshire or anywhere else in the United States. I also conclude that
8		my original recommended ROE range of 9.94% to 11.20% and point estimate of 10.51%
9		for EnergyNorth are each reasonable. Finally, I continue to find that the capital structure
10		as described in the joint testimony of Messrs. Simek and Sosnick, which consists of
11		50.15% common equity and 49.85% debt, is reasonable and consistent with other utility
12		companies.
13	Q.	How is the remainder of your testimony organized?
14	A.	The remainder of my testimony is organized as follows:
15		• Section III responds to five issues common to testimony of Staff and the OCA
16		regarding the recommended return on common equity;
17		• Section IV addresses certain items specific to Staff testimony on ROE and capital
18		structure;
19		• Section V discusses concerns with the inputs, proxy group, and CAPM
20		methodologies in the OCA's testimony;
21		• Section VI summarizes my conclusions and recommendations.

1 III. ISSUES COMMON TO STAFF AND OCA ROE TESTIMONY

2 Q. Please identify the issues common to the testimony of Dr. Chattopadhyay and the

- 3 testimony of Dr. Woolridge.
- 4 A. There are five main areas common to both testimonies that I will address in my rebuttal
- 5 testimony: low return on equity estimates; the impacts from the COVID pandemic;
- 6 market-to-book analyses; the assessment of flotation costs; and the small size premium.
- 7 <u>Low ROEs</u>

Q. Why is it important to establish authorized ROEs that are consistent with industry standards?

The purpose of allowing a regulated utility to earn a fair return is so that it can attract the 10 A. capital required for the safe and efficient operation of its utility system. EnergyNorth, 11 12 like every other utility, must compete for investors' capital, and investors weigh the risks of the investments they make against the returns they can earn. This is the reason why 13 ROEs are analyzed based on a proxy group of similarly situated companies with 14 15 comparable risk profiles. If the Commission was to establish an authorized ROE at a level inconsistent with industry standards, particularly at a level below the ROEs 16 17 authorized for other utility companies in the country and one of the lowest ROEs authorized in the last 40 years, the Company would be placed at a severe disadvantage in 18 19 its ability to attract capital.

1	Q.	What are the ROE recommendations and ranges proposed by Drs. Chattopadhyay
2		and Woolridge?
3	A.	Dr. Chattopadhyay recommends an ROE of 8.90% within a range of 8.80% and 9.00%. ¹
4		Dr. Woolridge recommends an ROE of 9.00% within a range of 7.60% and 9.00%. ²
5	Q.	Are these proposed ROEs in line with recent industry standards?
6	А.	No, they are not.
7	Q.	To what extent are their proposed ROEs out of line with recent industry standards?
8	A.	Their recommendations are very much an outlier. Drs. Woolridge and Chattopadhyay
9		propose to set EnergyNorth's ROE at a level that would make it among the five lowest
10		approved ROEs in the industry in the last five years. Since 2017, there have been 136
11		state commission approved ROEs for natural gas distribution utilities, 128 of which or
12		over 94% have been above 9.00% and only four of which have been below 9.00%. In
13		addition, the lower end of Dr. Woolridge's range, 7.6%, is more than 100 basis points
14		lower than any approved ROE in the last 30 years. Over this period, ROEs ranged from
15		8.7% to 11.88% with an average of 9.62%. Figure 1 below shows the authorized returns
16		of natural gas distribution utilities since 2017.

¹ New Hampshire Public Utilities Commission, Docket No. DG 20-105, Direct Testimony of Dr. Pradip Chattopadhyay, March 18, 2021 ("Chattopadhyay Testimony") at page 7.

² New Hampshire Public Utilities Commission, Docket No. DG 20-105, Direct Testimony of Dr. J. Randall Woolridge, March 18, 2021 ("Woolridge Testimony") at page 4.

Docket No. DG 20-105 Exhibit 47 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 5 of 36

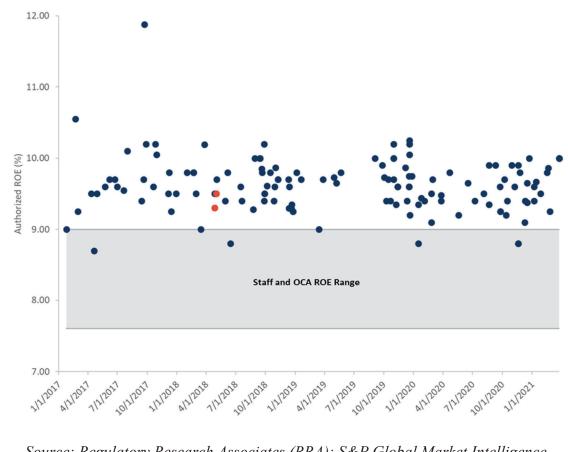


Figure 1. Authorized ROEs for Gas Utilities, January 2017 – Present

2

3

1

Source: Regulatory Research Associates (RRA); S&P Global Market Intelligence

4 Q. Does your data include decisions made by this Commission?

5 A. Yes it does. It includes the decisions made by this Commission in Docket Nos. DG 17-

- 6 070 (Northern Utilities) and DG 17-048 (EnergyNorth) and these are displayed visually
- 7 by the orange data points above.³

³ The ROE approved in DG 17-070 (Northern Utilities, Inc.) was 9.50% and ROE approved in DG 17-048 (EnergyNorth) was 9.30%.

Docket No. DG 20-105 Exhibit 47 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 6 of 36

1	Q.	Have authorized ROEs declined since the Company's last rate case?
2	A.	No, they have not. Since the approval of EnergyNorth's current authorized ROE, the
3		trendline for authorized ROEs for natural gas utilities is slightly positive, but effectively
4		zero (0.002). Additionally, more than 95% (124 out of 130) of the authorized ROEs
5		since May 2017 have been above the ROEs that Drs. Chattopadhyay and Woolridge have
6		recommended.
7	Q.	Is there any reason why certain commissions have approved ROEs under 9.00% in
8		recent years?
9	А.	Yes. The only Commission that has approved an ROE under 9.00% in the last 10 years is
10		the New York State Department of Public Service. However, the gas utilities subject to
11		these lower ROEs operate under an Earnings Sharing Mechanism ("ESM") where the
12		mechanism allows the utility to earn above the authorized ROE and share the profits with
13		their customers. These ESMs typically have a "deadband" under which the utility does
14		not have to share their earnings, and all of the utilities which have an authorized ROE
15		under 9.00% have a deadband that allows them to earn above 9.00%.
16	Q.	Could you provide some further historical context on authorized ROEs for natural
17		gas distribution utilities?
18	A.	Certainly. Of the 1,522 authorized ROEs for natural gas distribution utilities since 1979
19		reported by RRA, less than 1% (15) have been at or below the high end of the ranges that
20		Drs. Chattopadhyay and Woolridge have recommended.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 7 of 36

1	Q.	Has the Commission authorized an ROE at or below 9.00% for a natural gas
2		distribution utility?
3	А.	No, it has not. Since 2009, there have been five instances in which this Commission has
4		established an authorized ROE for a natural gas utility, the lowest authorized ROE was
5		9.30%, the Company's current ROE. ⁴ Therefore, in recommending a range of $7.60-$
6		9.00%, Drs. Chattopadhyay and Woolridge are recommending a lower ROE than the
7		Commission has established for a natural gas utility in recent history and one that would
8		put the decision in the lowest 1% of all natural gas utility ROEs established in the last 40
9		years.
10		Covid Impacts
11	Q.	Do Drs. Chattopadhyay and Woolridge explain what fundamental changes have
12		occurred in the utility industry or the New Hampshire economy?
13	А.	Both Dr. Chattopadhyay and Dr. Woolridge discuss the significant changes that have
14		impacted the economy due to the COVID-19 pandemic.
15	Q.	Have natural gas utility authorized ROEs been affected by the COVID-19
16		pandemic?
17	А.	It appears that commission authorized ROEs have not been significantly impacted by the
18		events associated with the COVID-19 pandemic. According to Dr. Woolridge's analysis,
19		"authorized ROEs for utilities also reached record low levels in 2020." ⁵ However, the

⁴ Regulatory Research Associates only covers rate cases in which the company has requested a rate change of at least \$5 million or has authorized a rate change of at least \$3 million.

⁵ Woolridge Testimony at page 13.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 8 of 36

1		average and median authorized ROEs since the onset of the COVID-19 pandemic (March
2		2020) were 9.55% and 9.60%, respectively. These are not significantly different than the
3		average and median authorized ROEs of natural gas utilities since 2017 of 9.62% and
4		9.60%, respectively.
5	Q.	Did Drs. Chattopadhyay and Woolridge identify uncertainty created as a result of
6		the pandemic?
7	А.	Yes. In his testimony, Dr. Chattopadhyay notes in various instances that the natural gas
8		industry (among others) is characterized as being unstable. Specifically, he notes: "From
9		the look at the US economy and the state of the natural gas utility industry (at least as
10		reflected in the OCA's proxy group), it is evident that gas utilities are not in a stable
11		environment lately."6 Dr. Woolridge, in his analysis, discussed how a "fear index"
12		reached 2.5 times its long-term level during the pandemic. ⁷
13	Q.	Do you concur that the recent events given the pandemic have increased uncertainty
14		as discussed by Drs. Chattopadhyay and Woolridge?
15	А.	Yes. I also discussed this in my direct testimony and I will restate here that the economic
16		impact of COVID-19 has resulted in increased uncertainty and risk to utility investors.
17		This increased risk resulted in a general increase in the betas for natural gas utilities and

⁶ Chattopadhyay Testimony at page 12.⁷ Woolridge Testimony at page 14.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 9 of 36

1		those in the proxy group. ⁸ In addition, I still conclude that the result of this is upward
2		pressure on expected returns.
3		Market-to-book
4	Q.	Please summarize Dr. Woolridge's and Dr. Chattopadhyay's claims regarding
5		market-to-book ratios for utilities.
6	А.	Dr. Woolridge and Dr. Chattopadhyay both claim that the fact that natural gas utility
7		market-to-book ratios having exceeded unity indicates that the expected ROE by
8		investors exceeds the true cost of equity. ⁹
9	Q.	Do you agree with the claim that market-to-book ratios in excess of unity reflect an
10		overstated ROE?
11	А.	No, I do not. Market-to-book value is equal to the price per share divided by the book

value per share. Several factors can cause the market-to-book ratio to deviate from unity 12

without resulting in an overstated cost of equity, such as "diversification into 13

- nonregulated fields...even though the profitability of the regulated portion is 14
- restricted."¹⁰ Additionally, "even if all the firm's activities are regulated, if assets are 15
- excluded from rate base, or if Construction Work in Progress (CWIP) does not appear in 16

⁸ New Hampshire Public Utilities Commission, Docket No. DG 20-105, Direct Testimony of John Cochrane, July 31, 2020 ("Cochrane Testimony") at pages 33-34.

⁹ Chattopadhyay Testimony at page 13 and Woolridge Testimony at page 26.

¹⁰ Dr. Roger Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006 ("Morin 2006") at page 362.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 10 of 36

1		rate base and no Allowance for Funds Used During Construction (AFUDC) is allowed on
2		CWIP, rate base will not equal net book value, and the M/B will not equal 1.0."11
3		Morin notes in New Regulatory Finance that:
4		"Historically, it has been highly unusual for utility stock prices to equal
5		book value. Stock prices above book value are common for utility stocks,
6		and indeed for all of the major market indexes. It is obvious that
7		regulators, through their rate case decisions, and investors do not subscribe
8		to the notion that utilities that have market prices above book value are
9		over-earning. Otherwise, regulators would not grant rate increases for any
10		utility whose stock price was above book value, and investors would never
11		bid up the price of stock above book value. It is very difficult to accept the
12		notion that, in a free-market economy with rampant competition, the vast
13		majority of all publicly traded stocks are earning well in excess of their
14		cost of capital." ¹²
15	Q.	Have market-to-book ratios for natural gas utilities exceeded unity in the past?
16	А.	Yes, and consistently so. Figure 2 below shows that the average market-to-book ratios
17		for my proxy group, Dr. Chattopadhyay's proxy group, and Dr. Woolridge's proxy group

18 have all traded above unity over the last decade.

¹¹ Ibid. Dr. Morin also notes that market-to-book ratios are functions of several other variables such as the expected return on book equity, expected dividend growth, dividend yield, standard deviation, proxies for earnings quality, regulatory climate, accounting convention, and risk measures such as the equity ratio, beta, CWIP treatment, regulatory climate ranking, and the relative importance of construction expenditure (see Morin 2006 at page 366).

¹² Morin 2006 at page 378.

Docket No. DG 20-105 Exhibit 47 Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 11 of 36

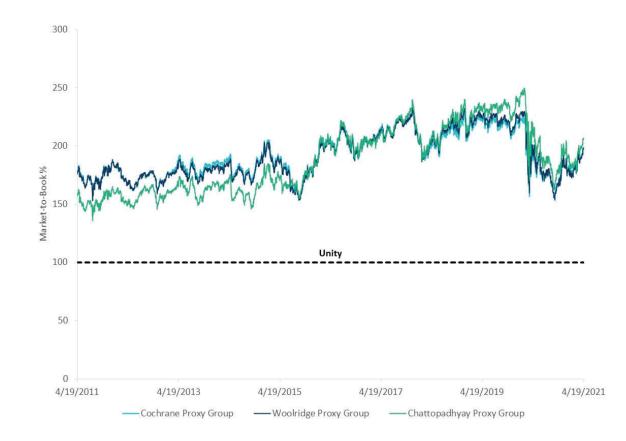


Figure 2. Proxy Group Market-to-Book %, 2011 – Present

2

1

If one were to accept Dr. Chattopadhyay's and Dr. Woolridge's claims that companies 3 with market-to-book ratios in excess of unity are overearning on their true cost of capital, 4 then one would also have to believe that the functioning, competitive market in which 5 these publicly-traded firms compete for capital has allowed these companies to earn well 6 in excess of their cost of capital for at least the last decade. I do not believe that, nor do 7 Dr. Chattopadhyay or Dr. Woolridge suggest how that could be possible. Moreover, 8 9 neither have provided any rationale or evidence as to why the current market-to-book ratios warrant a downward adjustment from EnergyNorth's ROE now, when the same 10 condition held at the time of the Company's last rate case, at which time the Commission 11

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 12 of 36

1		authorized an ROE more than 75-90 basis points over Staff's and OCA's
2		recommendations.
3	Q.	In his testimony, Dr. Woolridge discusses a study he conducted comparing the
4		estimated ROE and market-to-book ratios. Please explain this analysis.
5	A.	Dr. Woolridge performs a simple regression analysis where the dependent variable is the
6		market-to-book ratio and the independent variable is the estimated return on
7		shareholders' equity. His dataset for this analysis contains all natural gas distribution and
8		electric utility companies covered by Value Line.
9	Q.	Do you have concerns regarding the conclusions of that analysis?
10	A.	Yes. Dr. Woolridge claims that the R^2 of .5 demonstrates "a statistically-significant
11		positive relationship between ROEs and market-to-book ratios." ¹³ First, an R^2 of .5 is
12		widely considered a weak/moderate positive relationship at best and does not provide a
13		basis for his claim of a statistically-significant relationship. ¹⁴ Second, as he caveats with
14		a footnote, this statistic only measures how much variation in one variable (in this case,
15		market-to-book ratio) is explained by the other variable (in this case, ROE) and vice
16		versa. Therefore, the only conclusion that can be drawn from this analysis, as it was
17		designed, is that market-to-book ratios and ROEs tend to move together, directionally.
18		Specifically, only 50% of the variation in market-to-book ratios can be explained by

¹³ Woolridge Testimony at page 26.

¹⁴ Moore, D. S., Notz, W. I, & Flinger, M. A. (2018). The Basic Practice of Statistics (8th ed.). New York, NY: W. H. Freeman and Company. Page (236).

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 13 of 36

1	estimated ROE. Nothing can be said about causation between these variables nor in
2	which direction that causality may occur.
3	Flotation costs

4	Q.	Please summarize Dr. Woolridge's and Dr. Chattopadhyay's positions regarding the
5		flotation cost adjustment that you incorporated into your calculations in your direct
6		testimony?

7 A. Dr. Woolridge asserts that a flotation cost adjustment is unnecessary because: (1) there

8 have been no equity infusions into EnergyNorth in the past five years; and (2)

- 9 EnergyNorth has not paid any flotation costs in the past five years.¹⁵ Dr. Chattopadhyay
- 10 argues that flotation costs are small enough that his recommended ROE adequately

11 accounts for them.¹⁶

12 Q. Could you please address the concerns raised by Dr. Chattopadhyay?

A. As discussed earlier in my rebuttal testimony, market-to-book ratios greater than one are a normal market condition. There is not a distortion in ROEs and therefore the Company is not compensated for flotation costs through its ROE. For the reasons discussed above in my testimony, Dr, Chattopadhyay's recommended ROE does not reflect the true cost of capital. Without an appropriate adjustment for flotation costs, the Company would under-earn, all other things the same as stated in my direct testimony.¹⁷

¹⁵ Woolridge Testimony at page 88.

¹⁶ Chattopadhyay Testimony at page 40.

¹⁷ Cochrane Testimony at page 28.

1	Q.	Does Dr. Chattopadhyay assert that companies like EnergyNorth do not incur
2		flotation costs?
3	А.	He does not. In fact, in his discussion of his ROE calculations in his direct testimony, he
4		notes that flotation costs are legitimately incurred. ¹⁸
5	Q.	Please address the concerns raised by Dr. Woolridge.
6	А.	I disagree with the notion that a flotation cost adjustment is unnecessary simply because
7		EnergyNorth has not received any equity infusion nor paid any flotation costs in the last
8		five years. A flotation cost adjustment is required "even if no further stock issues are
9		contemplated, the flotation adjustment is still permanently required to keep shareholders
10		whole andflotation costs are only recovered if the rate of return is applied to total
11		equity, including retained earnings, in all future years, even if no future financing is
12		completed." ¹⁹ Furthermore, EnergyNorth receives equity capital from its parent and thus
13		provides capital returns that roll up to the parent company level. Parent companies attract
14		capital based on the returns of their subsidiaries and denying the recovery of flotation
15		costs incurred in the course of providing equity to subsidiaries will only penalize existing
16		utility investors. Therefore, I do not agree that there should be no adjustment to account
17		for flotation costs.

¹⁸ *Ibid*.

¹⁹ Morin 2006 at page 329.

Small Size Premium 1

2	Q.	Could you please summarize Dr. Woolridge's and Dr. Chattopadhyay's position
3		regarding the small-size premium?
4	A.	Both Drs. Woolridge and Chattopadhyay assert that there is evidence that no such size
5		premium exists for regulated utilities ²⁰ and Dr. Chattopadhyay argues that the small-firm
6		effect is dependent upon the time period chosen. ²¹ Both state that the Commission
7		should not allow an adjustment for a small-size premium.
8	Q.	Do you agree that the small-size premium does not apply to regulated utility
9		companies?
10	A.	I do not. As described in my testimony, there is a large body of literature to support the
11		consideration of a premium to account for EnergyNorth's size. ²² Analysis of the
12		Company's market capitalization and trading volume compared to the utilities in the
13		proxy group clearly indicates that EnergyNorth meets the criteria for a small-size
14		premium adjustment.

 ²⁰ Woolridge Testimony at page 95 and Chattopadhyay Testimony at page 40.
 ²¹ Chattopadhyay Testimony at page 40.

²² Cochrane Testimony at page 36.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 16 of 36

1	Q.	What is your response to the evidence provided by Dr. Woolridge and Dr.
2		Chattopadhyay in support of their shared assertion that a small size premium does
3		not apply to regulated utility companies?
4	А.	They both cite an article written by Professor Annie Wong, in which she concludes that
5		utility stocks do not exhibit a significant size premium. ²³ However, an article published
6		by Thomas M. Zepp specifically rebuts Professor Wong's article and provides evidence
7		that supports a small-size effect in the utility sector. ²⁴ Furthermore, another study
8		undertaken by Michael Annin at Ibbotson Associates provides additional support for the
9		use of a small-size premium for regulated utility companies. ²⁵
10	Q.	Can you provide additional support for the consideration of a small-size premium
11		for EnergyNorth?
12	A.	Yes. Another risk factor related to firm size is that of liquidity risk. Dr. Morin writes:
13 14 15 16 17 18 19		"Investment risk increases as company size diminishes, all else remaining constant. The size phenomenon is well-documented in the finance literature. The size effect is likely the result of lack of marketability, whereby investors in small stocks demand greater returns as compensation for the lack of marketability and liquidity. Investors prefer high to low liquidity and demand higher returns from less liquid investments, holding other factors constant."
20		As shown in Attachment JC-11 to my direct testimony, EnergyNorth is significantly

 ²³ Woolridge Testimony at page 91 and Chattopadhyay Testimony at page 40.
 ²⁴ Thomas Zepp, "Utility stocks and the size effect - revisited," *The Quarterly Review of Economics and Finance*, August 29, 2002, pages 578–582.

²⁵ Michael Annin, "Equity and Small Stock Effect," Public Utilities Fortnightly, October 15, 1995, pages 42–43.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 17 of 36

1	data obtained from Value Line, Table 1 below shows the average market capitalization of
2	the companies contained in my proxy group (the same as Dr. Woolridge's proxy group)
3	and in Dr. Chattopadhyay's proxy group, compared to EnergyNorth's market
4	capitalization. EnergyNorth is approximately 6% of the size of the average of both proxy
5	groups based on market capitalization. Therefore, as I discussed in my direct testimony,
6	it is appropriate to consider the effects of EnergyNorth's size when determining where
7	the authorized return should fall within in the calculated range of reasonable ROEs.

8

Table 1. Market Capitalization

	Market Capitalization (\$ Millions)	%
ENNG	\$307	
Cochrane Proxy Group	\$5,378	5.7%
Woolridge Proxy Group	\$4,966	6.2%
Chattopadhyay Proxy Group	\$4,911	6.3%

9

10 IV. <u>RESPONSE TO STAFF ROE TESTIMONY</u>

11 Q. Please summarize Dr. Woolridge's testimony and ROE recommendation.

12 A. Dr. Woolridge recommends an ROE of 9.00% within a range of 7.60% to 9.00%, based

13 primarily on the results of his Constant Growth DCF model.²⁶ In addition, Dr. Woolridge

recommends a capital structure that consists of 49.21% common equity and 50.79% debt.

15 Q. What are the main areas of disagreement between you and Dr. Woolridge?

- 16 A. In addition to the aforementioned areas of disagreement common to both witnesses, I
- 17 disagree with Dr. Woolridge in the following areas: (1) the appropriate growth rate for

²⁶ Woolridge Testimony at page 4.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 18 of 36

1		the Constant Growth DCF model; (2) the long-term growth rate used in the Multi-stage
2		DCF model; (3) the Market Risk Premium ("MRP") used in the CAPM model; and (4)
3		the appropriate capital structure for the Company.
4		DOE
4		ROE
5	Q.	In support of his recommended return on equity of 9.00%, Dr. Woolridge cites and
6		discusses a publication by Moody's. Do you believe that this article is misplaced in
7		the current financial environment?
8	А.	Yes. Dr. Woolridge asserts that Moody's recognizes that authorized ROEs for (electric
9		and) gas companies are declining due to lower interest rates. I believe that this is
10		misplaced as this article is six years old (March 2015) and Dr. Woolridge provides this as
11		support for his current recommendation for EnergyNorth's ROE. This is not reflective of
12		recent events and does not refer to or reflect the current expected near-term conditions of
13		the regulated gas utilities sector.
14		Constant Growth DCF Model
14		Constant Growth Der Woder
15	Q.	Please summarize Dr. Woolridge's ROE calculation using the Constant Growth
16		DCF model.
17	А.	Dr. Woolridge calculates a single point estimate of 9.00% using the Constant Growth
18		DCF approach. He arrives at this estimate by calculating the average dividend yield of
19		his proxy group of 3.25%, applying a growth adjustment to the dividend yield of 1.02625,
20		and adding his DCF growth rate of 5.25%. ²⁷

²⁷ Woolridge Testimony at page 42 and Attachment JRW-7 at page 1.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 19 of 36

1	Q.	Please summarize the growth rates considered in Dr. Woolridge's Constant Growth
2		DCF analysis.
3	А.	Dr. Woolridge considers a number of different growth rates, including historical and
4		projected dividends per share ("DPS"), book value per share ("BVPS"), and earnings per
5		share ("EPS") growth rates reported by Value Line, projected EPS growth rates reported
6		by Yahoo! Finance, Zacks, and Reuters, and a measure of sustainable growth calculated
7		from Value Line data. ²⁸ Table 2 below summarizes Dr. Woolridge's growth rate
8		measures.

9

Table 2. Woolridge DCF Growth Rate Indicators

Growth Rate Indicator	Woolridge Proxy Group
Historic Value Line Growth in EPS, DPS, and BVPS	5.4%
Projected Value Line Growth in EPS, DPS, and BVPS	6.2%
Sustainable Growth ROE * Retention Rate	3.9%
Projected EPS Growth from Yahoo, Zacks, and Reuters – Median	5.3%

10

11 It is unclear how Dr. Woolridge arrives at his final estimate of 5.25%. He claims that he 12 gives "primary weight to the projected EPS growth rate of Wall Street analysts" to arrive 13 at his estimate but provides no other support for his chosen growth rate.²⁹

²⁸ Woolridge Testimony at pages 40-42 and Attachment JRW-7 at pages 1-6.

²⁹ Woolridge Testimony at page 42.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 20 of 36

1	Q.	Do you agree with the use of historic growth rates in the Constant Growth DCF
2		model?

No, I do not. The Constant Growth DCF is intended to be forward-looking, and historic 3 A. growth going back five and ten years is unlikely to be indicative of the long-term future 4 growth of any particular investment. Historic growth rates may reflect changes that will 5 not reasonably continue in the future and will not capture any known future changes. 6 7 Additionally, historic growth will have been accounted for in analyst growth projections. As such, I do not find it appropriate to use historic growth rates in the Constant Growth 8 DCF model. It is also worth noting that Dr. Woolridge himself may not agree with the 9 use of historic growth rates. In his criticism of the historical approach to estimating 10 market risk premia, Dr. Woolridge asserts that "market conditions can change such that 11 ex post historical returns are poor estimates of ex ante expectation,"³⁰ an argument that 12 can easily be extended to his use of historical EPS, DPS, and BVPS growth rates in the 13 Constant Growth DCF model. 14

15

Q. Do you agree with the use of Dr. Woolridge's sustainable growth rate?

A. I do not. Dr. Woolridge's sustainable growth rate is calculated using the following
formula:

18

g = b * r

Where g is the sustainable growth rate, b is earnings expected to be retained by the
company, and r is an estimate of ROE. The Constant Growth DCF model implies that the

³⁰ Woolridge Testimony at page 51.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 21 of 36

1		chosen b and r will continue in perpetuity. Importantly, Dr. Woolridge's sustainable
2		growth calculation assumes an expected ROE, r. Using data from Value Line, Dr.
3		Woolridge uses a median ROE estimate of 9.50% as his value, yet he recommends an
4		ROE of 9.00%. Essentially, his ROE recommendation is inconsistent with the expected
5		ROE used as an input in his model.
6	Q.	Does Dr. Woolridge explain this inconsistency?
7	А.	No, he does not.
8	Q.	Do you agree with the use of DPS and BVPS growth rates in the Constant Growth
9		DCF model?
10	А.	No, I do not. Projections of DPS and BVPS growth rates are only reported by Value
11		Line, which increases the risk of these projections being skewed either high or low as
12		there is no consensus among various analysts. As noted by Dr. Morin:
13		"Casual inspection of the Zacks Investment Research, First Call
14		Thompson, and Multex Web sites reveals that earnings per share forecasts
15		dominate the information provided. There are few, if any, dividend growth
16		forecasts. Only Value Line provides comprehensive long-term dividend
17		growth forecasts. The wide availability of earnings forecasts is not
18		surprising. There is an abundance of evidence attesting to the importance
19		of earnings in assessing investors' expectations. The sheer volume of
20		earnings forecasts available from the investment community relative to the
21		scarcity of dividend forecasts attests to their importance. The fact that
22 23		these investment information providers focus on growth in earnings rather than growth in dividends indicates that the investment community regards
23 24		earnings growth as a superior indicator of future long-term growth.
25		Surveys of analytical techniques actually used by analysts reveal the
26		dominance of earnings and conclude that earnings are considered far more
27		important than dividends." 31

³¹ Morin 2006 at pages 302–303.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 22 of 36

1		Additionally, earnings growth drives dividend growth. Dr. Morin further notes that:
2 3 4 5 6 7		"[S]ince the ability to pay dividends stems from a company's ability to generate earnings, growth in earnings per share can be expected to strongly influence the market's dividend growth expectations. After all, dividend growth can only be sustained if there is growth in earnings. It is the expectation of earnings growth that is the principal driver of stock prices." ³²
8	Q.	What do you conclude from this information?
9	А.	I conclude that projected earnings growth is the appropriate growth rate measure to use in
10		the Constant Growth DCF model.
11	Q.	Do you agree with Dr. Woolridge's assertion that analyst earnings growth rate
12		forecasts are "overly optimistic and upwardly biased"? ³³
13	A.	I do not. Dr. Woolridge provides several references to studies that evaluate the accuracy
14		of forecasted EPS growth rates to support his claim that analyst earnings growth forecasts
15		are upwardly biased. However, as explained by Dr. Morin, this concern is largely
16		irrelevant:
17 18 19		"Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a
20		strong influence on the expectations of many investors who do not possess
21		the resources to make their own forecasts, that is, they are a cause of g.
22 23		The accuracy of these forecasts in the sense of whether they turn out to be correct is not at issue here, as long as they reflect widely held
23 24		expectations. As long as the forecasts are typical and/or influential in that
25		they are consistent with current stock price levels, they are relevant. The

use of analysts' forecasts in the DCF model is sometimes denounced on

the grounds that it is difficult to forecast earnings and dividends for only

³² Morin 2006 at page 284.

26

27

³³ Woolridge Testimony at page 63.

1 2 3 4		one year, let alone for longer time periods. This objection is unfounded, however, because it is present investor expectations that are being priced; it is the consensus forecast that is embedded in price and therefore in required return, and not the future as it will turn out to be." ³⁴
5	Q.	In other words, research indicates that the forecasts do, in fact, reflect widely held
6		expectations of investors?
7	А.	Yes.
8	Q.	Does Dr. Woolridge use these forecasts in his own calculations?
9	А.	He does. Dr. Woolridge still gives primary weight to these very forecasts when arriving
10		at his 5.25% growth rate for the Constant Growth DCF analysis. ³⁵
11	Q.	Does Dr. Woolridge reconcile his objection to your use of purportedly flawed
12		forecasts with his own use of the same forecasts?
13	А.	No, he does not.
14	Q.	Is there support for the use of analyst earnings growth projections in regulatory
15		proceedings in other jurisdictions?
16	А.	Yes. The Federal Energy Regulatory Commission ("FERC") has long relied on analyst
17		earnings growth estimates at appropriate growth rates for DCF analysis in estimating
18		ROE. ³⁶ Additionally, other Commissions in the Northeast have also approved the use of
19		analyst earnings growth estimates. In Docket No. 2017-00198, the witness for the Maine

³⁴ Morin 2006 at page 298.

³⁵ Woolridge Testimony at page 42.

³⁶ See, e.g., Opinion No. 531, 147 FERC ¶ 61,234; Opinion No. 531-B, 150 FERC ¶ 61,165; Opinion No. 569, 169 FERC ¶ 61,129.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 24 of 36

1		Public Utilities Commission estimated Emera Maine's ROE using Yahoo! Finance
2		analyst earnings growth rates. ³⁷ In Case No. 18-0974-TF, the witness testifying on behalf
3		of the Vermont Public Service Commission used analyst earnings growth forecasts from
4		Value Line, Zacks, and Yahoo! Finance, consistent with my approach. ³⁸
5		Multi-Stage DCF Model
6	Q.	Please summarize Dr. Woolridge's concern with your Multi-stage DCF model.
7	А.	Dr. Woolridge takes issue with my use of projected analyst earnings growth rates as the
8		first stage growth rate in the Multi-stage DCF model and claims that my long-term
9		growth rate based on historical GDP growth and a measure of inflation is without any
10		theoretical or empirical support. ³⁹
11	Q.	Can you provide any support for the use of historic GDP growth as your chosen
12		long-term growth rate?
13	А.	Yes. Duff & Phelps writes that:
14		"A long view of capital market historyprovide[s] a period long enough
15		to include most or all of the major types of events that investors have
16 17		experienced and may experience in the future. Such events include war and peace, growth and decline, bull and bear markets, inflation and
18		deflation, and other less dramatic events that affect asset returns. By
19		studying the past, one can make inferences about the future. While the
20		actual events that occurred during $1926 - 2018$ will not be repeated, the
21		event-types of that period can be expected to recurTo the degree that
22		historical event-types tend to repeat themselves, the examination of past

³⁷ Maine Public Utilities Commission, Docket No. 2017-00198, "Bench Analysis," December 21, 2017, at page 67.

³⁸ Vermont Public Service Commission, Case No. 18-0974-TF, Direct Testimony of Richard A. Baudino, August 10, 2018, at page 24.

³⁹ Woolridge Testimony at page 71.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 25 of 36

1 2		capital market returns is likely informative about what may be expected in the future." ⁴⁰
3		Using data going back to 1929, consistent with my methodology, Dr. Morin also notes
4		that "the growth rate in US real GDP has been reasonably stable over time. Therefore, its
5		historical performance is a reasonable estimate of expected long-term future
6		performance."41
7		CAPM
8	Q.	Please describe Dr. Woolridge's CAPM analysis.
9	A.	Dr. Woolridge uses a risk-free rate of 2.50%, which he takes from a range (1.3%–4.75%)
10		of 30-year US Treasury yields; ⁴² a proxy group beta of .85, which he arrives at by
11		calculating the median Value Line beta of his proxy group; ⁴³ and a market risk premium
12		of 6.00%, which is what he views to be a "conservatively high" estimate of the market
13		risk premium based on his review of several studies and survey of the market risk
14		premium. ⁴⁴
15	Q.	Do you disagree with any aspects of Dr. Woolridge's CAPM analysis?
16	А.	Yes. Primarily in the estimation of the market risk premium. While Dr. Woolridge has

17

18 the market risk premium based on the difference between the return on large company

consulted numerous studies to develop a market risk premium of 6.00%, I have estimated

⁴⁰ Duff & Phelps, 2019 *SBBI Yearbook* at page 2-1.

⁴¹ Morin 2006 at page 311.

⁴² Woolridge Testimony at page 45.

⁴³ Woolridge Testimony at page 50.

⁴⁴ Woolridge Testimony at page 58.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 26 of 36

stocks (as measured by applying the Constant Growth DCF methodology to the S&P 500
 companies) and the yield on the 30-year US Treasury bonds.

3 Q. What are your criticisms of Dr. Woolridge's market risk premium?

- 4 A. I have three main concerns with Dr. Woolridge's market risk premium estimation
- 5 methodology. First, Dr. Woolridge is inconsistent in his approach. He discusses the
- 6 issues inherent in using the historical "Ibbotson approach" to estimating a market risk
- 7 premium, yet still considers several studies employing the historical risk premium
- 8 approach when determining his own market risk premium.
- 9 Second, Dr. Woolridge considers several surveys in deciding his market risk premium,
- 10 which are subject to various shortcomings. These shortcomings include response bias,
- such as "subjective assessments about long-term market behavior [that] may well place
- 12 undue weight on recent events and immediate prospects."⁴⁵
- 13 My third concern with Dr. Woolridge's market risk premium is that it results in an
- 14 extremely low ROE estimate of 7.60%, a result he does not attempt to explain. This ROE
- 15 estimate is 170 basis points below EnergyNorth's currently authorized ROE and 110
- basis points below any authorized ROE in the last 40 years of the natural gas industry.

⁴⁵ Morin 2006 at page 162.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 27 of 36

1 <u>Capital Structure</u>

2	Q .	What is the capital structure	recommended by Dr.	Woolridge?

- A. Dr. Woolridge recommends a capital structure consisting of 49.21% common equity and
- 4 50.79% debt, which he claims is more reflective of the capital structures of his proxy

5 group.

6 Q. Did Dr. Woolridge provide support for this recommendation?

- 7 A. In his testimony, Dr. Woolridge notes that his recommended common equity ratio of
- 8 49.21% was the equity share approved in the Company's last rate case. Furthermore, his
- 9 proxy group sample yields a mean common equity share of 45.8%.

10 Q. What is your response to Dr. Woolridge's recommended capital structure?

11 A. As stated in my direct testimony, a capital structure consisting of 50.15% common equity

- 12 is squarely within the range of common equity ratios from my proxy group companies,
- 13 which ranged from approximately 38% to 67% on average over the period 2015 2019.
- 14 The capital structure of my proxy group was, on average, comprised of approximately
- 15 54% common equity and 46% long-term debt. As a result, I continue to find that the
- 16 capital structure consisting of 50.15% equity and 49.85% debt proposed by Messrs.

17	Simek a	nd Sosnick	t is reasonable.
- ,			

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 28 of 36

1 V. <u>RESPONSE TO OCA ROE TESTIMONY</u>

Q. Please summarize Dr. Chattopadhyay's testimony and ROE recommendation. A. Dr. Chattopadhyay recommends an ROE for EnergyNorth of 8.90% with a range of 8.80% to 9.00%.⁴⁶ His results primarily rely on the Constant Growth DCF model, as he proposes to use his CAPM analysis as a check on the reasonableness of his DCF estimates.

7 Q. What are the main areas of disagreement between you and Dr. Chattopadhyay?

8 A. In addition to the aforementioned areas of disagreement common to both witnesses, I

9 disagree with Dr. Chattopadhyay in the following areas: (1) the composition of the proxy

10 group; (2) the appropriate growth rate for the Constant Growth DCF model; (3) the

11 expected market return used in the CAPM; and (4) the risk-free rate used in the CAPM.

12 Proxy Group

13 Q. What are the criteria used by Dr. Chattopadhyay in selecting his proxy group?

14 A. Dr. Chattopadhyay began with the same universe of companies identified as natural gas

15 utilities by Value Line as I did and applied similar screening criteria. However, while I

16 found that a threshold of receiving 60% of operating income or net income from

17 regulated gas operations was appropriate, Dr. Chattopadhyay used thresholds of 50%

- regulated natural gas revenues and 75% regulated natural gas assets. In his analysis then,
- 19 Dr. Chattopadhyay's proxy group differs from mine with the inclusion of Northwest

⁴⁶ Chattopadhyay Testimony at page 7.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 29 of 36

1	Natural Gas Company and the exclusion of NiSource, New Jersey Resources, and
2	Southwest Gas.

Q. Do you have any concerns with Dr. Chattopadhyay's screening criteria in the
selection of the proxy group?

A. Yes, I do. Requiring the combination of both 50% regulated gas revenues and 75% of
 regulated gas assets is overly restrictive; however, as stated in my direct testimony the
 key metric for comparability is operating/net income from regulated gas operations.

8 Q. Please explain why this screening criteria is overly restrictive.

9 A. As Dr. Chattopadhyay admits, there are few companies in the universe of natural gas 10 utilities, making the criteria for selection necessarily less stringent than for electric utilities. However, when applying the double criteria of regulated revenues and regulated 11 assets, he becomes overly restrictive with his selection criteria, excluding companies that 12 have significant natural gas operations and exhibit a similar risk profile to EnergyNorth 13 in all aspects. I believe that NiSource, which has 67% of its revenues that come from 14 regulated natural gas operations and 61% of its assets are regulated natural gas 15 operations; New Jersey Resources, which has 65% of its income that come from 16 regulated natural gas operations and 63% of its assets are regulated natural gas 17 operations; and Southwest Gas which has 68% of its income that come from regulated 18 natural gas operations and 83% of its assets are regulated natural gas operations should 19 remain included in the proxy group.⁴⁷ I would also note that Dr. Woolridge included all 20

⁴⁷ Percentages based on 2020 data.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 30 of 36

1		of these companies in his proxy group, again citing concerns about the low number of
2		available natural gas companies.
3	Q.	Do you agree with Dr. Chattopadhyay's decision to exclude NiSource, New Jersey
4		Gas, Southwest Gas?
5	А.	No. As discussed above, I believe that Dr. Chattopadhyay's screening criteria is too
6		restrictive resulting in the removal of three entities in the proxy group that share a similar
7		risk profile to that of EnergyNorth.
8		Constant Growth DCF Model
9	Q.	Please provide a brief summary of Dr. Chattopadhyay's Constant Growth DCF
10		methodology and results.
11	A.	Dr. Chattopadhyay applies the same Constant Growth DCF methodology as I do, with the
12		
		exception of his choice of growth rate and the fact that he only uses pricing data from
13		exception of his choice of growth rate and the fact that he only uses pricing data from February 1 to March 1, 2021. Dr. Chattopadhyay disagrees with my approach of using
13 14		
		February 1 to March 1, 2021. Dr. Chattopadhyay disagrees with my approach of using
14		February 1 to March 1, 2021. Dr. Chattopadhyay disagrees with my approach of using analyst earnings growth projections and instead relies on an average of Value Line's
14 15		February 1 to March 1, 2021. Dr. Chattopadhyay disagrees with my approach of using analyst earnings growth projections and instead relies on an average of Value Line's expected growth rates for DPS and BVPS and the average of Value Line, Zacks, and

⁴⁸ Chattopadhyay Testimony at page 34.

⁴⁹ Ibid.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 31 of 36

1	Q.	What are your areas of disagreement with Dr. Chattopadhyay's Constant Growth
2		DCF methodology?
3	А.	My disagreement with Dr. Chattopadhyay's Constant Growth DCF largely lies with his
4		choice of growth rate. As I discussed in my response to the testimony of Dr. Woolridge,
5		I do not believe that projections of DPS and BVPS nor Dr. Chattopadhyay's measure of
6		terminal growth are the appropriate growth rate measures for use in the Constant Growth
7		DCF model. Instead, for reasons discussed earlier in this Rebuttal Testimony, I reiterate
8		that projected earnings growth is the appropriate growth rate measure for the Constant
9		Growth DCF model.
10		<u>CAPM</u>
11	Q.	Please summarize how Dr. Chattopadhyay calculates his expected market return
12		estimates.
13	А.	Dr. Chattopadhyay calculates three estimates of expected market return by applying the
14		Constant Growth DCF model to the S&P 500 companies. For his first two estimates, he
15		uses only the subset of the S&P 500 companies that pay dividends and applies two
16		different measures of growth: earnings growth projections and the average of earnings,
17		dividends, and book value growth projections. For his third estimate, he uses all S&P
18		500 companies and applies only the earnings growth projections. ⁵⁰

⁵⁰ Chattopadhyay Testimony at page 45.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 32 of 36

1	Q.	Do you agree with Dr. Chattopadhyay's approach to calculating the expected
2		market return?
3	А.	I disagree with Dr. Chattopadhyay's first two methods of estimating the expected market
4		return – specifically, I do not agree with his choice of growth rate and with his decision to
5		remove companies that do not pay dividends from the market return calculation. First,
6		for reasons described earlier in my testimony, I do not think that the average of earnings,
7		dividend, and book value growth rate is the appropriate growth rate to use. Second,
8		excluding non-dividend paying companies from the calculation will result in an expected
9		market return that does not accurately reflect the market. Based on the data in PKC-11,
10		the companies in the S&P excluded from the analysis include 6 of the 10 largest
11		companies and represent approximately 30% of the total market capitalization of the S&P
12		500.
12		
13		To exclude these companies would not only result in a distorted market risk premium but
14		would also divorce the calculation from the market as viewed by investors. The expected
15		market return is intended to estimate the total return investors would require for an
16		investment in the broader market represented by the S&P 500 Index. An investment that
17		tracks this index includes the returns of both dividend paying and non-dividend paying

companies. Therefore, I believe it is inappropriate and not representative of the market to

19 exclude non-dividend paying companies from the expected market return calculation.

18

166 036

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 33 of 36

1	Q.	What is the risk-free rate used by Dr. Chattopadhyay in his CAPM model?
2	А.	Dr. Chattopadhyay uses the yield on 10-year US Treasury bonds as his risk-free rate. ⁵¹
3		He claims that this measure "strikes a reasonable balance between choosing a truly
4		interest rate risk-free instrument (like the shortest of short term Treasury bills) and a
5		consideration that investors have relatively long investment horizons and that regulated
6		utility rates are usually set for longer terms than just a few months."52
7	Q.	Do you agree with Dr. Chattopadhyay's chosen risk-free rate?
8	А.	No. The use of historical 30-year US Treasury bond rates is widely accepted as a proxy
9		for the risk-free rate, including by the FERC. ⁵³ Dr. Woolridge also uses 30-year US
10		Treasury yields as his risk-free rate in his CAPM analysis.
11	Q.	Do you have any other concerns regarding Dr. Chattopadhyay's use of the CAPM
12		model?
13	А.	Yes. Primarily, I have concerns with the methodology used by Dr. Chattopadhyay
14		whereby he employs the use of the CAPM framework in developing estimates then pivots
15		to say that he does not recommend relying on the CAPM approach in setting the allowed
16		ROE adding the qualifier that "the analyses are still useful as checks." ⁵⁴ Therefore, Dr.
17		Chattopadhyay is able to dismiss the estimates, developed using a FERC-approved
18		methodology, that lie above his recommended range.

⁵¹ Chattopadhyay Testimony at page 41.
⁵² Chattopadhyay Testimony at pages 41–42.
⁵³ Opinion 569, 169 FERC ¶ 61,129.
⁵⁴ Chattopadhyay Testimony at page 49.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 34 of 36

1 VI. <u>CONCLUSIONS AND RECOMMENDATIONS</u>

2 Q. Please summarize your conclusions.

A. I have four primary conclusions. *First*, I conclude that the recommendations of Drs.
Woolridge and Chattopadhyay are completely inconsistent with industry standards and
would results in one of the lowest ROEs in the last 40 years. *Second*, I conclude that the
inconsistency derives, in part, from methodological flaws in their calculation of
EnergyNorth's ROE. *Third*, I conclude that my recommended ROE and reasonable range
in my direct testimony continue to be appropriate. *Fourth*, I conclude that the

9 Company's proposed capital structure also continues to be appropriate.

10 Q. Please explain your first conclusion regarding the inconsistency of the ROEs

11 recommended by Drs. Woolridge and Chattopadhyay to industry standards.

12 A. The analyses contained in Section III of this testimony show that the ROEs recommended

by Dr. Woolridge and Dr. Chattopadhyay are significantly below recent and historic

14 industry standards. Not only do they recommend ROEs that would place EnergyNorth in

15 the bottom one percentile of authorized ROEs for natural gas utilities since 1979, they do

16 not provide evidence of a change in capital market conditions such that a downward

adjustment of 30–40 basis points to EnergyNorth's current authorized ROE is warranted.

18 I also find that their argument that market-to-book ratios in excess of unity indicate that

19 natural gas utilities have been over-earning on their true cost of capital to be erroneous

20 and not supportive of such a low range of recommended ROEs.

168 038

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 35 of 36

1	Q.	Please explain your second conclusion regarding the methodological flaws in the
2		ROE calculations undertaken by Dr. Woolridge and Chattopadhyay.
3	А.	As discussed in Sections III-V of my testimony, I find several methodological flaws in
4		their ROE calculations. These flaws include their use of DPS and BVPS growth rates
5		and the circular and inconsistent sustainable growth rates for their implementation of the
6		Constant Growth DCF model, their chosen market risk premiums in the CAPM model,
7		and in the case of Dr. Chattopadhyay, his proxy group screening criteria.
8	Q.	Please explain your third conclusion regarding the reasonableness of your
9		recommended ROE and reasonable range.
10	А.	Based on the first two conclusions and my analyses contained herein, I find no
11		compelling reason to adjust my original recommended ROE and reasonable range. I
12		conclude that my recommended ROE range of 9.94% to 11.20% for EnergyNorth is
13		reasonable as is my point estimate of 10.51%.
14	Q.	Please explain your fourth conclusion regarding the reasonableness of the
15		Company's proposed capital structure.
16	А.	I continue to find the Company's proposed capital structure consisting of 50.15%
17		common equity to be reasonable. Based on an analysis of the capital structure of proxy
18		group companies, that proposed structure is reflective of and within the range of common
19		equity ratios.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Docket No. DG 20-105 Rebuttal Testimony of John Cochrane Page 36 of 36

1 Q. Please summarize your recommendations.

- 2 A. My recommendations are unchanged from those provided in my direct testimony.
- 3 Specifically, I recommend that the Commission authorize an ROE for EnergyNorth of
- 4 10.51%, that it accept the Company's proposed capital structure of 50.15% common
- 5 equity and 49.85% debt as well as debt costs, and that it authorize a total ROR of 7.47%.
- 6 Q. Does this conclude your testimony?
- 7 A. Yes.

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty

DG 20-105 Distribution Service Rate Case

OCA Data Requests - Set 3

Date Request Received: 12/14/20 Request No. OCA 3-1 Date of Response: 12/29/20 Respondent: John Cochrane

REQUEST:

Refer to Direct Testimony of J. Cochrane, Bates page II-295, Lines 18-20.

- a. Please clarify why, in applying the set of screening criteria, companies were "generally" but not strictly included based on the screening criteria.
- b. If the screening was applied "generally" and not strictly, please identify which company was impacted by the "general" application? Please provide an explanation for that treatment.

RESPONSE:

- a. Please see the Direct Testimony of J. Cochrane, Bates page II-296, Lines 1–8 that provides the discussion of the general criteria for inclusion in the proxy group. However, there may be other factors outside of the general screening criteria that would cause a company to be excluded from the proxy group. For example, Northwest Natural was excluded from the proxy group, even though it "strictly" met the screening criteria, due to its *Value Line* EPS growth rate being 26.5%, making it an outlier.
- b. Please see response to (a) above.