Entergy Services, Inc.
639 Loyola Avenue (70113)
P.O. Box 61000
New Orleans, LA 70161-1000
Tel 504 576 2603
Fax 504 576 5579

Brian L. Guillot
Senior Counsel
Legal Services – Regulatory
bguillot1@entergy.com

November 9, 2018

Via Hand Delivery
Ms. Lora W. Johnson, CMC, LMMC
Clerk of Council
Room 1E09, City Hall
1300 Perdido Street
New Orleans, LA 70112

Re: Application of Entergy New Orleans, LLC for Approval of Renewables Portfolio and Request for Cost Recovery and Related Relief
CNO Docket NO.: UD-18-06

Dear Ms. Johnson:

Please find enclosed for your further handling an original and three copies of the Supplemental Testimony and Exhibits of Michael J. Goin and Seth E. Cureington on behalf of Entergy New Orleans, LLC. Please file an original and two copies into the record in the above referenced matter, and return a date stamped copy to our courier.

In connection with the Company's filing, a Confidential Version of the above-described documents bearing the designation "Highly Sensitive Protected Materials" are being provided to the appropriate reviewing parties pursuant to the terms and conditions of the Official Protective Order adopted in Council Resolution R-07-432. Portions of the information included in the filing consist of Highly Sensitive Protected Materials pursuant to Council Resolution R-07-432, the disclosure of which could subject not only the Company, but also its customers, to a substantial risk of harm. As such, these confidential materials shall be exempt from public disclosure, subject to the provisions of Council Resolution R-07-432.

Thank you for your assistance with this matter.

Sincerely,

Brian L. Guillot

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BY:

Enclosures

cc: Official Service List (Public version via email)
Appropriate Viewing Representatives (Confidential version via UPS)

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BEFORE THE

COUNCIL OF THE CITY OF NEW ORLEANS

APPLICATION OF ENTERGY NEW ORLEANS, LLC FOR APPROVAL OF RENEWABLES PORTFOLIO AND REQUEST FOR COST RECOVERY AND RELATED RELIEF	**)** **)** **)** **)** **)**	**DOCKET NO. UD-18-06**

SUPPLEMENTAL DIRECT TESTIMONY

OF

SETH E. CUREINGTON

ON BEHALF OF

ENTERGY NEW ORLEANS, LLC

CONFIDENTIAL VERSION

HIGHLY SENSITIVE PROTECTED MATERIALS PURSUANT TO COUNCIL RESOLUTION R-07-432 HAVE BEEN REDACTED

NOVEMBER 2018

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I. INTRODUCTION AND PURPOSE

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Seth E. Cureington. My business address is 1600 Perdido Street, New Orleans, Louisiana 70112. I am the same Seth Cureington that filed Direct Testimony in this docket.

Q2. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY?

A. I am testifying on behalf of Entergy New Orleans, LLC ("ENO" or the "Company") in support of the Company's Application, which seeks approval of its proposed renewable energy resources portfolio consisting of a 20 megawatt ("MW") self-build solar project located in New Orleans East ("New Orleans Solar Station" or "NOSS"), a 50 MW acquisition of a solar project located outside of Orleans Parish ("Iris Solar Facility" or "ISF"), and a 20 MW purchase power agreement from a solar project that is also located outside of Orleans Parish ("St. James PPA") (collectively the "Renewables Portfolio").

On July 31, 2018, I filed Direct Testimony in this Docket in which, among other things, I explained the 2016 RFP evaluation process and provided a general overview of the evaluation results. I also provided the results of the Company's economic analysis related to each of the resources in the Renewables Portfolio.

I am filing this Supplemental Direct Testimony in the interest of transparency in order to update the results of the economic analysis for each of the solar resources to account for the most recent planning assumptions.

II. RESOURCE NEED

Q3. PLEASE EXPLAIN THE PROCESS BY WHICH THE COMPANY IDENTIFIED ITS LONG-TERM RESOURCE PLANNING NEEDS.

A. Consistent with ENO's regulatory obligations, and as discussed in detail in my Direct Testimony, the Company's long-term resource planning process seeks to design a portfolio of resources that reliably meets customer power needs at the lowest reasonable supply cost while considering risk. Through that process, ENO identified the long-term resource planning needs addressed in my Direct Testimony, including its overall long-term capacity need. As explained in my Direct Testimony, the Company continues to have a need for additional long-term capacity and would be short capacity in each year of the planning horizon if the Renewables Portfolio is not approved.

Specifically, projected peak load plus the target Planning Reserve Margin ("PRM") results in a long-term capacity need that exceeds the Company's long-term supply- and demand-side resources in many years of the planning horizon, indicating a need to deploy additional long-term resources. As shown in HSPM Exhibit SEC-2 to my Direct Testimony, without the Renewables Portfolio the Company projects an overall need for approximately 19 MW of capacity by 2021 and up to 96 MW by 2032. In other words, even accounting for the construction of the New Orleans Power Station, the Company would be short in each year of the 20-year planning horizon without the Renewables Portfolio. When the Renewables Portfolio is included, the analysis shows a very modest average 29 MW surplus (*i.e.*, an average of 2% of the Company's projected total load requirement) for eight years of the 20-

year planning horizon, after which the Company projects the need for additional capacity associated with the deactivation of legacy gas and coal units, which need is projected to substantially increase upon the deactivation of Union Power Block 1.

III. UPDATED ECONOMIC ANALYSIS

Q4. PLEASE DESCRIBE THE MODELING ASSUMPTIONS THAT WERE UPDATED IN THIS CASE.

A. As listed below, there were many different factors that were updated in the economic analysis, which resulted from changes in the Company's planning assumptions as compared to the original economic analysis conducted in early 2018. These changes resulted in various increases and decreases in the projects' economics, so the Company decided to completely update the economics for the Council's consideration. The following assumptions were updated in the supplemental analysis:

- Updated project cost estimates;
- The use of BP19 Capacity Price Forecast and BP19 Reference Gas and Low Gas LMP forecasts (lowered project economics);
- Proposal-specific property tax and insurance (lowered project economics);
- Inclusion of property tax as benefit for New Orleans project (improved project economics);
- Asset life increased to 30 years (improved project economics);
- Assumed 10-year terminal value (improved project economics);
- ITC methodology (improved and lowered project economics);
- Updated O&M rate (improved project economics);

Q5. PLEASE SUMMARIZE THE RESULTS OF THE UPDATED ECONOMIC ANALYSIS.

A. The Company ran three different cases for each solar project. As explained below, the three cases share all the original and/or updated assumptions listed above with the exception of capacity value. As explained below, using the avoided cost of another long-term resource as an input for the value of capacity for these solar resources is an important sensitivity for the Council to consider. Thus, the Company included a sensitivity using the levelized cost of a Wärtsilla engine as the value of capacity, a second case using the levelized cost of a generic CT as the value of capacity; and finally, a case that simply updates projected short-term market revenues as the value of capacity. The results of these scenarios are as follows:

Case 1: Levelized Wärtsilla Capacity Value (HSPM)

Levelized Wärtsilla Capacity Value			
Proposal	**Reference Case Net Benefit [2017$ - $M]**	**Net Benefit with Property Tax Sensitivity** *Property Tax modeled as both a cost and a benefit to ENO Customers (NOSS only)* ***[2017$ - $M]***	**Net Benefit with Fuel Diversity Value and Property Tax Benefit [2017$ - M]**
50 MW IRIS Solar Facility BOT Proposal 9008A	[redacted]	[redacted]	[redacted]
20 MW New Orleans Solar Station Self-Build Proposal 7436	[redacted]	[redacted]	[redacted]
20 MW Sunchase PPA Proposal 2987P	[redacted]	[redacted]	[redacted]
90 MW Portfolio Net Benefit	[redacted]	[redacted]	[redacted]

Case 2: Levelized CT Capacity Value (HSPM)

Levelized CT Capacity Value			
Proposal	**Reference Case Net Benefit [2017$ - $M]**	**Net Benefit with Property Tax Sensitivity** *Property Tax modeled as both a cost and a benefit to ENO Customers (NOSS only)* ***[2017$ - $M]***	**Net Benefit with Fuel Diversity Value and Property Tax Benefit [2017$ - M]**
50 MW IRIS Solar Facility BOT Proposal 9008A	[redacted]	[redacted]	[redacted]
20 MW New Orleans Solar Station Self-Build Proposal 7436	[redacted]	[redacted]	[redacted]
20 MW Sunchase PPA Proposal 2987P	[redacted]	[redacted]	[redacted]
90 MW Portfolio Net Benefit	[redacted]	[redacted]	[redacted]

Case 3: MISO Revenues as Capacity Value (HSPM)

MISO Capacity Revenues as Capacity Value			
Proposal	**Reference Case Net Benefit [2017$ - $M]**	**Net Benefit with Property Tax Sensitivity** *Property Tax modeled as both a cost and a benefit to ENO Customers (NOSS only)* ***[2017$ - $M]***	**Net Benefit with Fuel Diversity Value and Property Tax Benefit [2017$ - M]**
50 MW IRIS Solar Facility BOT Proposal 9008A	[redacted]	[redacted]	[redacted]
20 MW New Orleans Solar Station Self-Build Proposal 7436	[redacted]	[redacted]	[redacted]
20 MW Sunchase PPA Proposal 2987P	[redacted]	[redacted]	[redacted]
90 MW Portfolio Net Benefit	[redacted]	[redacted]	[redacted]

Q6. PLEASE EXPLAIN WHY USING THE LEVELIZED COST OF A LONG-TERM RESOURCE IS AN APPROPRIATE INPUT FOR THE CAPACITY VALUE OF THE PROPOSED RESOURCES FOR PURPOSES OF THE ECONOMIC ANALYSIS.

A. As the MISO Independent Market Monitor ("IMM") has stated in its 2017 Report, short-term "capacity market design issues…have contributed to understated price signals."[1] The IMM recognized that the capacity market is undervaluing incremental capacity above the minimum MISO requirement at zero, which is "inconsistent with its true reliability value and results in inefficient capacity market outcomes."[2] In other words, from a MISO market perspective, the IMM recognized that there is value to adding incremental capacity above the minimum MISO requirement because such incremental capacity is valuable in maintaining the system reliability given the inevitability of unit deactivations associated with an aging generation fleet. The Company's original economic analysis valued the capacity of these solar resources based on the expected revenues generated in the short-term MISO market, which as the IMM has stated, does not represent the true value of capacity when MISO is in a surplus environment. The IMM stated that the market is currently sending inefficient price signals and that it therefore cannot "achieve the purpose of any capacity market—to facilitate efficient investment and retirement decisions."[3]

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1 *See* Exhibit SEC-3, page 10 of 117.

2 *See Id.*, page 11 of 117.

3 *See Id.*, page 23 of 117.

Accordingly, since the true value of capacity may not be fully captured by using short-term MISO capacity auction revenues, it stands to reason that relying solely on projections of short-term capacity market revenues may result in these solar resources being undervalued in their economic analysis. Thus, in order to better assist the Council in making its certification decision, through this Supplemental testimony, the Company is providing two additional sensitivities that value capacity at: (1) the levelized cost of a RICE engine; and (2) the levelized cost of a CT.

Q7. DO THESE SENSITIVITIES (CASE 1 AND CASE 2) CONSTITUTE COMPARISONS BETWEEN TRADITIONAL GAS-FIRED RESOURCES AND THE RENEWABLE RESOURCES BEING PROPOSED?

A. No. These sensitivities should not be interpreted as an attempt to compare the solar resources at issue to any traditional resource, as this would not be an apples-to-apples comparison. The two sensitivities simply show variations on one economic input in the solar resources' economic analysis—their capacity value. To be clear, the solar resources at issue and gas-fired peaking generation serve very different supply role and reliability needs and are not directly comparable. The gas-fired peaking resource is a dispatchable resource that provides load-following capability and serves in a peaking role, whereas the solar resource is a non-dispatchable energy resource. Attempting such a comparison would require a fundamentally different analysis involving many different factors that were not considered here and would be irrelevant to the instant docket.

Q8. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, at this time.

BEFORE THE

COUNCIL OF THE CITY OF NEW ORLEANS

APPLICATION OF ENTERGY NEW ORLEANS, LLC FOR APPROVAL OF RENEWABLE PORTFOLIO AND REQUEST FOR COST RECOVERY AND RELATED RELIEF	**)** **)** **)** **)** **)**	**DOCKET NO. UD-18-06**

SUPPLEMENTAL DIRECT TESTIMONY

OF

MICHAEL J. GOIN

ON BEHALF OF

ENTERGY NEW ORLEANS, LLC

PUBLIC VERSION

HIGHLY SENSITIVE PROTECTED MATERIALS
REDACTED PURSUANT TO COUNCIL RESOLUTION R-07-432

NOVEMBER 2018

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EXHIBITS

SUPPLEMENTAL TESTIMONY

Q1. PLEASE STATE YOUR NAME AND CURRENT BUSINESS ADDRESS.

A. My name is Michael J. Goin. My business address is Parkwood II Building, Suite 300, 10055 Grogan's Mill Road, The Woodlands, Texas 77380. I am the same Micael J. Goin that filed Direct Testimony in this docket.

Q2. PLEASE EXPLAIN THE PURPOSE OF YOUR DIRECT TESTIMONY.

A. In my Direct Testimony, I committed to filing a copy of the executed agreement for the Iris Solar Facility once completed. The Iris Solar Facility contract was executed on [redacted]. Accordingly, I attach the executed agreement as Exhibit MJG-3. In addition, the estimated total dollar investment for ENO to acquire the Iris Solar Facility included in my original Direct Testimony was approximately $[redacted]. That figure inadvertently did not include $[redacted] million related to ADFUC, and accordingly, the updated total dollar investment to acquire the Iris Solar Facility once ADFUC is considered is now $[redacted] million.

Q25. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, at this time.

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COUNCIL OF THE CITY OF NEW ORLEANS

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EXHIBIT MJG-3 (HSPM)

PUBLIC VERSION

HIGHLY SENSITIVE PROTECTED MATERIALS PURSUANT TO COUNCIL RESOLUTION R-07-432 HAVE BEEN REDACTED

NOVEMBER 2018