BEFORE THE

COUNCIL OF THE CITY OF NEW ORLEANS

IN RE: APPLICATION OF ENTERGY NEW ORLEANS, INC. FOR APPROVAL TO CONSTRUCT NEW ORLEANS POWER STATION AND REQUEST FOR COST RECOVERY AND TIMELY RELIEF	**)**	**DOCKET NO. UD-16-02**

DIRECT TESTIMONY

OF

BYRON S. WATSON, CFA, CRRA

ON BEHALF OF

THE ADVISORS TO THE

COUNCIL OF THE CITY OF NEW ORLEANS

PUBLIC REDACTED VERSION

NOVEMBER 20, 2017

PREPARED DIRECT TESTIMONY

OF

BYRON S. WATSON, CFA, CRRA

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Byron S. Watson. My business address is 8055 East Tufts Avenue, Suite 1250, Denver, Colorado, 80237. I am a Senior Consultant in the firm Legend Consulting Group Limited of Denver, Colorado ("Legend").

Q. ON WHOSE BEHALF DO YOU APPEAR IN THIS PROCEEDING?

A. I am presenting testimony on behalf of the Advisors to the Council of the City of New Orleans ("Council"). The Council regulates the rates, terms, and conditions of electric and gas service of Entergy New Orleans, Inc. ("ENO"), which is a subsidiary of Entergy Corporation ("Entergy").[1]

Q. PLEASE SUMMARIZE YOUR RELEVANT EDUCATIONAL BACKGROUND AND TESTIMONY EXPERIENCE.

[1] The Entergy Operating Companies ("Operating Companies") are comprised of: Entergy Arkansas, Inc. ("EAI"), Entergy Mississippi, Inc. ("EMI"), Entergy Louisiana, LLC ("ELL"), ENO, and Entergy Texas, Inc. ("ETI").

A. Exhibit No. ____ (BSW-2) provides a summary of my relevant education and professional experience, and Exhibit No. ____ (BSW-3) lists my previous testimony experience.

II. PURPOSE OF TESTIMONY

Q. CAN YOU PLEASE IDENTIFY THE COUNCIL ACTION THAT CAUSED YOU TO SUBMIT YOUR TESTIMONY?

A. Yes. On June 20, 2016, ENO filed with the Council its "*Application of Entergy New Orleans, Inc. for Approval to Construct New Orleans Power Station and Request for Cost Recovery and Timely Relief*" ("Initial Application"). On November 18, 2016, ENO filed its required "*Supplemental Testimony of Entergy New Orleans, Inc. ("ENO") for Approval to Construct New Orleans Power Station and Request for Cost Recovery and for Timely Relief*" ("Supplemental Filing") with the Council that included the analysis requested by the Advisors. On July 6, 2017, ENO filed its "*Supplemental and Amending Application of Entergy New Orleans, Inc. for Approval to Construct New Orleans Power Station and Request for Cost Recovery and Timely Relief*" ("Supplemental Application"). I refer to these three filings collectively as the "Application". On August 10, 2017, Council Resolution No. R-17-426 established a new procedural schedule in the instant docket. Based on my review of the Application and discovery in the instant docket, my testimony is filed pursuant to that procedural schedule.

Q. PLEASE STATE THE PURPOSE OF YOUR TESTIMONY.

A. The purpose of my testimony is to present the results of analyses related to the relative economic rank, revenue requirement impact, and typical average monthly bill impact of

each of seven economic cases originally constructed and modeled by ENO, but modified consistent with ENO's responses to the Advisors' Data Requests ("DR") and the testimonies of other Advisor witnesses. Further, as the Council is expected to review ENO's approved Return on common Equity ("ROE") as part of the Combined Rate Case,[2] and as any capital investment the Council may approve as part of the instant docket is expected to be placed into service after new rates are set by the Council based on a new approved ROE,[3] my testimony presents revenue requirements and typical bill impacts based on an illustrative ROE. I note that my testimony does not discuss or recommend any ROE for Council adoption as part of any rate action, but rather my testimony discusses a ROE for the purpose of evaluating the matters before the Council in the instant docket.

III. MODELED ECONOMIC CASES

Q. DOES ENO PRESENT ECONOMIC EVALUATIONS OF DIFFERENT SCENARIOS IN THE INSTANT DOCKET?

A. Yes, ENO performed an economic evaluation of seven scenarios in the instant docket ("Cases"). Each case represents a combination of fixed-cost revenue requirement modeling, load and capability modeling to estimate costs and revenues related to the Midcontinent Independent System Operator Inc.'s ("MISO") Planning Resource Auction

[2] Council Resolution No. R-15-194 provides for "ENO's filing a full cost of service study based on combined ENO operations on both the east bank and west bank of the Mississippi River (the "Combined Rate Case")."

[3] See ENO's response to Advisors Data Request CNO 12-14 (b).

("PRA"), and Variable Supply Costs ("VSC") impacts. The results of ENO's analyses are presented in HSPM Exhibit SEC-13.

Q. PLEASE DESCRIBE THE CASES MODELED IN ENO's ANALYSES.

A. The below table summarizes the characteristic of each case from Exhibit SEC-13 as modeled by ENO.

Table 1
Modeled Economic Cases, Exhibit SEC-13
($ in millions)

Case	Descriptive Name	Additional Local Generation	Additional PV Solar Capacity	Transmission Upgrade Investment	Council's 2% DSM Goal	Additional Wind Capacity
1	RICE Alternative	128 MW (RICE)	100 MW	$23.2 (2021)	-	-
1G	CT Alternative	226 MW (CT)	100 MW	-	-	-
2	Transmission Alternative	-	100 MW	$57.3 (2021)	-	-
3	RICE Alternative + 2% DSM	128 MW (RICE)	100 MW	-	Yes	-
3G	CT Alternative + 2% DSM	226 MW (CT)	100 MW	-	Yes	-
4A	Additional Solar + 2% DSM	-	200 MW	$44.3 (2021)	Yes	-
4B	Wind + 2% DSM	-	100 MW	$44.3 (2021)	Yes	300 MW

Q. HAS ENO ACKNOWLEDGED ANY CALCULATION ERRORS IN THE PREPARATION OF EXHIBIT SEC-13?

A. Yes, through discovery, on November 8, 2017 ENO acknowledged a significant error in its calculation of VSCs for the cases involving the CT Alternative (*i.e.*, cases 1G and 3G)

that overstate Make Whole Payments ("MWP") (revenues) by double.[4] The total dollar effect of this error over the 20-year modeling time horizon for VSCs provided by ENO is an overstatement of MWP revenues of $155 million and $149 million for cases 1G and 3G respectively. In response to further discovery, on November 13, 2017 ENO acknowledged that its error extended to the calculation of net generation revenues (*i.e.*, Generation Revenue less Generation Costs) and to a lesser extent Uplift Charges.[5] These further-disclosed errors offset the error in modeling MWP revenues. As such, ENO reports that the error has only a small effect. ENO's errata workpapers present a levelized Present Value ("PV") value increase of $9.4 million and $9.1 million for cases 1G and 3G (the CT Alternative cases) respectively as compared to the original Exhibit SEC-13.

The Advisors have served further discovery upon ENO seeking supporting workpapers or tables to validate ENO's updated estimates of Generation Cost and Generation Revenue, but no response has been provided by ENO as of the preparation of this testimony. As such, it is currently not possible to fully validate ENO's workpapers as of the time of the preparation of this testimony, and I reserve the right to file supplemental testimony or otherwise amend my direct testimony should the results of further Advisor discovery materially affect my analyses.

Q. DOES YOUR TESTIMONY REFLECT AN EVALUATION OF DATA PROVIDED BY ENO RELATED TO ITS VSC ERRATA?

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[4] See ENO's response to the Advisors' DR CNO 14-1.

[5] See ENO's response to the Advisors' DR CNO 15-1.

A. Yes, subject to further discovery on and validation of this errata data. I have employed in my analysis ENO's errata VSC table as presented in its file "FINAL_ENO_NOPP_VSC_ERRATA_HSPM.xlsx". This VSC data table is the only material change to Exhibit SEC-13 (*i.e.*, the use of this table results in the same model calculations whether used in the original Exhibits SEC-13 or in the errata version thereof).

Q. PLEASE SUMMARIZE THE RESULTS PRESENTED IN EXHIBIT SEC-13 ERRATA.

A. The below table summarizes the results of the economic modeling from Exhibit SEC-13 Errata.

Table 2
Exhibit SEC-13 Errata Economic Modeling Results
($ in millions)

Case	PV of Costs	Relative Economic Rank	Variance of PV of Costs to Least Cost Case	% Variance of PV of Costs to Least Cost Case
Cases w/o Additional DSM Measures				
1 (RICE)	[redacted]	3rd	[redacted]	[redacted]
1G (CT)	[redacted]	1st	-	-
2 (Transmission)	[redacted]	2nd	[redacted]	[redacted]
Cases w/ the Council's 2% DSM Goal				
3 (RICE)	[redacted]	3rd	[redacted]	[redacted]
3G (CT)	[redacted]	1st	-	-
4A (Solar)	[redacted]	2nd	[redacted]	[redacted]
4B (Wind)	[redacted]	4th	[redacted]	[redacted]

As the above table presents, ENO's economic modeling shows that constructing the 226 MW Combustion Turbine ("CT") generating unit (the "CT Alternative") has the highest economic rank (*i.e.*, is least cost on a PV basis) under both the scenario of no DSM program expansion and under ENO's modeled scenario involving the Council's 2% DSM goal.

Q. DO THE TRANSMISSION UPGRADE INVESTMENTS FROM TABLE 1 REFLECT CHANGES IN THE DATA PROVIDED BY ENO IN THE INSTANT DOCKET?

A. From responses to Advisor discovery, in two cases, no: Case 1 (RICE Alternative) and Case 4A (Transmission Alternative plus the Council's 2% DSM goal). In Case 1, ENO has stated that the need-by date of the transmission upgrades estimated to cost $23.2 million should be 2027, rather than 2021 as per Exhibit SEC-13.[6] In Case 4A, it is my understanding that ENO has provided a transmission study entitled "Results of Transmission Analyses Performed in Support of the NOPS: Requested Case: B2", which models a scenario substantially similar to that of Case 4A (Transmission Alternative plus 200MW total solar plus the Council's 2% DSM goal) from Exhibit SEC-13. Based on the Direct Testimony of Philip J. Movish, a $23.2 million investment in transmission upgrades is required by 2027, rather than $44.3 million in 2021 as modeled in Exhibit SEC-13.

Q. WHAT CHANGES TO THE MODELING INPUTS EMPLOYED IN EXHIBIT SEC-13 ARE APPROPRIATE GIVEN THE TRANSMISSION-RELATED INFORMATION ENO HAS PROVIDED IN THE INSTANT DOCKET?

A. ENO's modeling inputs to Exhibit SEC-13 should be changed so that: a) the $23.2 million investment in transmission in Case 1 (RICE Alternative) is moved from 2021 to 2027, and

[6] See ENO's response to the Advisors' DR CNO 11-10.

b) the 2021 $44.3 million transmission investment in Case 4A is changed to a 2027 transmission investment of $23.2 million.

Q. PLEASE DESCRIBE THE CALCULATION METHODOLOGY ENO EMPLOYS TO PRESENT THE RELATIVE ECONOMIC RANK OF EACH CASE?

A. Exhibit SEC-13 presents the PV of the levelized net-cash flows of each of its seven modeled cases. ENO has calculated a levelized amount for each major cost category and then presented the PV of twenty years of such a levelized amount.

Q. DOES THE PV OF LEVELIZED CASH FLOWS PROPERLY PRESENT THE CASES RELATIVE ECONOMIC RANKING?

A. No, while this methodology may seek to address the fact that the modeling underlying Exhibit SEC-13 lacks out-year data for VSC and MISO PRA revenues (*i.e.*, after 20 years), it is not consistent with the proper application of discounted cash flow valuation methodologies and tends to favor more capital-intensive cases such as cases involving the CT Alternative and the RICE Alternative.

Q. HAVE YOU PREPARED AN ANALYSIS THAT ADDRESSES EACH OF THE ISSUES YOU IDENTIFY RELATED TO EXHIBIT SEC-13?

A. Yes, HSPM Exhibit BSW-4 employs the more appropriate ENO-provided data related to the amount and timing of transmission investments, calculates a PV for each Case over a 20-year time horizon of nominal incremental cash flows, and employs ENO's errata VSC data.

Q. WHY DOES EXHIBIT BSW-4 REFLECT A 20-YEAR TIME HORIZON?

A. ENO has provided economic modeling data having differing time horizons, but a 20-year modeling time horizon is the longest for which all such data exists. In particular, VSC and Capacity Purchases data are for only a 20-year time horizon. As such, Exhibit BSW-4 is able to reflect the most complete ENO economic modeling data by presenting a 20-year PV calculation.

Q. WHAT IS THE DEPRECIABLE USEFUL LIFE OF THE GENERATING UNIT ALTERNATIVES ENO IS PRESENTING IN THE INSTANT DOCKET?

A. For each of the CT unit and the 128 MW Reciprocating Internal Combustion Engine ("RICE") unit (the "RICE Alternative"), the modeled depreciable useful life is 30 years.

Q. WOULD AN ANALYSIS SIMILAR TO THAT PRESENTED IN EXHIBIT BSW-4, BUT OVER A 30 YEAR TIME HORIZON INDICATE A DIFFERENT RELATIVE ECONOMIC RANKING AMONG THE MODELED CASES?

A. Yes, among the cases reflecting the Council's 2% DSM goal. Such an analysis would cause Case 4A (Transmission Alternative plus the Council's 2% DSM goal). to be modeled as the most economic among the other cases involving the Council's 2% DSM goal. as opposed to Case 3G (the CT Alternative plus the Council's 2% DSM goal) under a 20-year timeframe analysis. As my testimony later discusses, when employing Mr. Rogers's illustrative MISO PRA Market Clearing Price ("MCP") (*i.e.*, $6.00/kW-year), Case 4A is the most economic among the cases reflecting the Council's 2% DSM goal whether modeled across a 20-year or a 30-year time horizon. As such, the choice between

employing a 20-year or a 30-year time horizon would not impact the conclusions of an evaluation of the relative economic ranking among the seven modeled cases.

Q. PLEASE SUMMARIZE THE RESULTS OF THE ANALYSIS FROM EXHIBIT BSW-4.

A. The following table summarizes the results of the analysis from Exhibit BSW-4, which changes transmission-related inputs to reflect ENO-provided information.

Table 3
Exhibit BSW-4 Economic Modeling Results
Updated Transmission Investments[1]
($ in millions)

Case	PV of Costs	Relative Economic Rank	Variance of PV of Costs to Least Cost Case	% Variance of PV of Costs to Least Cost Case
Cases w/o Additional DSM Measures				
1 (RICE)	$ [redacted]	3rd	$ [redacted]	[redacted]
1G (CT)	$ [redacted]	1st	-	-
2 (Transmission)	$ [redacted]	2nd	$ [redacted]	[redacted]
Cases w/ the Council's 2% DSM Goal				
3 (RICE)	$ [redacted]	3rd	$ [redacted]	[redacted]
3G (CT)	$ [redacted]	2nd	$ [redacted]	[redacted]
4A (Solar)	$ [redacted]	1st	-	-
4B (Wind)	$ [redacted]	4th	$ [redacted]	[redacted]

[1] Reflects PV analysis over a 20-year time horizon and reflects ENO-provided transmission investment and timing.

Q. HOW DOES EXHIBIT SEC-13 MODEL THE REVENUES AND COSTS RELATED TO THE MISO CAPACITY MARKET?

A. Exhibit SEC-13 forecasts ENO's capacity surplus or deficit by year and calculates either the revenues from the sale of surplus capacity or the cost to purchase capacity to cover a

forecasted deficit in the MISO PRA. ENO estimates the MISO PRA MCP based on the assumption that the MCP will reach an equilibrium with the Cost of New Entry ("CONE") for generating capacity by 2022.

Q. DOES ADVISOR WITNESS ROGERS DISCUSS THE ASSUMPTION OF MCP REACHING CONE EQUILIBRIUM BY 2022?

A. Yes. The Direct Testimony of Joseph W. Rogers, P.E., discusses ENO's assumed 2022 equilibrium, which is employed in Exhibit SEC-13. Mr. Rogers questions ENO's assumption, and he instead employs a MCP of $6.00/kW-year, and escalated annually by 2%, for illustrative purposes in the evaluations performed in the instant docket.

Q. HAVE YOU PREPARED AN ANALYSIS REFLECTING MR. ROGERS'S IDENTIFIED MCP OF $6.00/KW-YEAR, AND ESCALATING ANNUALLY BY 2%?

A. Yes, Exhibit BSW-5 also presents the relative economic ranking of the cases presented in Table 3, but with a PRA MCP of $6.00/kW-year, escalated by 2% annually. The following table summarizes the results of the analysis from Exhibit BSW-5.

Table 4
Exhibit BSW-5 Economic Modeling Results
Updated Transmission Investments and
Updated MISO PRA MCPS[1]
($ in millions)

Case	PV of Costs	Relative Economic Rank	Variance of PV of Costs to Least Cost Case	% Variance of PV of Costs to Least Cost Case
Cases w/o Additional DSM Measures				
1 (RICE)	$	2nd	$	
1G (CT)	$	3rd	$	
2 (Transmission)	$	1st	-	-
Cases w/ the Council's 2% DSM Goal				
3 (RICE)	$	2nd	$	
3G (CT)	$	3rd	$	
4A (Solar)	$	1st	-	-
4B (Wind)	$	4th	$	

[1] Reflects PV analysis over a 20-year time horizon, reflects ENO-provided transmission investment and timing, and reflects a MISO PRA MCP of $6.00/kW-year.

As Exhibit BSW-4 shows, Case 1G (CT), when reflecting ENO's forecasted PRA MCPs, presented MISO PRA revenues having a 20-year PV of $ million, but the same analysis incorporating the $6.00/kW-year PRA MCP (*i.e.*, Exhibit BSW-5) discussed in Mr. Rogers's testimony yields a PV of $ million ($ million less). Incorporating Mr. Rogers's PRA MCP value changes the relative economic ranking among the Cases in favor of the transmission-based scenarios (*i.e.*, Cases 2 and 4A).

IV. TYPICAL MONTHLY BILL IMPACT

Q. HAS ENO ESTIMATED THE TYPICAL MONTHLY BILL IMPACT RELATED TO CERTAIN SCENARIOS MODELED IN EXHIBIT SEC-13?

A. Yes, in response to Advisor discovery, ENO has estimated the typical monthly bill impact of Cases 1 (RICE), 1G (CT), and 2 (Transmission) from Exhibit SEC-13 Addendum 1.[7] I reproduce the results of ENO's analysis below.

	Estimated Levelized Incremental Typical Summer Monthly Bill (Portfolio Level)		
$/kWh (forecasted sales)	Case 1	Case 1G	Case 2
Residential (1,000 kWh)	$7.19	$5.61	$6.49
Commercial (9,125 kWh)	$65.62	$51.16	$59.25
Industrial (91,250 kWh)	$656.19	$511.57	$592.49

Q. PLEASE DESCRIBE THE METHODOLOGY ENO EMPLOYS TO ESTIMATE TYPICAL MONTHLY BILL IMPACTS?

A. In estimating typical monthly bill impacts by case in its addendum response to the Advisors' DR CNO 13-1, ENO first calculates an incremental supply cost by case and by year (*i.e.*, an incremental revenue requirement impact). ENO then levelizes and unitizes these incremental supply costs by calculating their PV across seventeen years and then dividing that PV value by the PV of forecasted MWh sales across the same timeframe, resulting in a levelized $/kWh bill impact for each case (a single $/kWh value for all rate classes). This per-kWh cost allocation methodology is similar to that employed in Rider PPCACR to allow ENO recovery of its fixed costs related to Ninemile 6 and Union PB1.

[7] See ENO's response to the Advisors' DR CNO 13-3 (a) Addendum 1.

ENO then multiplies its levelized $/kWh bill impact by a typical monthly consumption by rate class to present a levelized $/mo typical bill impact.[8]

Q. WHAT COST ALLOCATION METHODOLOGY DOES ADVISOR WITNESS PREP RECOMMEND FOR INTERIM RECOVERY OF FIXED COSTS RELATED TO ANY GENERATING UNIT THE COUNCIL MAY APPROVE IN THE INSTANT DOCKET?

A. The Direct Testimony of Victor M. Prep, P.E. recommends that fixed costs related to any generating unit the Council may approve in the instant docket be recovered on an interim basis based on a cost allocation among the rate classes in proportion to that reflected in ENO's current base rates (*i.e.*, a base rate allocation).

Q. HAVE YOU PERFORMED A TYPICAL MONTHLY BILL ESTIMATE USING THE INTERIM COST ALLOCATION METHODOLOGY RECOMMENDED BY MR. PREP?

A. Yes. I have estimated typical monthly bill impacts for each of the cases from Exhibit BSW-5, allocating fixed costs among the rate classes based on 2016 base-rate revenues, and allocating variable costs (*i.e.*, VSC) based on kWh consumption. The below table presents the results of this analysis for the first year each case models its relevant investment being

[8] I note that the methodology for calculating typical bill impacts ENO employs in its addendum response to the Advisors' DR CNO 13-3 (a) is different from that employed in its initial response.

placed into useful service (*i.e.*, 2020 for cases 1, 1G, 3, 3G, 4A and 4B and 2021 for Case 2).[9]

Table 5
Typical Monthly Bill Impact
Based on Exhibit BSW-5[1]

Case	Residential Typical Bill Impact (1,000 kWh/mo)	Commercial Typical Bill Impact (9,125 kWh/mo)	Industrial Typical Bill Impact (91,250 kWh/mo)
Cases w/o Additional DSM Measures			
1 (RICE)	$6.91	$48.31	$360.29
1G (CT)	$7.33	$51.55	$389.48
2 (Transmission)	$1.82	$12.91	$98.68
Cases w/ the Council's 2% DSM Goal			
3 (RICE)	$22.90	$163.69	$1,197.15
3G (CT)	$23.35	$167.24	$1,228.30
4A (Solar)	$19.47	$137.34	$977.75
4B (Wind)	$17.54	$118.95	$774.48

[1] Reflects a MISO PRA MCP of $6.00/kW-year.

Q. WHY IS THERE SUCH A SIGNIFICANT DIFFERENCE BETWEEN THE CASES WITHOUT ADDITIONAL DSM MEASURES AND CASES INVOLVING THE COUNCIL'S 2% DSM GOAL?

A. ENO modeled the cost of achieving the Council's 2% DSM goal as equal to that estimated by Navigant Consulting, Inc. ("Navigant") in its June 26, 2017 DSM Potential Study performed for ENO.[10] The RICE Alternative cases 1 and 3 as well as the CT Alternative cases 1G and 3G model the same scenarios except that cases 3 and 3G include the cost of

[9] A review of ENO's Form 1 2016 Annual Report to FERC, page 304, indicates that ENO's average monthly kWh Commercial sales were 11,500. For comparability with ENO's typical bill estimates, I employ the same 9,125 kWh/mo value for Commercial customers as did ENO.

[10] See *Entergy New Orleans—Energy Efficiency Potential Study*, Table 10 at page 29.

achieving the Council's 2% DSM goal as estimated by Navigant. As such, the net modeled effect on typical residential monthly bills of accomplishing the Council's 2% DSM goal is $15.99/mo for the RICE Alternative and $16.02/mo for the CT Alternative.

V. RETURN ON EQUITY

Q. PLEASE BRIEFLY DESCRIBE THE CUSTOMARY REGULATORY RATEMAKING METHODOLOGY TO ALLOW A UTILITY THE OPPORTUNITY TO EARN A FAIR RETURN ON ITS INVESTMENTS.

A. It is customary to set a utility's rates based on a revenue requirement that includes a return on a utility's rate base at its Weighted Average Cost of Capital ("WACC").

Q. WHAT ARE THE COMPONENTS OF ENO's WACC?

A. The components of ENO's WACC are: a) the yield to maturity of long-term debt, b) the dividend yield of preferred stock, and c) the Council's approved ROE. As the term's name implies, ENO's WACC is the average of these values weighted by their dollar contributions to ENO's capitalization.

Q. WHAT IS THE PURPOSE OF THE ROE COMPONENT OF WACC?

A. The purpose of the approved-ROE is to allow a return on the equity invested in a utility by its shareholders. While other cost of service components comprising a utility's overall revenue requirement are calculated to allow a utility the opportunity to recover its prudently incurred costs, ROE is calculated to allow a utility to earn a return on the investment made by its shareholders (*i.e.*, a fair return).

Q. WHAT ARE THE MOST RECENT COUNCIL-APPROVED ELECTRIC ROEs FOR NEW ORLEANS?

A. For Legacy-ENO,[11] Council Resolution No. R-09-0136 set an allowed electric ROE of 11.1% on April 2, 2009. For Algiers (then an ELL electric utility), Council Resolution No. R-14-278 set an allowed ROE of 9.95% on July 10, 2014. ENO's analysis in Exhibit SEC-13 employs a ROE of 11.04%, which is equal to the asset-weighted average of ENO's two Council approved electric ROEs of 11.1% and 9.95%.

Q. WHAT IS THE MOST RECENTLY APPROVED RETAIL ELECTRIC ROE AMONG THE OPERATING COMPANIES?

A. Based on my review of Entergy Corporation's Form 10-K 2016 Annual Report to the SEC, the Arkansas Public Service Commission ("APSC") authorized an electric ROE for EAI of 9.75% in February 2016.[12] I am not aware of any subsequent ROE approvals by the Operating Companies' other retail regulators.

Q. IS AN APPROVED ROE OF 9.75% INDICATIVE OF THE ROE THE COUNCIL MAY APPROVE FOR ENO AS PART OF THE COMBINED RATE CASE?

A. Not necessarily. The Council is not bound by the regulatory ratemaking decisions of other regulatory bodies such as the APSC. Further, the Council will likely be presented a record

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[11] Legacy-ENO refers to ENO's service territory on the east bank of the Mississippi River.

[12] See Entergy Corporation's Form 10-K 2016 Annual Report to the SEC at page 83.

in the Combined Rate Case that includes then more current data than that before the APSC in February 2016. For example, the dividend yield of the Utilities Select Sector SPDR fund (ticker: 'XLU'), an exchange traded fund consisting of the stocks of investor owned utility holding companies, has fallen from 3.88% to 3.03% from February 1, 2016 through October 31, 2017.[13] Dividend yield is an additive component of ROE as calculated using the commonly used Discounted Cash Flow ("DCF") ROE estimation formula.[14] As such, based on dividend yield, the formulaic construction of ROE based on the DCF methodology suggests a declining ROE since the APSC's decision.

Q. FOR ILLUSTRATIVE PURPOSES AND IN ORDER TO DEMONSTRATE THE EFFECT ON ENO'S REVENUE REQUIREMENT DUE TO A REDUCTION IN ENO'S COUNCIL-APPROVED ROE, WHAT ROE HAVE YOU USED?

A. I have used a 9.75% ROE as it may be closer to the range of ROEs the Council may be asked to consider in the Combined Rate Case than is ENO's current 11.1% ROE, based on data available today. As such, to assist the Council in evaluating the relative economic ranking and typical bill impacts of the modeled costs in the instant docket, an analysis based on a 9.75% ROE may be probative.

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[13] http://www.dividend.com/dividend-stocks/uncategorized/other/xlu-utilities-select-sector-spdr/#dividend-yield-history.

[14] The single-stage DCF formula is k = D1/P0 + g, where k=ROE, g=dividend growth, and D1/P0=dividend yield.

Q. ARE YOU ESTIMATING OR RECOMMENDING AN ROE FOR COUNCIL APPROVAL AT THIS TIME?

A. No, the proper venue for such Council consideration is the Combined Rate Case. My analysis in the instant docket is simply to present a ROE that may be indicative of those the Council may consider as part of the Combined Rate Case and solely for the purpose of evaluating the relative economic rank and typical bill impacts of certain modeled cases. As the modeled cases involve varying capital investments, their relative economic ranking may be affected by the ROE used to model their revenue requirement. Any ROE recommendation as part of the Combined Rate Case should be based on a comprehensive review of ENO's circumstances at that time and the performance of utilities comparable to ENO, and such data does not yet exist.

Q. HAVE YOU PREPARED AN ANALYSIS COMPARABLE TO THAT PRESENTED IN EXHIBIT BSW-5, BUT BASED UPON A ROE OF 9.75%?

A. Yes, I have performed the same analysis as was performed related to Exhibit BSW-5, but based on an ROE of 9.75% instead of 11.04%. The results of this analysis are presented in HSPM Exhibit BSW-6. The below table presents a summary of Exhibit BSW-6.

Table 6
Exhibit BSW-6 Economic Modeling Results
9.75% ROE[1]
($ in millions)

Case	PV of Costs	Relative Economic Rank	Variance of PV of Costs to Least Cost Case	% Variance of PV of Costs to Least Cost Case
Cases w/o Additional DSM Measures				
1 (RICE)	$ [redacted]	2nd	$ [redacted]	[redacted]
1G (CT)	$ [redacted]	3rd	$ [redacted]	[redacted]
2 (Transmission)	$ [redacted]	1st	-	-
Cases w/ the Council's 2% DSM Goal				
3 (RICE)	$ [redacted]	2nd	$ [redacted]	[redacted]
3G (CT)	$ [redacted]	3rd	$ [redacted]	[redacted]
4A (Solar)	$ [redacted]	1st	-	-
4B (Wind)	$ [redacted]	4th	$ [redacted]	[redacted]

[1] Reflects PV analysis over a 20-year time horizon, reflects ENO-provided transmission investment and timing, and reflects a MISO PRA MCP of $6.00/kW-year.

As the above table shows in comparison to Table 5, which presents the same analysis but employing a ROE of 11.04%, a ROE of 9.75% reduces the PV of modeled costs involving a generating unit somewhat (by approximately 1%). This is because the capital costs' components in the modeling are relatively small on a PV basis (*e.g.*, RICE Alternative Case 1's RICE unit comprises 12.5% of the case's total PV cost). Employing a 9.75% ROE does not alter the relative economic ranking of the modeled cases as compared to employing a 11.04% ROE.

Q. HAVE YOU ESTIMATED THE TYPICAL BILL IMPACTS RELATED TO THE COSTS MODELED IN SUPPORT OF EXHIBIT BSW-6?

A. Yes, I estimated typical monthly bill impacts using the same methodology used to calculate the data presented in Table 5 above (11.04% ROE), but employing the cost results of my

analysis in support of Exhibit BSW-5. The below table presents the typical monthly bill impact related to the cost estimates from Exhibit BSW-5 (9.75% ROE).

Table 7
Typical Monthly Bill Impact
Based on Exhibit BSW-6[1]

Case	Residential Typical Bill Impact (1,000 kWh/mo)	Commercial Typical Bill Impact (9,125 kWh/mo)	Industrial Typical Bill Impact (91,250 kWh/mo)
Cases w/o Additional DSM Measures			
1 (RICE)	$6.43	$44.87	$333.84
1G (CT)	$6.79	$47.75	$360.26
2 (Transmission)	$1.69	$11.96	$91.46
Cases w/ the Council's 2% DSM Goal			
3 (RICE)	$22.41	$160.13	$1,170.70
3G (CT)	$22.81	$163.31	$1,199.08
4A (Solar)	$19.08	$134.59	$957.38
4B (Wind)	$17.13	$116.03	$752.74

[1] Reflects a MISO PRA MCP of $6.00/kW-year and a 9.75% ROE.

The modeled typical bill impact of employing a 9.75% ROE as compared to employing a 11.04% ROE is a residential typical bill reduction of 7.5% for the RICE Alternative Case 1 and 8% for the CT Alternative Case 1G. As with my estimation of the relative economic ranking of the modeled cases employing a 9.75% ROE as compared to an 11.04% ROE, the relative ranking of typical bill impacts is unchanged when employing this reduced ROE.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, although as I discuss elsewhere in my testimony, I reserve the right to amend this testimony based on responses to discovery pending as of the preparation of this testimony.

AFFIRMATION

STATE OF COLORADO)
)
COUNTY OF DENVER)

I, Byron S. Watson, am the person identified in the attached Testimony and such testimony was prepared by me or under my direct supervision; the answers and information set forth therein are true to the best of my knowledge and belief, and if asked the questions set forth therein, my answers thereto would, under oath, be the same.

Byron S. Watson

Subscribed and sworn to before me this 20th day of November, 2017.

NOTARY PUBLIC

ROBIN MARIE SHAVER-LaBARGE
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20064043695
MY COMMISSION EXPIRES APRIL 3, 2019