

**BEFORE THE  
COUNCIL OF THE CITY OF NEW ORLEANS**

**IN RE: APPLICATION OF ENTERGY )  
NEW ORLEANS, INC. FOR APPROVAL TO )  
DEPLOY ADVANCED METERING )  
INFRASTRUCTURE, AND REQUEST FOR )  
COST RECOVERY AND RELATED RELIEF )**

**DOCKET NO. UD-16-04**

**DIRECT TESTIMONY  
OF  
JOSEPH A. VUMBACO, P.E.  
ON BEHALF OF  
THE ADVISORS TO THE  
COUNCIL OF THE CITY OF NEW ORLEANS**

**May 26, 2017**

**PREPARED DIRECT TESTIMONY  
OF**

**JOSEPH A. VUMBACO, P.E.**

**I. INTRODUCTION**

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

2 **A.** My name is Joseph A. Vumbaco. My business address is 8055 East Tufts Avenue, Suite  
3 1250, Denver, Colorado, 80237. I am a registered Professional Engineer in the states of  
4 Louisiana, Connecticut, Colorado, Utah and Texas, and Managing Partner in the firm  
5 Legend Consulting Group Limited of Denver, Colorado (“Legend”).

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

7 **A.** I am presenting testimony on behalf of the Advisors to the Council of the City of New  
8 Orleans (“Council”). The Council regulates the rates, terms, and conditions of electric and  
9 gas service of Entergy New Orleans, Inc. (“ENO”), which is an affiliate of Entergy  
10 Corporation (“Entergy”).<sup>1</sup>

11 **Q. PLEASE SUMMARIZE YOUR RELEVANT EDUCATIONAL BACKGROUND**  
12 **AND TESTIMONY EXPERIENCE.**

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<sup>1</sup> 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”).

1    **A.**    Exhibit No. \_\_\_\_ (JAV-2) provides a summary of my relevant education and professional  
2            experience and Exhibit No. \_\_\_\_ (JAV-3) lists my previous testimony experience.

3    **II.    PURPOSE OF TESTIMONY AND SUMMARY**

4    **Q.    WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

5    **A.**    The purpose of my testimony is to introduce the other Advisor witnesses and the general  
6            areas of their testimony and recommend that the Council find that ENO’s proposed  
7            Advanced Metering Infrastructure (“AMI”) deployment, as modified by recommendations  
8            of the Council Advisors’ (“Advisors”) witnesses in the instant docket, is in the public  
9            interest, and that prudently incurred costs related to such deployment be presumed  
10           recoverable through base rates. Further, my testimony addresses data security and privacy  
11           issues and makes recommendations to the Council regarding such.

12   **Q.    PLEASE SUMMARIZE YOUR TESTIMONY AND MAJOR CONCLUSIONS OR**  
13           **RECOMMENDATIONS.**

14   **A.**    My testimony discusses the public interest considerations related to ENO’s proposed AMI  
15            deployment, requested special cost recovery mechanism, and requested cost deferral.  
16            Based on my review of ENO testimony, discovery responses, and the analyses and  
17            recommendations presented in the other Advisor testimony, I recommend that the Council  
18            approve ENO’s proposed AMI deployment as modified by recommendations of the  
19            Advisor witnesses in the instant docket.

1 **Q. CAN YOU PLEASE PROVIDE AN OVERVIEW OF THE OTHER ADVISOR**  
2 **WITNESSES TESTIFYING IN THIS DOCKET AND THE PURPOSE OF THEIR**  
3 **TESTIMONY?**

4 **A.** Yes. The other Advisor witnesses in this docket providing testimony are Mr. Victor M.  
5 Prep, P.E., Mr. Byron S. Watson, CFA, CRRA, and Ms. Cortney A. Crouch. Mr. Prep's  
6 testimony discusses the operational net-benefits of AMI deployment and potential further  
7 benefits that may be realized utilizing AMI technologies. Mr. Prep also discusses the  
8 appropriate return ENO should be allowed on its stranded assets. Mr. Watson's discusses  
9 the appropriateness of ENO's requested cost deferrals, ENO's requested special cost  
10 recovery, ENO's proposed AMI opt-out program, data security and customer data privacy,  
11 and ENO's planned pre-pay electric service. Ms. Crouch's testimony presents her analysis  
12 quantifying the observations and conclusions from Mr. Prep's testimony.

13 **III. APPLICATION BEFORE THE COUNCIL IN DOCKET NO. UD-16-04**

14 **Q. PLEASE IDENTIFY THE APPLICATION THAT CAUSED THIS DOCKET TO**  
15 **BE INITIATED.**

16 **A.** On October 18, 2016, ENO filed its *Application for Approval to Deploy Advanced*  
17 *Metering Infrastructure, Request for Cost Recovery and Related Relief* ("Application")  
18 with the Council. On January 12, 2017, the Council adopted Resolution R-17-7 which  
19 opened the instant docket and established the procedural schedule to consider the  
20 Application. My testimony is being filed in accordance with that procedural schedule, as  
21 subsequently adjusted by the Hearing Officer.

1 **Q. WHAT RELIEF DOES ENO SEEK IN THE APPLICATION?**

2 **A.** The Application requests, in part, that the Council: 1) find that ENO's deployment of AMI,  
3 including the removal and retirement of existing meters, is in the public interest, and is  
4 therefore prudent; 2) confirm that ENO's investments in AMI are presumed prudent and  
5 eligible for recovery from customers, and that ENO may recover all prudently-incurred  
6 costs of the AMI deployment; 3) approve ENO's proposed special cost recovery  
7 mechanism (the "AMI Customer Charge"); 4) authorize ENO to defer certain Operations  
8 and Maintenance ("O&M") costs incurred in 2017 and 2018 for later recovery plus carrying  
9 charges at ENO's Weighed Average Cost of Capital ("WACC"); 5) find that ENO may  
10 continue to recover stranded costs related to existing meters according to current  
11 depreciation rates along with a return on related rate base at ENO's WACC; and 7) approve  
12 an AMI opt-out program and related customer fees.

13 **IV. AMI**

14 **Q. PLEASE BRIEFLY DESCRIBE AMI, AS ENO IS PROPOSING.**

15 **A.** As Advisor Witness Victor M. Prep, P.E. discusses in detail in his testimony, AMI, as  
16 proposed by ENO, comprises an integrated set of technologies: smart meters with data  
17 networking capabilities, a data network connecting such smart meters together and to  
18 ENO's information technology systems, and a collection of software systems enabling the  
19 use of AMI technologies such as billing, outage management, operations, and providing  
20 customer service.

21 **Q. PLEASE BRIEFLY DESCRIBE THE AMI DEPLOYMENT ENO IS PROPOSING.**

1    **A.**    ENO, in its Application, proposes to deploy AMI over a multi-year period involving three  
2            phases: 1) an already ongoing design phase, including the selection of preferred vendors,  
3            2) a system build phase, which includes validating system functionality and some customer  
4            education, and 3) actual meter and communication network deployment commencing in  
5            2019.

6    **Q.    WHAT IS ENO’S ESTIMATED TOTAL COST FOR AMI DEPLOYMENT?**

7    **A.**    ENO estimates a total cost of \$76.6 million, consisting of \$29.8 in meter costs, \$18.8  
8            million in communication network costs, and \$28.0 million in software, system integration,  
9            and other costs.

10   **Q.   DO YOU AGREE WITH MR. PREP THAT ENO’S PROPOSED AMI**  
11       **DEPLOYMENT TIMELINE IS REASONABLE?**

12   **A.**    Yes. I agree with Mr. Prep that ENO’s AMI deployment timeline is supported by sufficient  
13            documentation and falls within the range of similar such deployment timelines.

14   **V.    PUBLIC INTEREST**

15   **Q.    WHAT IS THE PUBLIC INTEREST STANDARD IN UTILITY REGULATION?**

16   **A.**    The public interest theory of regulation seeks, in general terms, to protect and benefit the  
17            public at large through a balancing of interests in any regulatory decision. In this docket,  
18            ENO is asking the Council to determine whether ENO’s proposed AMI deployment and  
19            related investments are in the public interest.

1 **Q. IN DETERMINING WHETHER ENO’S PROPOSED AMI INVESTMENT IS IN**  
2 **THE PUBLIC INTEREST, IS THERE A SPECIFIC FORMULA OR**  
3 **PARTICULAR SET OF ANALYSES UPON WHICH THE COUNCIL CAN RELY?**

4 **A.** No. Many times the definition of what is in the public interest has been referred to as a  
5 “net benefits” test, but such a test encompasses more than a simple algorithm or numerical  
6 analyses and often results in a subjective balancing of interests by the regulator in making  
7 its determination. Such is the case in this docket. As Mr. Prep discusses, ENO’s ratepayer  
8 benefit analysis does not account for all potential benefits to ratepayers and the public at  
9 large from AMI deployment. Even though ENO’s testimony estimates an initial increase  
10 in ENO’s revenue requirement as a result of AMI deployment, it is important to consider  
11 all relevant factors in deciding whether ENO’s proposed AMI deployment is in the public  
12 interest *in toto*.

13 **Q. DO YOU AGREE WITH MR. PREP’S CATEGORIES FOR EVALUATING THE**  
14 **BENEFITS OF AMI?**

15 **A.** Yes. Mr. Prep evaluates AMI’s benefits according to four categories: economic operational  
16 cost benefits, reliability and power quality benefits, environmental benefits, and security  
17 and safety benefits. I agree that these categories are suitable for an evaluation of whether  
18 ENO’s AMI deployment would serve the public interest.

19 **Q. DOES ENO’S PROPOSED AMI DEPLOYMENT SERVE THE PUBLIC**  
20 **INTEREST?**

1    **A.**    Yes. As Mr. Prep discusses in his testimony and as Ms. Crouch calculates in her testimony,  
2           AMI deployment is reasonably expected to provide net economic operational cost benefits  
3           to ratepayers over the deployment’s useful life. Further, as Mr. Prep discusses, AMI  
4           deployment is reasonably expected to enhance utility service reliability and power quality,  
5           provide environmental benefits through enabling reduced consumption and demand, as  
6           well as enhance utility service security and safety. As such, ENO’s proposed AMI  
7           deployment serves the public interest.

8    **Q.    WHAT IS YOUR RECOMMENDATION TO THE COUNCIL WITH REGARD TO**  
9           **WHETHER ENO’S PROPOSED AMI DEPLOYMENT SHOULD BE FOUND TO**  
10          **BE IN THE PUBLIC INTEREST?**

11   **A.**    I recommend that the Council find that ENO’s proposed AMI deployment, as modified by  
12           the recommendations of the Advisor witnesses in the instant docket, is in the public interest  
13           and related costs be presumed to be prudently incurred.

14   **VI.    SINGLE ISSUE RATEMAKING**

15   **Q.    WHAT IS ENO’S AMI CUSTOMER CHARGE?**

16   **A.**    ENO’s proposed AMI Customer Charge is an adjustment to base rates as part of the  
17           Combined Rate Case<sup>2</sup> and three further adjustments to base rates effective January 2020,  
18           2021, and 2022 and is designed to recover AMI-related costs estimated for the same period

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<sup>2</sup> ENO expects that the Council may set new base rates as part of the Combined Rate Case in August 2019.



1 in which the adjustments are effective (i.e., contemporaneous cost recovery). Further, the  
2 AMI Customer Charge would reflect a credit for certain estimated avoided O&M costs for  
3 each such period, primarily avoided costs related to manual meter reading. ENO proposes  
4 that its final AMI Customer Charge as of 2022 remain in effect thereafter until a subsequent  
5 Council rate action could allow ENO recovery of its AMI-related costs through rates  
6 established according to customary regulatory ratemaking principles.

7 **Q. DO YOU AGREE WITH MR. WATSON THAT ENO'S PROPOSED AMI**  
8 **CUSTOMER CHARGE CONSTITUTES SINGLE ISSUE RATEMAKING?**

9 **A.** Yes. ENO's proposed AMI Customer Charge evaluates ENO's incremental costs  
10 associated with its proposed AMI deployment as well as some related avoided costs  
11 separately from ENO's total overall cost of service. As such, I agree with Mr. Watson that  
12 it constitutes single issue ratemaking.

13 **Q. DO YOU AGREE WITH MR. WATSON'S RECOMMENDATION TO THE**  
14 **COUNCIL TO DENY ENO'S REQUEST FOR AN AMI CUSTOMER CHARGE?**

15 **A.** Yes, as ENO's proposed AMI Customer charge constitutes single issue ratemaking.  
16 Furthermore, as Mr. Watson has demonstrated, ENO's financial position would not  
17 reasonably be jeopardized by allowing ENO to recover its AMI-related costs through base  
18 rates set according to customary regulatory ratemaking principles, I agree with Mr.  
19 Watson's recommendation to the Council to deny ENO's proposed AMI Customer Charge.

20 **Q. PLEASE DESCRIBE THE COST DEFERRAL ENO IS REQUESTING.**

1    **A.**    As Mr. Watson discusses in detail, ENO is requesting as part of its Application that the  
2           Council allow ENO to defer certain O&M costs for later recovery to include carrying  
3           charges at ENO's WACC.

4    **Q.**    **DO YOU AGREE WITH MR. WATSON'S RECOMMENDATION THAT THE**  
5           **COUNCIL DENY ENO'S REQUEST FOR A COST DEFERRAL?**

6    **A.**    Yes. As Mr. Watson discusses, ENO's cost deferral request is contrary to the terms of  
7           ENO's current rate freeze. Also as Mr. Watson demonstrates, ENO's current rates already  
8           allow it to recover its costs of service, including the O&M costs it seeks to defer.

9    **VII. STRANDED COSTS**

10   **Q.**    **WHAT ARE STRANDED COSTS?**

11   **A.**    Generally, stranded costs can be described for the purposes of AMI deployment as those  
12           costs that are the result of a utility's investments either ceasing to be or never becoming  
13           used and useful in the provision of service to ratepayers. In the case of the instant docket,  
14           the early retirement of currently existing meter plant will result in stranded costs whose  
15           net-book value as of December 31, 2016 is \$43.8 million and whose annual depreciation  
16           expense totals \$1.5 million.<sup>3</sup> Mr. Watson estimates ENO's annual revenue requirement  
17           related to these assets to be approximately \$4.6 million if they were retired on December  
18           31, 2016.

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<sup>3</sup> See ENO's response to the Advisors RFI CNO 2-22 (b).

1 **Q. DO YOU AGREE WITH MR. PREP'S RECOMMENDATION TO THE COUNCIL**  
2 **THAT ENO'S STRANDED COSTS RELATED TO AMI DEPLOYMENT BE**  
3 **RECOVERABLE?**

4 **A.** Yes. While Mr. Prep notes that some regulators have denied recovery of all stranded costs  
5 related to AMI deployments, regulators may take into account the interests of all  
6 stakeholders when setting rates, and ENO reasonably should be encouraged to deploy AMI.  
7 Mr. Prep identifies certain regulators that have set rates regarding stranded costs less than  
8 equivalent rates for plant still in useful service. As such, I agree with Mr. Prep that ENO  
9 should be afforded extraordinary treatment allowing recovery of stranded costs in this case,  
10 but that ENO should share the risk of such investment given the circumstances in that  
11 ENO's allowed return on AMI-related stranded costs' rate base should at ENO's debt-only  
12 WACC. Specifically, I agree with Mr. Prep's recommendation that ENO be allowed to  
13 record a regulatory asset equal to the then net book value of stranded costs, but that ENO  
14 be allowed a return on the rate base of such a regulatory asset at ENO's debt-only WACC,  
15 and that ENO be allowed to recover such a regulatory asset's amortization cost over the  
16 15-year period recommended by Mr. Watson.

17 **VIII. COST ALLOCATION METHODOLOGY**

18 **Q. HOW DOES ENO PROPOSE TO ALLOCATE AMI-RELATED COSTS FOR**  
19 **RECOVERY?**

20 **A.** As Mr. Prep discusses, ENO proposes to allocate responsibility of AMI-related costs on a  
21 per-customer basis.

1 **Q. DO YOU AGREE WITH MR. PREP'S RECOMMENDATION TO THE COUNCIL**  
2 **REGARDING ALLOCATION OF AMI-RELATED COSTS FOR RECOVERY?**

3 **A.** Yes. As Mr. Prep discusses, allocation of AMI-related costs on a per-customer basis does  
4 not properly reflect the wide range of benefits related to AMI-deployment afforded the  
5 various customer classes and unfairly burdens residential and other small customer classes.  
6 As such, I agree with Mr. Prep's recommendation that AMI-related cost responsibility be  
7 allocated among the customer classes based on a methodology weighted by customer  
8 count, energy consumption, and peak demand.

9 **IX. OTHER MATTERS FOR COUNCIL CONSIDERATION**

10 **Q. PLEASE DESCRIBE ENO'S PROPOSED AMI OPT-OUT PROGRAM.**

11 **A.** As Mr. Watson discusses in detail, ENO proposes to allow residential customers to opt-out  
12 of AMI by allowing them service through legacy meters and through manual meter reading.  
13 ENO proposes to impose certain up-front and monthly charges on customers who opt-out  
14 of AMI.

15 **Q. DO YOU AGREE WITH MR. WATSON'S RECOMMENDATION TO THE**  
16 **COUNCIL REGARDING ENO'S AMI OPT-OUT PROGRAM?**

17 **A.** Yes. I agree with Mr. Watson that opting-out of AMI is a personal choice for utility  
18 customers and costs related to such a choice should be borne only by those customers who  
19 opt-out. As such, I agree with Mr. Watson's recommendation to the Council that ENO

1 ensure customers who do not opt-out of AMI are not responsible for the recovery of the  
2 costs of ENO's AMI opt-out program.

3 **Q. DO YOU AGREE WITH MR. WATSON'S RECOMMENDATIONS TO THE**  
4 **COUNCIL REGARDING DATA SECURITY?**

5 **A.** Yes. I agree with Mr. Watson's observation that ENO has made data security a part of the  
6 AMI deployment, has engaged reputable vendors to ensure data security, and plans to  
7 implement an AMI system that will secure customer data. As data security is an important  
8 issue relative to the public interest, I agree with Mr. Watson's recommendation that ENO  
9 be required to make periodic reports before the Council relative to data security.

10 **Q. DO YOU AGREE WITH MR. WATSON'S RECOMMENDATIONS TO THE**  
11 **COUNCIL REGARDING CUSTOMER DATA PRIVACY?**

12 **A.** Yes. I agree with Mr. Watson's recommendations that the Council develop a policy  
13 regarding customer data privacy regarding AMI-related data and that ENO should be  
14 required to make periodic reports to the Council relative to customer data privacy.

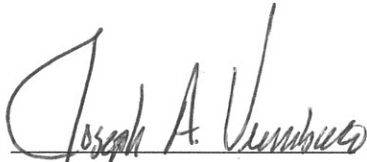
15 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

16 **A.** Yes.

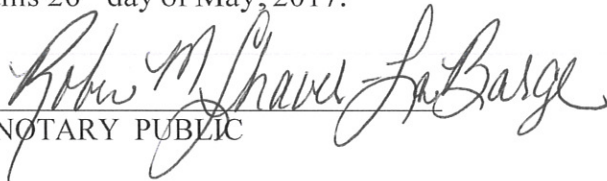
**AFFIRMATION**

STATE OF COLORADO    )  
  )  
COUNTY OF DENVER    )

I, Joseph A. Vumbaco, 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.

  
\_\_\_\_\_  
Joseph A. Vumbaco

Subscribed and sworn to before me  
this 26<sup>th</sup> day of May, 2017.

  
\_\_\_\_\_  
NOTARY PUBLIC

**ROBIN MARIE SHAVER-LABARGE  
NOTARY PUBLIC  
STATE OF COLORADO  
NOTARY ID 20084043885  
MY COMMISSION EXPIRES APRIL 3, 2019**