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### By Hand Delivery and Electronic Mail

October 2, 2018

Ms. Lora W. Johnson, CMCLMMC Clerk of Council Council of the City of New Orleans Room 1E09, City Hall 1300 Perdido Street New Orleans, LA 70112

## In Re: Technical Conference #2, 2018 TRIENNIAL INTEGRATED RESOURCE PLAN OF ENTERGY OF NEW ORLEANS, INC. (Docket No. UD-17-03)

Dear Ms. Johnson:

On September 14, Entergy New Orleans (ENO) conducted a Technical Conference regarding aspects of the TRIENNIAL INTEGRATED RESOURCE PLAN OF ENTERGY OF NEW ORLEANS, INC. (IRP). Included in the materials were studies of Demand Side Management (DSM) potential for consideration in the Plan.

AEMA was granted intervenor status in the subject docket and has several comments to share regarding the DSM studies. AEMA is an organization of demand response providers and consumers with a wealth of experience in provision of demand response capability from retail customers and administration of DSM programs. AEMA promotes demand response programs and their proven contributions to lower electricity costs and improved reliability.

Enclosed are an original and 3 copies of our comments. Copies have been distributed to intervenors by email.

Do not hesitate to contact me at 202-524-8832 or <u>Katherine@aem-alliance.org</u> should you have any questions regarding this response.

Sincerely,

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Katherine Hamilton Executive Director Advanced Energy Management Alliance

cc: Official Service List, Docket UD-17-03

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

IN RE: 2018 TRIENNIAL INTEGRATED RESOURCE PLAN OF ENTERGY NEW ORLEANS, INC.

) ) DOCKET NO. UD-17-03

## Comments by the Advanced Energy Management Alliance concerning the Council's Independent Demand Side Management Potential Study and Entergy's Demand Side Management Study

The Advanced Energy Management Alliance (AEMA) is pleased to offer these comments on the Demand Side Management (DSM) Potential Studies offered in this Docket. We will keep our comments brief and to the point. We offer a summary of our recommendations at the end of these comments. These comments represent the collective consensus of AEMA as an organization, although it does not necessarily represent the individual positions of the full diversity of AEMA member companies.

Technical Conference No. 2 was conducted on September 14, 2018. At that Conference DSM potential studies commissioned by the City Council and by Entergy of New Orleans (ENO) were reviewed and discussed. The comments herein were offered verbally at the Technical Conference by Bruce Campbell, an AEMA member. Those comments are supplemented here with clarification and supporting references. AEMA's members have particular expertise in demand response derived from large users and these comments are largely limited to that customer segment. These comments can be summarized succinctly as follows: both studies grossly underestimate the potential for demand response that is dispatchable for peak reduction.

The City of New Orleans commissioned Optimal Energy, Inc. (Optimal) to develop a DSM potential study. ENO commissioned Navigant to conduct a similar study. Both studies were discussed a Technical Conference No. 2. Both suffer from the same flaw: vastly understated peak curtailment potential from demand resources.

AEMA would expect that overall peak reduction demand response capability should be at least 5% to 7% of ENO's peak demand of 1100MW or 55MW to 77 MW. About half of this (30MW) is likely to be derived from larger Commercial and Industrial (C&I) customers. The five to seven percent range is consistent with actual resource mixes in organized markets. For example, PJM (the RTO in the mid-Atlantic region) meets an average of 7% of its resource adequacy needs with demand resources. MISO claims similar an even greater amount.

The Optimal study discusses several scenarios for enhancing large C&I demand response. One scenario targets the use of a Standard Offer Program (SOP) that would offer rebates or credits for commitments to reduce peak use. Optimal estimates the cost of such a program at \$37.23/kW saved (\$37,230/MW). We assume that the bulk of this cost would go to the customer in the form of reduced bills or rebates. AEMA would suggest that the cost is somewhat low but is nonetheless workable. RTO programs have proven to be workable with compensation in this range. It is noted that ENO's current interruptible program compensates customers at the considerably higher rate of \$64,000/MW saved. Optimal's analysis indicates that about 17MW of capacity reductions are achievable from C&I customers by 2037. AEMA's experience suggests the 17MW value is low by a factor of 2 to 3. New Orleans should be able to achieve peak reductions of 30MW to 45MW. Optimal "project[s] a relatively modest trajectory of increasing program participation",<sup>1</sup> reaching the targeted 17 MW over 20 years and gaining just 5 MW in the first 4 years. AEMA believes that if proper program designs were in place by June of 2019, the full 17 MW would be achievable by 2022 and that this amount could double to 34 MW by 2024. In summary, AEMA recommends that the IRP recognize that that demand response has a higher and faster potential than the Optimal study indicates.

The Optimal study also indicates that Advanced Metering Infrastructure (AMI) is a prerequisite for these outcomes. While AMI may be useful for mass market demand response, all that is really required for large C&I customers is hourly integrated meters. Telemetry is not needed and performance can be established after the fact. Much of the DR fleet managed by AEMA members for capacity-based programs rely on this common configuration.

The Optimal Energy study states that there is a single customer utilizing an interruptible rate in ENO. The amount of reduction is not indicated. Public records do not indicate the capability either. For example, the Department of Energy's Energy Information Agency summarizes peak reduction capability as reported by utilities.<sup>2</sup> ENO reports only nominal amounts of peak reduction from residential programs (less than 1 MW and none from industrial sources. Thus it is unclear if the study assumed an incremental capability from this customer.

As described above, the Optimal study is overly conservative. However, the Navigant study commissioned by ENO is unjustifiably conservative.

Like Optimal, Navigant also considers C&I Curtailment as a strategy.<sup>3</sup> However Navigant finds that only 1.2 MW of curtailment could be achieved by 2038 for large  $C&I^4$ , less than 0.2% of overall load! The overall curtailment projection is 34.6MW, most of which is residential Direct Load control. AEMA accepts the DLC estimate residential customers but rejects the C&I estimate as unreasonable and unjustified. These peak demand reduction targets are simply not credible.

<sup>&</sup>lt;sup>1</sup> Optimal Energy Report at page 49.

<sup>&</sup>lt;sup>2</sup> https://www.eia.gov/electricity/data/eia861/

<sup>&</sup>lt;sup>3</sup> Navigant Study at 2.2.4.2, p. 48

<sup>&</sup>lt;sup>4</sup> Navigant at 4.2.1, p. 77

Reasons for the incorrect estimates may include:

- Omission of customer owned backup generators.<sup>5</sup> Many large facilities have such generators and hospitals are usually required to have them. Even though environmental limits may preclude use of some of these generators, many would be able to offset customer loads in peak conditions.
- No consideration of potential for participation of facilities with Combined Heat and Power (Tulane University and possibly others)
- No cost effective Behind the Meter Battery Storage (BTMS).<sup>6</sup> This assessment apparently assumes that there is no customer benefit for BTMS. AEMA members have seen interest in the reliability benefit that batteries provide as protection from distribution outages. Some customers will install batteries regardless of utility support. And more will do so if utilities provide compensation for the capability that batteries can provide.
- A general underestimation of participation levels and curtailment capability. For example the achievable potential for C&I appears limited to HVAC curtailment.<sup>7</sup> Most C&I customers can implement a variety of other actions.

As indicated above, the electric industry has amply demonstrated that 5% to 7% of peak curtailments are readily achievable and that a significant portion of that can be sourced from large C&I customers. ENO should be able to target at least 30MW of C&I curtailment. AEMA suggests that most of this is achievable within 5 years. PJM ramped from about 2% to 7% of reliability capacity from demand response in just 4 years, growing from less than 2000MW to more than 8,000MW. MISO added 900 MW of DR resources in the last annual auction. Navigant's suggested ramp over 30 years only makes sense if ENO has access to generation with costs so low that retirement makes no sense and no growth or replacement is needed; even then, it ignores the fact that excess capacity could be sold at market-based rates.

Peak demand reduction capability can defer or eliminate the need for construction of expensive new generating plants and accelerate retirement of aging and inefficient older plants. Demand response can help reduce peak wholesale prices thereby reducing costs for all customers. Customers participating in such programs will have lower costs and may be in a position to expand their facilities, hire more staff, and reinvest in the local economy. Engaging customers in their energy usage leads to a more resilient grid.

Low estimates of potential peak reductions would result in failure to identify and implement cost effective programs for peak capacity needs in IRP plans and resulting resource commitments. Some of the Technical Conference discussion centered on the structure of various scenarios and strategies, some of which would be driven by policy

<sup>&</sup>lt;sup>5</sup> Navigant at 2.2.4.4, p. 51

<sup>&</sup>lt;sup>6</sup> Navigant at 4.2.1, p. 77.

<sup>&</sup>lt;sup>7</sup> Navigant at 4.2.4, p. 81. "manual curtailment of HVAC loads makes up the remaining 43%." [43% of 2.8MW is 1.2MW]

decisions that are not consistent with reduction of electricity costs. For example, environmental factors might take into account health and climate change impacts. But AEMA believes that, properly evaluated, additional Emergency Peak reductions will prove to be a least cost solution in any scenario or strategy.

In AMEA's experience, customers with the opportunity to participate in peak reduction programs are much more likely to participate in other energy reduction programs as well. This can magnify the impact of sound peak reduction programs.

AEMA urges Entergy to consider the recommendations below. AEMA members have extensive experience providing DR services to customers and could help ENO maximize participation in its programs by serving as Program Administrators. While AEMA members would very much like to provide DR services to New Orleans customers, our recommendations are applicable regardless of such participation.

# **Recommendations:**

- 1) Optimal and Navigant should consider peak load reduction targets aligned with existing and demonstrated capabilities in MISO and other regions; 5% to 7% of peak demand.
- 2) Entergy and Navigant should re-assess the peak load reductions that can be targeted to large users.
  - a) In AMEA's experience this can include industrial, commercial and institutional classes. Of ENO's 20 largest customers, only the lodging segment is likely to decline participation in a well-designed program.
- 3) Entergy should clarify how much peak load reduction capability is currently under contract or participating in current programs.

AEMA offers some additional observations and resources for Entergy and the City Council to consider:

- AEMA believes that ENO's Interruptible tariff (Schedule LIS-13) is undersubscribed. Improved account management could increase utilization as could a re-design of the Tariff.
- ENO's Market Valued LMR and DR Riders are unlikely to be utilized due to low compensation and scarcity of large loads in the targeted 15<sup>th</sup> Ward (Algiers).
- AEMA has developed a "Model tariff" to facilitate demand response in regulated utilities. It can be accessed at <a href="http://aem-alliance.org/download/121043/">http://aem-alliance.org/download/121043/</a>
- AEMA has assembled some cost effectiveness case studies that may be helpful in assessing options for New Orleans. These can be accessed at: <u>http://aem-alliance.org/download/121151/</u>

Thank you for the opportunity to provide these thoughts and suggestions. We look forward to continued work on this important study for New Orleans and are open to any further discussion that may be desired following this filing.

### CERTIFICATE OF SERVICE Docket No. UD-17-03

I hereby certify that I have served the required number of copies of the foregoing report upon all other known parties of this proceeding, by the following: electronic mail, facsimile, overnight mail, hand delivery, and/or United States Postal Service, postage prepaid.

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