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Capital Structure

Witness: Zephania Marevangepo

Sponsoring Party: MoPSC Staff
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Case No.: GR-2014-0152

Date Testimony Prepared: July 30, 2014

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION UTILITY SERVICES – FINANCIAL ANALYSIS

REBUTTAL TESTIMONY

OF

ZEPHANIA MAREVANGEPO

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Date 9	314	Repo	orter SJP
File No.			

LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP. d/b/a LIBERTY UTILITIES

CASE NO. GR-2014-0152

Jefferson City, Missouri July 2014

* Denotes Proprietary Information *



1	TABLE OF CONTENTS
2	OF THE REBUTTAL TESTIMONY OF
3	ZEPHANIA MAREVANGEPO
4	LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP.
5	d/b/a LIBERTY UTILITIES
6	CASE NO. GR-2014-0152
7	EXECUTIVE SUMMARY1
8	ROBERT HEVERT'S TESTIMONY3
9	CAPITAL STRUCTURE3
10	EMBEDDED COST OF DEBT6
11	EMBEDDED COST OF DEBT UPDATES6
12	COST OF EQUITY7
13	Quarterly Growth DCF and Constant DCF Models
14	Multi-Stage DCF Model12
15	Practical analyses of Robert Hevert's perpetual growth rate inputs12
16	Capital Asset Pricing Model13
17	Bond Yield Plus Risk Premium Approach15
10	

1	REBUTTAL TESTIMONY			
2	OF			
3	ZEPHANIA MAREVANGEPO			
4	LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP.			
5	d/b/a LIBERTY UTILITIES			
6	CASE NO. GR-2014-0152			
7	Q. Please state your name.			
8	A. My name is Zephania Marevangepo.			
9	Q. Are you the same Zephania Marevangepo who prepared the Rate of Ret	urn		
10	Section of the Staff's Revenue Requirement Cost of Service Report ("Staff Report") that v	vas		
11	filed in this Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities ("Libe	rty		
12	Midstates" or "Company") rate case?			
13	A. Yes.			
14	Q. What is the purpose of your rebuttal testimony?			
15	A. The purpose of my rebuttal testimony is to respond to certain rate of return	ιof		
16	positions sponsored by Liberty Midstates' cost of equity expert witness – Robert Hevert.			
1 <i>7</i> 7	EVECUTIVE CHMMADV			
17	EXECUTIVE SUMMARY	1		
18	Q. Would you please summarize the specific rate of return positions sponsor	rea		
19	by Robert Hevert that you wish to address?			
20	A. Robert Hevert sponsored (1) a Liberty-Midstates-allocated ratemaking cap	ital		
21	structure, which comprised 58.34 percent equity and 41.66 percent long-term debt (2) a		
22	return on the equity of 10.50 percent and (3) a 4.78 percent Liberty-Midstates-alloca	ted		
23	embedded cost of debt. As already expressed in Staff's revenue requirement report, St	aff		

established that Liberty Midstates' parent company (Liberty Utilities Company "LUCo") is a rated entity and Liberty Midstates is not; and the embedded debt cost that was allocated to Liberty Midstates was based on LUCo's consolidated business and financial risk profile and not Liberty Midstates. Consequently, Staff recommended the use of LUCo's consolidated capital structure and embedded cost of debt to set Missouri customer rates.

Robert Hevert's recommended 10.50 percent return on common equity was based on his estimated cost of equity range of 10.00 percent to 10.50 percent. Staff will discuss later in this testimony the unreasonableness of the inputs and/or assumptions made by Robert Hevert in order to determine this cost of equity range.

- Q. Would you please summarize the specific aspects of Staff's recommendation that relate to Robert Hevert's positions cited above?
- A. Staff recommended the use of LUCo's capital structure as the rate-making capital structure. This capital structure comprised * * percent equity and * * percent long-term debt as of the test year date –September 30, 2013. Due to the discovery issues expressed in Staff's Report, the embedded cost of debt sponsored by Staff was based on LUCo's stated interest rates associated with the outstanding long-term debt balance. Staff was not able to give consideration to debt issuance expenses due to the Company not providing this information.
- Q. Please state and explain any specific issues that Staff updated after filing its direct position.
- A. In light of the additional information received through a response to Staff's Data Request No. 0177.2, Staff updated its consolidated embedded cost of debt

¹ Staff report revenue requirement cost of service; page 21, lines 20 through 28.

	Rebuttal Testimony of Zephania Marevangepo
1	recommendation from * * percent to * * percent. Staff's higher cost of debt
2	estimate is due to the fact that the Company provided information regarding debt issuance
3	costs that allowed Staff to take this into consideration in its calculations.
4	Q. Did the embedded cost of debt adjustment impact any other facets of Staff's
5	recommendation?
6	A. Yes. The embedded cost of debt adjustment raised Staff's overall rate of
7	return range from 6.30-6.80 percent to 6.39-6.85 percent.
8	ROBERT HEVERT'S TESTIMONY
9	Q. Would you please highlight the major areas of Robert Hevert's
10	recommendation that Staff will address?
11	A. Capital structure, embedded cost of debt, and cost of equity. Staff will address
12	these accordingly.
13	CAPITAL STRUCTURE
14	Q. Would you please explain the differences between Robert Hevert's and Staff's
15	capital structure recommendations?
16	A. Staff recommended LUCo's consolidated capital structure consisting of
17	* * percent common equity and * * percent long-term debt. Robert Hevert
18	recommended Liberty Midstates' allocated capital structure consisting of 58.34 percent
19	equity and 41.66 percent long-term debt. Staff recommends the Commission reject the use of
20	Liberty Midstates' allocated capital structure for purposes of determining customer rates in
21	this case.
22	Q. Would you please explain why Staff believes the allocated rate-making capital
23	structure sponsored by Robert Hevert should be rejected?

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Liberty Midstates, as an entity, (1) does not have a credit rating, (2) does not issue equity, (3) does not issue long-term debt, (4) does not raise its own short-term debt and (5) its capital structure has no bearing on the cost of capital required by investors.

All the activities listed above occur at the LUCo level. Consequently, Staff recommends that the Commission use LUCo's capital structure for purposes of determining Missouri customer rates.

- Q. Would you please provide Staff's basic understanding of LUCo's allocation process?
- Based on the information presented by Algonquin Power & Utilities A. Corporation's (APUC) Chief Executive Officer - Ian Robertson during meetings in the acquisition case (GM-2012-0037) and also confirmed by the Company's response to Staff's Data Request No. 0177.2 in this rate case, LUCo issues long-term debt to debt investors and equity to its parent company (APUC); and then allocates portions of this capital to the operations that need capital at the time, Thus, Liberty Midstates' capital structure is defined as an allocated capital structure.
- Q. Does Staff know if LUCo has a targeted capital structure for Liberty Midstates or any of its subsidiaries?
- No. However, in response to Staff's Data Request No. 0185.1, the Company A. suggested that the levels of capital for each of LUCo's operations are not stable since they are simply a function of the amount of capital needed at a point in time and the timing of capital needed. However, even if LUCo did indicate it had a targeted capital structure for Liberty Midstates, the only logical targeted capital structure would be one that is consistent

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21 22 with LUCo on a consolidated basis since Liberty Midstates' business risk is similar to that of LUCo and LUCo is the only "investable" capital structure.

- Given the still low interest rate environment and the availability of LUCo's Q. credit facility, does Staff know the quantifiable financial and investment justification for LUCo's decision to allocate higher percentage levels of equity versus debt to certain subsidiaries/operations?
- A. No. However, Staff notes that Liberty Midstates has not had any debt capital assigned to it since LUCo issued capital to acquire the operations. If Liberty Midstates were a stand-alone entity, its capital structure would at least reflect an outstanding short-term debt balance that supports its working capital needs or inventory-related costs that the Company currently seeks to recover through rate base. All else equal, inclusion of short-term debt in the capital structure would reduce the Company's equity ratio and cost of capital.

As LUCo is currently organized, it is LUCo management's judgment and prerogative to assign capital based on a subjective process that can't be audited or verified. Consequently, there is no quantifiable financial and investment justification for assigning higher equity capital percentages to Liberty Midstates.

- Q. Given a combination of the existing low interest rate environment and LUCo's current/ ongoing acquisitive mode, do you believe Staff's recommended ratemaking capital structure (LUCo's consolidated capital structure) represents a long-term capital structure position for LUCo?
 - A. Yes.
 - What, therefore, is Staff's capital structure recommendation? Q.

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A. Staff recommends that the Commission use LUCo's consolidated capital structure for purposes of determining customer rates in this case.

EMBEDDED COST OF DEBT

- Q. Would you please explain the differences between Robert Hevert's and Staff's embedded cost of debt recommendations?
- A. Robert Hevert sponsored an embedded cost of debt of 4.78 percent, which is based on the debt allocated to Liberty Midstates' capital structure.²

Because the allocation of the cost of debt capital suffers from the same problems as the allocation of the amount of debt for a capital structure, Staff recommended the use of a consolidated embedded cost of debt based on LUCo's consolidated capital structure.

However, due to the limited data that was available at the time Staff developed this recommendation, Staff's debt cost was based on stated interest rates rather than embedded costs. Embedded rates ensure recovery of long-term debt issuance expenses; stated rates do not.

EMBEDDED COST OF DEBT UPDATES

- Q. Did Staff make any embedded cost of debt updates in this testimony?
- A. Yes. In light of the additional information the Company provided in response to Staff Data Request No. 0177.2, Staff's updated cost of debt increased to * * percent from * * percent.
- Q. Did this embedded cost of debt update impact Staff's overall rate of return recommendation?

² Liberty Midstates Cost of Service Schedules: Schedule COS-9.

A. Yes. Staff's recommended rate of return increased from 6.34-6.80 percent to 6.39-6.85 percent.

COST OF EQUITY

- Q. Would you please state and explain Robert Hevert's cost of equity recommendation?
- A. Robert Hevert recommended a 10.50 percent return on common equity based on his estimated cost of common equity range of 10 10.50 percent. Robert Hevert, on page 46 of his direct testimony, suggests that a 10 10.50 percent cost of common equity range represents a spectrum of required rate of returns that are currently anticipated by natural gas utilities' equity investors.

Staff will discuss in this section of its testimony how Robert Hevert's cost of equity model inputs, which are diametrically contrary to existing practical investment expectations, inflated the results of his cost of equity models.

- Q. Would you please explain Staff's understanding of Robert Hevert's basis for his 10-10.50 percent estimated cost of common equity range?
- A. Robert Hevert's estimated cost of equity range is primarily based on (1) three versions of a Discounted Cash Flow (DCF) model (Quarterly Growth DCF, Constant DCF and Multi-Stage DCF), (2) Capital Asset Pricing Model (CAPM) and (3) a Bond Yield Plus Risk Premium Approach.
- Q. Would you please express Staff's opinion of Robert Hevert's proposed cost of equity range and the cost of equity methodologies upon which the range is premised?
- A. Upon reviewing Robert Hevert's cost of equity study, Staff established that the perpetual growth rate assumptions and inputs used in Robert Hevert's DCF models were

inflated. Robert Hevert's perpetual growth rate assumptions and inputs far exceed those that are reported and used in practice by equity analysts and financial advisors performing valuation analyses for purpose of mergers and acquisitions. Staff, therefore, recommends that Robert Hevert's proposed cost of equity range and his recommended return on common equity be rejected.

- Q. What is the primary basis for the growth rate inputs used in Robert Hevert's cost of equity study?
- A. The growth rate inputs are based on an average of four growth estimates ((1) Zacks Earnings Growth, (2) First Call Earnings Growth, (3) Value Line Earnings Growth and (4) Sustainable Growth). Caveat -these are 3-5 year growth estimates in earnings per share, not perpetual growth rates investors use to project dividends using the dividend discount model (the more specific description of what is commonly referred to as the discounted cash flow model in utility regulatory ratemaking).

However, before dissecting the anatomy of Robert Hevert's growth rate input, Staff would like to respond Robert Hevert's suggestion that investors who buy utility stocks are largely influenced by expectations of growth in earnings and not dividends.³

- Q. Would you please express Staff's opinion of this suggestion?
- A. Staff believes such a suggestion disregards the sacrosanct fundamental understanding that investors in utility stocks are largely influenced by dividends. Not only do utility stock investment analysts recognize this basic characteristic of regulated utility stock investments, but it is frequent fodder on investment blogs. It is clearly acknowledged that utility stocks are viewed as (1) "widow and orphan" investments, (2) "flight to safety"

³ Robert Hevert direct testimony: page 14, lines 1-19 and page 15, lines 1-7.

investments and/or (3) an alternative to bond investments because of their stable and predictable dividend payments.

Some characterize utility stocks as "widow and orphan" investments because that class of the investment community is viewed as conservative and risk-averse. Simply put, this class of investors is primarily driven to invest in utility stocks because of the stable cash flows experienced by utility companies, *especially regulated utilities*, and the predictable and stable dividends paid thereof.⁴

Utility Stocks are also referred to as "flight to safety" and alternatives to bond investments because of the ability to pay relatively high and stable income (dividend yields) at a time when treasury yields are low due to recessionary and other macro-economic climatic conditions. This notion seems to hold true in the current environment where the Federal Reserve has, for a considerably lengthy period of time, implemented monetary policies that have helped keep long-term interest rates considerably low.

To that extent, below is an excerpt that reveals how the markets are truly viewing utility stocks from a practical investment standpoint (Forbes: Investing - 4/28/2014):

Dividends Are No Antidote To Overvaluation In Utilities

Good utility stocks are hard to find because dividend-seeking investors have bid the prices up well beyond their fair valuations. Too often, investors evaluate stocks primarily based on dividend yield rather than looking at the underlying fundamentals first. This habit causes them to miss potential red flags. If the stock is overvalued, it will likely underperform, even with the dividend.⁵

⁴ http://www.investmentu.com/article/detail/33793/abandon-utility-stocks#.U7sIRk0o_cs.

⁵ http://www.forbes.com/sites/greatspeculations/2014/04/28/dividends-are-no-antidote-to-overvaluation-in-utilities/.

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O. In light of this undeniable practical evidence, please express Staff's opinion of Robert Heyert's use of earnings growth estimates to represent the perpetual growth rate input in the DCF model?

A. Besides establishing the fact that the price valuation of utility stocks is largely influenced by stable dividends, and not earnings growth estimates, Staff also notes that the use of 3-year and 5-year earnings growth estimates as a proxy for the perpetual growth rate input inflates the ultimate results of the DCF model in which such assumptions are imputed. Staff will further expound this issue in the following subsection of this testimony.

Quarterly Growth DCF and Constant DCF Models

- Q. What is the basis for the perpetual growth rate input used by Robert Hevert for purposes of determining his Quarterly and Constant DCF model results?
- A. Robert Hevert's perpetual growth rate input relies exclusively on an average of 3-5 year earnings growth rate estimates from Zacks, First Call and Value Line; and also on his individual computation of a retention growth rate estimate.
- Q. What specific issues does Staff have with the use of such a growth rate input to represent perpetual growth rate?
- A. On average, the perpetual growth rate estimates imputed by Robert Hevert are much higher than the publicly available long-term growth rate estimates of the United States' overall economy. Accepting the use of such exorbitant growth rates as a perpetual growth rate inputs would, therefore, suggest that the regulated natural gas utilities are expected to infinitely outgrow the economy of the country/ region in which they operate.
- Q. Would you please explain, with the use of specific numbers, how Robert Hevert's Quarterly and Constant DCF perpetual growth rate assumptions are

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21 22 unreasonably higher than the long-term economic growth rate expectations of the United States' overall economy?

Α. Yes. Based on the most recent publication of the Annual Energy Outlook 2014, the long-term forward-looking real growth of the economy through 2040 is expected to be approximately 2.45 percent. For purposes of illustrating Robert Hevert's inflated estimate for real GDP growth, Staff will add Robert Hevert's suggested 2.35 percent inflation rate (most projections for inflation for GDP are approximately 2.0 percent) on page 22 of his direct testimony. Based on using these inputs, the suggested forward-looking compounded nominal growth rate estimate of the U.S economy would be approximately 4.86 percent ((1.0235*1.0245)-1),

To put Robert Hevert's DCF results into perspective, Robert Hevert imputed an average perpetual growth rate estimate of 5.34 percent, which is 48 basis points over the projected long-term growth of the U.S economy using Robert Hevert's inflation rate or 84 basis points using a projected GDP inflation rate of 2.0 percent. Consequently, Staff recommends that the Commission reject all the DCF results based on growth rate inputs that imply that U.S regulated natural gas utilities will outgrow the U.S economy into perpetuity.

- Q. Is there an instance where 3-5 year growth rate estimates, which are higher than the overall economy growth rate estimates, may be acceptable for purposes of determining cost of equity using the DCF models?
- Yes. It is Staff's position that the use of 3-year to 5-year earnings growth A. estimates may be acceptable and reasonable to the extent that they are used to represent the average growth rate input for the first stage of a multi-stage DCF model.

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Multi-Stage DCF Model

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- Q. What specific issue does Staff have with the growth rate inputs imputed by Robert Hevert in his Multi-Stage DCF model?
- A. The perpetual growth rate used in the last stage of Robert Hevert's Multi-Stage DCF model is approximately 91 basis points higher than the published projections for the long-term growth rate for the United States' overall economy.
 - Q. How did Staff determine the 91 basis?
- It is the difference between Robert Hevert's Multi-Stage DCF assumption that A. the United States' economy will grow at 5.71 percent into perpetuity and the 4.80 percent explained above.
- Staff recommends that Robert Hevert's multi-stage results be dismissed for the very same reasons Staff explained in the previous subsection.

Practical analyses of Robert Hevert's perpetual growth rate inputs

- Q. Please explain if Staff is aware of any equity analysts and/or financial advisors to mergers and acquisitions that assume or impute perpetual growth rates that are consistent with any of Robert Hevert's average perpetual growth rate assumptions, which are all greater than 5.30 percent?
- A. Staff unreservedly notes that Robert Hevert's growth rates diametrically contradict the reality of practical investment assumptions made by investors and investment advisors in regulated utilities. Staff has over time reviewed confidential asset and equity valuation reports that were provided in the context of merger, acquisition and other financial/investment advisor roles; and Staff has never seen growth rates greater than 4 percent being imputed in any of those analyses. Staff would be highly enlightened if

Robert Hevert can provide equity valuation reports or analyses for APUC that show perpetual growth rates of anywhere close to 5.71 percent.

Capital Asset Pricing Model

- Q. What specific issues does Staff have with Robert Hevert's CAPM analysis and results?
- A. Staff notes that the risk premiums, which are inflated, imputed in Robert Hevert's CAPM analysis are based on a DCF approach that Staff rebutted earlier in this testimony. Again, for as long as Robert Hevert is using 3-year to 5-year earnings growth rate estimates to represent perpetual growth rates in his DCF analysis, his DCF results are going to be inflated.
- Q. Would you please explain the basis for Robert Hevert's proposed implied equity risk premiums?
- A. Robert Hevert's computation of implied equity risk premium estimates are based on the Bloomberg data (Bloomberg estimate) and Value Line data (Value Line estimate). The Bloomberg estimate, which is an average of estimates based on current and projected 30-year treasuries, is approximately 8.63 percent; and the Value Line estimate is approximately 7.53 percent.⁶
- Q. Please explain Staff's primary concern with such a computation of implied equity risk premium.
- A. Staff notes that the CAPM results are very sensitive to each witness' choice of equity risk premium. Thus, if rate of return witnesses chose to assume that equity investors in regulated utilities and unregulated corporations require the same equity returns or greater,

⁶ Robert Hevert direct testimony: Schedule RBH-7 CAPM.

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then their reported implied equity risk premiums will obviously be much higher than what is actually expected by regulated utility common equity investors.

For instance, Robert Hevert's choice of the inputs that he imputed to derive his DCF results, which in turn determined the equity risk premium that was finally imputed in his CAPM analysis, inflated his CAPM results.

- Q. Based on Staff's cost of equity and the 30-year treasury (3.87 percent) used by Robert Hevert, what is the implied equity risk premium?
- A. Based on Staff's estimated cost of equity range of 8.20 percent 9.20 percent, the implied equity risk premium range would be 4.33 percent to 5.33 percent; and Robert Hevert's implied risk premiums range from 7.53 percent to 8.63 percent.
- Q. For purposes of checking the reasonableness of Staff's implied equity risk premium range, can you provide any practical investment sources that support Staff's position?
- A. Based on various cost of equity analyses it reviewed, Duff and Phelps', as reported in its 2014 Valuation Handbook, recommends an estimated market required cost of equity of 9 percent based on an equity risk premium of 5 percent and a normalized risk-free rate of 4 percent.⁷
 - Q. What conclusions would Staff draw from Duff & Phelps's recommendations?
- A. Staff's cost of equity estimate and the implied equity risk premium are both in check with the realities of practical investment analysis. As for Robert Hevert, his extremely high required market return/ cost of equity and the implied market risk premium estimates are a function of his inflated DCF inputs, assumptions and results.

⁷ 2014 Valuation Handbook, Guide to Cost of Capital: Duff & Phelps: pages 3-20 to 3-23.

Bond Yield Plus Risk Premium Approach

- Q. What specific issues does Staff have with Robert Hevert's Bond yield plus risk premium approach?
- A. Staff notes that the use of allowed Return On Equity (ROE) as the basis for computing equity risk premium used in Robert Hevert's approach is improper. Such a treatment would equate allowed ROE with the cost of equity.
 - Q. What is the difference between the allowed ROE and the cost of equity?
- A. In light of the practical cost of equity estimates that are reported by equity analysts and merger/ acquisition financial advisors (which staff discussed earlier in this testimony), the allowed ROE typically is higher than the cost of equity whether done so inadvertently and/or for purpose of providing incentives to utility companies.
- Q. Did Robert Hevert's use of allowed ROE instead of cost of equity estimates impact his Bond Yield Plus Risk Premium Approach results?
- A. Yes. It magnified his reported equity risk premium and the resulting implied cost of equity results.
 - Q. Does this conclude your rebuttal testimony?
 - A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Liber Natural Gas) Corp. d Tariff Revisions Desig General Rate Increase f in the Missouri Service	l/b/a Liberty Utilition ned To Implement or Natural Gas Servi	es') a) ce)	Case No. GR-2014-0152	
4	AFFIDAVIT OF ZEF	IPANIA M	IAREVANGEPO	
STATE OF MISSOURI	(
COUNTY OF COLE) ss.)			
preparation of the foregoing pages to be properties. Testimony were given by	going Rebuttal Testing resented in the above by him; that he has k	mony in que case; that nowledge he best of h	a states: that he has participal uestion and answer form, control the answers in the foregoin of the matters set forth in such is knowledge and belief.	nsisting of g Rebuttal
Subscribed and sworn to D. SUZIE MANK Notary Public - Nota State of Missioned for Col	IN ry Seal	29H	_ day of July, 2014.	
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