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Harry M. Barton
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July 15, 2019

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

Re: *Resolution & Order Establishing a Docket and Opening Rulemaking Proceeding to Establish Renewable Portfolio Standard*
Council Docket No. UD-19-01

Dear Ms. Johnson:

Enclosed please find an original and three copies of Entergy New Orleans, LLC's ("ENO") Reply Comments in Response to Council Resolution R-19-109 Concerning the Establishment of Renewable Portfolio Standards in the above referenced docket. Please file an original and two copies into the record in the above referenced matter and return a date-stamped copy to our courier.

Should you have any questions regarding the above, I may be reached at (504) 576-2984. Thank you for your assistance with this matter.

Sincerely,

Harry M. Barton

HMB/bkd

Enclosures

Cc: Official Service List (*via electronic mail*)

RECEIVED
JUL 15 2019
BY:

BEFORE THE

COUNCIL OF THE CITY OF NEW ORLEANS

RESOLUTION AND ORDER ESTABLISHING A DOCKET AND OPENING RULEMAKING PROCEEDING TO ESTABLISH RENEWABLE PORTFOLIO STANDARD	**)**	**DOCKET NO. UD-19-01**

ENTERGY NEW ORLEANS, LLC'S REPLY COMMENTS IN RESPONSE TO COUNCIL RESOLUTION R-19-109 CONCERNING THE ESTABLISHMENT OF RENEWABLE PORTFOLIO STANDARDS

NOW BEFORE THE COUNCIL OF THE CITY OF NEW ORLEANS (the "Council"), through undersigned counsel, comes Entergy New Orleans, LLC ("ENO" or the "Company"), which respectfully submits its Reply Comments in response to comments filed by other parties on June 3, 2019, per Council Resolution R-19-109 ("Resolution R-19-109"), that address the potential establishment of a Renewable Portfolio Standard ("RPS") for the City of New Orleans.

At the outset, ENO is pleased to report that since the filing of the first round of comments in this proceeding, the parties to Council Docket No. UD-18-06 have agreed to and filed with the Council a settlement agreement that, if approved, will allow ENO to add 90 megawatts ("MW") of solar generation resources to its supply-side portfolio. Once constructed, roughly 10% of ENO's electric energy demand will be met with renewable resources, and about 60% will be met with zero-emitting resources. This development is a positive one in its own right and demonstrates what can be accomplished when ENO, the Council, the Advisors, and other stakeholders work collaboratively to achieve progressive policy goals in a practical manner. ENO hopes that a similar collaborative approach may be undertaken in this proceeding to arrive at an outcome that is realistically achievable in terms of maintaining reliability, continuing to reduce carbon emissions, and causing minimal cost increases for customers.

ENO is, and has been, committed to the Council's goals of lowering carbon emissions and creating a more environmentally sustainable New Orleans. To that end, ENO proposes a path forward that will build on the progress the Council's leadership has already enabled in this regard. ENO believes that the Council's goals of aggressively lowering carbon emissions can be achieved at a relatively low cost to ENO's customers, provided the Council establishes a framework for flexibly utilizing all resources and technologies available (*e.g.*, solar, wind, nuclear, hydro, demand-side management, beneficial electrification, etc.) to achieve these goals. ENO's Reply Comments focus on the benefits of such an approach; but also inform the Council of the serious, and well-documented, risks of a more restrictive approach – one that would greatly increase costs while jeopardizing reliability and the goal of reducing carbon emissions.

I. Background and Summary of Filed Comments

In addition to ENO, in the first round of comments, the Council received input from ENO's largest industrial customer,[1] several organizations dedicated to fighting climate change and protecting the environment,[2] trade associations[3] and other non-profit entities[4] representing the interests of the solar and wind industries, as well as one for-profit energy services company from that sector.[5] In general, the parties' proposals lay out two distinct paths the Council may choose to follow in pursuit of its goal to reduce carbon emissions for New Orleans. One path represents a narrow and restrictive approach that seeks to give preferences and subsidies to specific technologies at the expense of ENO's customers and to the detriment of the Council's ability to simultaneously achieve its overarching goals of lowering carbon emissions, fighting climate change, maintaining reliability, and keeping rates low. The other path, while still adopting more renewables, represents an aggressive, technology neutral, "all-the-tools-in-the-toolbox," approach that seeks to further reduce carbon emissions by building on the progress that ENO and the Council have made to date in establishing a clean, reliable, low-cost foundation for electric service in New Orleans. Given the infeasibility of, and dramatic rate increases entailed by, the narrower approach, ENO believes the path forward is clear: the Council should decline the invitation to establish a mandatory RPS framework that is as unrealistic as it is uneconomic and instead join with other progressive regulators who are instituting advanced clean energy policies that will use all tools available, including renewable generation, to reduce carbon emissions.

As ENO discussed in its initial Comments, the most effective means to significantly reduce carbon emissions, while keeping rates low and electric service reliable, involves the adoption of a comprehensive Clean Energy Standard ("CES"). Such a policy would focus on carbon reductions across all sectors of New Orleans' economy and make use of all tools available, including increased development of solar photovoltaic ("PV") and other renewable resources, electrification of transportation and other sectors, demand-side management ("DSM"), and the incorporation of existing emission-free nuclear and hydro generation. ENO has proposed an aggressive CES that will reduce carbon emissions for New Orleans, which is vitally important to the primary goal of the Council's initiative: combatting the long-term effects of climate change. Adopting a CES, as opposed to a restrictive RPS, would also take advantage of ENO's existing zero-emitting resources and allow the Council to foster actions that will reduce carbon emissions without imposing unnecessary, potentially drastic, rate increases on ENO's customers.

ENO's recommended approach is not new or novel. Industry and academic thought-leaders on climate change issues have consistently advocated for the use of a CES as the preferred, and most effective and cost-conscious, solution for combatting climate change. Progressive

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1 Air Products and Chemicals, Inc. ("APC").

2 These entities include the Center for Climate and Energy Solutions ("C2ES"), the Clean Air Task Force ("CATF"), America's Wetland Foundation ("AWF"), Environmental Progress, and Third Way.

3 These entities include the Southern Renewable Energy Association ("SREA"), the Gulf States Renewable Energy Industries Association ("GSREIA"), and Vote Solar ("VS"), a non-intervenor that has apparently drafted comments on behalf of, or in collaboration with, 350 New Orleans ("350").

4 The Alliance for Affordable Energy ("AAE").

5 PosiGen is a for-profit energy services and solar sales and leasing company domiciled in Jefferson Parish.

regulators across the United States are following those recommendations. For instance, correspondence from CATF urged the Council "to follow five progressive states – California, Colorado, Washington State, New Mexico and Nevada – who have recently established a 'clean energy standard' in preference to a renewable-only RPS."[6] CATF also noted that "a recent review of 40 studies concluded that combining wind and sun with firm energy, rather than relying exclusively or overwhelmingly on wind and sun, would substantially reduce the cost of deeply reducing carbon emissions in the electricity sector."[7] CATF also performed an analysis specific to New Orleans of the possible cost of a restrictive, renewables-only RPS. This analysis shows that, even assuming it is physically possible to primarily rely on locally-sited renewable resources and energy storage to power New Orleans, the costs would be astronomical and represent a remarkably inefficient use of the City's finite resources.

Third Way's correspondence urged the Council to "design regulations that, instead of promoting a narrow set of favored technologies, allow for the use of whatever combination of energy resources will create the most rapid transition to a carbon-free grid."[8] The letter noted that this approach is supported by the United Nations' Intergovernmental Panel on Climate Change ("ICCP"), "as well as the Obama Administration's Mid-Century Strategy, the Union of Concerned Scientists, The Nature Conservancy, World Resources Institute, and countless other authorities on the subject."[9] Third Way also noted a recent study from the Massachusetts Institute of Technology, which found that a CES-based approach to eliminating carbon emissions from the electric grid would be as much as 62% cheaper than a restrictive RPS that allowed for only renewables and energy storage. The organization also noted that "if New Orleans can eliminate carbon from the grid at a lower cost, that would enable more investment in other infrastructure, energy use, and mitigation programs that will help New Orleans tackle its climate goals rapidly and equitably."[10]

Outside of the materials submitted in this proceeding, the City's own Climate Action Plan for a Resilient New Orleans ("Climate Action Plan") issued in July 2017 underscores the importance of relying on existing low-emitting resources to enable further emission reductions. When discussing the results of the City's 2014 greenhouse gas emissions audit, the Climate Action Plan notes of New Orleans that "Our total emissions are calculated for Orleans Parish only and are relatively low compared to other U.S. cities. This is largely due to the high amount of low-carbon energy already in our electricity mix compared to other cities."[11] Notably, the Climate Action Plan declined to set a goal focused solely on renewable energy sources, but instead, the City stated its goal in terms of "low-carbon electricity."[12]

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[6] CATF Comments, dated May 30, 2019, also included as Attachment B to ENO's initial Comments, at page 2.

[7] *Id*. at pg. 6.

[8] Third Way Comments, dated May 30, 2019, also included as Attachment C to ENO's initial Comments, at page 1.

[9] *Id*.

[10] *Id.* at pg. 2

[11] Climate Action Plan, available at https://www.nola.gov/nola/media/Climate-Action/Climate-Action-for-a-Resilient-New-Orleans.pdf, at pg. 18.

[12] *Id* at pg. 28. The Climate Action Plan defines a low-carbon resource as "is that which is 100 grams CO2e/kWh in median lifecycle emissions or less." *See* pg. 71, fn. 12.

Several academic and industry studies confirm that focusing on renewables alongside nuclear and other clean energy resources is essential to effectively lowering emissions while maintaining reliability and minimizing cost increases. For example, 2019 studies from the Wood Mackenzie group[13] and from Ernest Moniz and IHS Markit, Ltd.[14] both document the cost and reliability risks associated with attempts to reach 100% renewable targets while excluding nuclear and other zero-emitting resources. In an article summarizing both studies, it was noted that the cost of deploying a 100% renewable-powered grid in the U.S. by 2040 "would cost U.S. households $2,000.00 **per year** through 2040."[15] The same summary notes reliability concerns, stating that when wind and solar are added at levels "above 50%, the challenge of ensuring reliable grid operations starts to take off."[16] Ernest J. Moniz, the U.S. Secretary of Energy under President Obama, voiced similar concerns when discussing his team's recent study, stating "The idea that we're going to have by 2050… a 100% renewable system is not realistic, straightforwardly, certainly not at a reasonable cost."[17] For this, and other reasons detailed in their study, Secretary Moniz's group recommends that "States should consider adopting technology-neutral clean energy portfolio standards and zero-emissions credits in order to strengthen markets for clean energy innovation — to include renewables and other forms of zero or low-carbon energy."[18]

Rather than focusing on what climate advocates, industry and academic experts, and the City of New Orleans have acknowledged to be the most effective strategies for reducing carbon emissions and addressing climate change, comments filed by certain other Parties seem determined to focus on creating subsidized economic opportunities for specific kinds of technologies and for-profit businesses. These Parties purport to fund such subsidies through rates paid by ENO's customers and with unrealistic, and in some cases unlawful, penalty schemes they would have the Council foist on ENO. These comments support mandates for particular types and quantities of renewable generation, ignore the clean energy benefits of existing nuclear generation, demand-side management initiatives, and incremental electrification opportunities, and propose various compliance restrictions and penalties on the Company, some of which are constitutionally prohibited. The net effect of these suggestions would be to impede progress towards the Council's goal of reducing carbon emissions, ignore established principles of prudent resource planning, jeopardize the reliability of the electric grid in New Orleans, and significantly increase the costs borne by ENO's customers in attempting to achieve that goal.[19]

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[13] Shreve, Dan, Schauer, Wade, "Deep Decarbonisation (sic) Requires Deep Pockets, Trillions Required to Make the Transition," June 2019, available at: http://www.decarbonisation.think.woodmac.com/summary/

[14] Moniz, Ernest, J., Yergin, Daniel, et al., "Advancing the Landscape of Clean Energy Innovation," February 2019, available at: https://cdn.ihs.com/www/prot/pdf/0219/FULL%20Report_IHS%20Markit%20-%20EFI%20Report.pdf

[15] *See* https://www.eenews.net/energywire/stories/ (Emphasis added; subscription required).

[16] *Id.*

[17] *Id.*

[18] Moniz et al. at pg. 19.

[19] In addition to the analyses submitted in this proceeding and discussed herein and in ENO's initial Comments, extensive academic research confirms this risk. *See, e.g.* Clack, Christopher, T.M., *et al.*, "Evaluation of a Proposal for Reliable Low-Cost Grid Power with 100% Wind, Water, and Solar," *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 114, No. 26., June 27, 2017, available at

Moreover, the proposal to subsidize certain technologies, while restricting others, also limits potential economic benefits to New Orleans.[20] Developing a CES is the smarter and more effective way for the Council to achieve its carbon emissions reductions goal while mitigating the cost impacts on customers that would otherwise accrue under a mandatory RPS policy.

With these ideas in mind, the remainder of ENO's Reply Comments are organized to respond first to the other Parties' proposals for a mandatory RPS and later to address other legal, regulatory, and resource planning issues raised in the Parties' comments.

II. Issues Under a Renewables Mandate

A. Mandatory RPS

AAE, Sierra Club, PosiGen,[21] and Vote Solar/350 New Orleans (VS/350) all support a restrictive, mandatory RPS of 55% by 2033 and 100% by 2040. Audubon LA also supports a restrictive 100% RPS by 2040, and C2ES supports a mandatory 30% RPS by 2030, as well as a mandatory 90% CES by 2030 and a 100% CES by 2050. PosiGen and VS/350 additionally support a requirement that 50% of resources necessary to comply with the RPS be located in the City of New Orleans (within the geographical limit of Orleans Parish). By mandating compliance through particular types, locations, and amounts of renewable resources, and by disregarding the clean energy benefits of existing nuclear and hydro resources in ENO's portfolio, these Parties lay out a proposal that, were it even physically possible to accomplish, will lead to significantly higher costs for ENO's customers and ultimately hinder the Council's carbon reduction goals.

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https://www.pnas.org/content/pnas/114/26/6722.full.pdf (hereinafter the "National Academy of Sciences Study") at pg. 6722 ("A policy prescription that overpromises on the benefits of relying on a narrower portfolio of technologies options could be counterproductive, seriously impeding the move to a cost effective decarbonized energy system.") and at 6723 ("Relying on 100% wind, solar, and hydroelectric power could make climate mitigation more difficult and more expensive than it needs to be.").

[20] "In addition to making the transition to zero-carbon faster and more affordable, this technology-inclusive approach is a better way to foster innovation in clean energy. We cannot be certain of what new tools might be developed in the coming decades to generate power with no emissions or even "negative emissions", as the IPCC and others say will be needed. Nor can we be certain of which existing tools might become more accessible thanks to cost reductions or performance improvements. But we *can* be certain that New Orleans will not be the place where pioneers in these clean energy fields choose to research, develop, or demonstrate their technologies if local energy policies exclude them from incentives or restrict their access to the market. By making power sector mandates less proscriptive, the Council can achieve its emissions goals while giving New Orleans an opportunity to be a hub for unique, next-generation renewables; carbon capture, use, and storage; advanced nuclear; and other cutting-edge clean energy technologies." *See* Third Way Comments at pgs. 2-3.

[21] PosiGen is presently a "MegaWatt [sic] Member" of the AAE, and has in the past been a "Transformer Level" sponsor of the AAE, meaning that PosiGen donates between $5,000 to $10,000 per fiscal year to the AAE. PosiGen's former Director of Policy & Government Affairs also served as a member of the Board of Directors for the AAE. The two organizations appear to frequently collaborate on activities designed to further the AAE's policy objectives and PosiGen's business interests. *See, e.g.,* http://www.fox8live.com/story/34977855/solar-panels-lighting-up-new-orleans-east. In this Docket, the AAE's former CEO serves as a representative of PosiGen. The longstanding and significant relationship between the AAE and this for-profit solar sales and leasing company provides necessary context for evaluating the AAE's positions in this and other proceedings.

1. The Location-Specific, Mandatory RPS Proposed by Certain Parties Represents a Physical Impossibility.

To the best of ENO's knowledge and understanding, providing enough generation to meet 55%, let alone 100%, of customer load with renewable-only technologies, with 50% of the resources located within Orleans Parish, is a physical impossibility. The Parties that advocate for the Council to mandate that ENO accomplish this feat, and penalize ENO when it cannot, have put forth no credible analysis to demonstrate otherwise. The National Academy of Sciences Study cited to in footnote 19, *supra*, outlines what a credible analysis in this regard would need to demonstrate[22] by stating as follows:

> In our view, to show that a proposed energy system is technically and economically feasible, a study must, at a minimum, show, through transparent inputs, outputs, analysis, and validated modeling, that the required technologies have been commercially proven at scale at a cost comparable with alternatives; that the technologies can, at scale, provide adequate and reliable energy; that the deployment rate required of such technologies and their associated infrastructure is plausible and commensurate with other historical examples in the energy sector; and that the deployment and operation of the technologies do not violate environmental regulations.[23]

The comments at issue in this proceeding do not even attempt to meet this kind of burden. Instead they advocate that the Council adopt a policy that would mandate that ENO abandon all reasonable resource planning principles and reliability guidelines and do so without considering any valid analyses to support the recommended course of action. The Council would do well to view these policy proposals with a great deal of skepticism absent valid analyses. As the National Academy of Sciences Study noted, "Policy makers should treat with caution any visions of a rapid, reliable, and low-cost transition to entire energy systems that relies almost exclusively on wind, solar, and hydroelectric power."[24]

Moreover, mandating a 55% renewable target, let alone a 100% renewable target, will not result in a significant increase in clean energy that matches ENO's hourly load shape. Analysis of ENO's projected hourly loads and owned and controlled generation shows that procuring additional renewable energy at that level would not result in energy production that can be used to serve ENO customers; in fact, were ENO to add solar PV generation beyond its current business plan to meet a 55% RPS, approximately 70% of the additional renewable energy would be surplus to ENO's needs when generated, and therefore exported and sold in the Midcontinent Independent System Operator, Inc. ("MISO") market at whatever energy price is then-prevailing. At the same time, ENO's customers would be solely responsible for the investment cost needed to construct the new generation.

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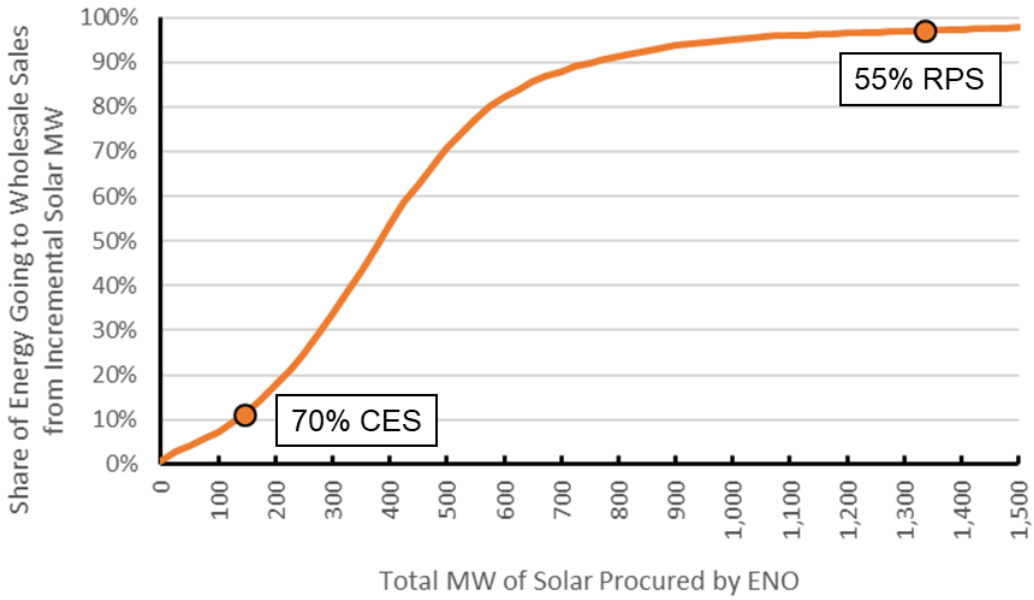
[22] The National Academy of Sciences Study was written in response to another study (Jacobson, *et al*., 2015) which argued, and attempted to demonstrate through modelling, that "the future primary energy sources for the United States could be narrowed to almost exclusively wind, solar, and hydroelectric power and suggest that this can be done at 'low-cost' in a way that supplies all power with a probability of loss of load 'that exceeds electric-utility-industry standards for reliability.'" *See* National Academy of Sciences Study at pg. 6723.

[23] *Id*.

[24] *Id*. at pg. 6722.

ENO's baseload nuclear resources and existing renewable resources are already expected to serve approximately 50% of ENO's retail energy need; planned new utility-scale renewable resources will increase that amount further. In fact, if ENO were to achieve the 70% Clean Energy Standard-based goal that it discussed in its initial Comments, that would be about the maximum amount of clean generation that could be matched to ENO's load without adding energy storage.[25] When incremental clean energy is added in an hour when ENO already serves its customers with 100% clean energy, the incremental (or excess) energy would be sold into the MISO market and would not source sales to serve ENO's load. Under the most recent ENO business plan load and supply assumptions, this would occur only in a small number of hours per year; but, as more non-dispatchable and presumably zero marginal cost energy is added to serve a customer base that is already served by a large amount of clean energy, more of that energy will be delivered in hours when it is excess to ENO customer load. The diminishing returns are illustrated below; beyond a certain level (roughly 300-400MW), most new solar generation would be liquidated in the MISO market and would not in fact source sales to ENO's customers.

Figure 1 –Percent of Renewable Energy Exported to MISO Market



The analysis depicted above underscores the advantages of the Council adopting a 70% Clean Energy goal through a CES, under which ENO can generate or procure clean energy without having to liquidate significant amounts of excess clean energy into the MISO market. Again, such sales will be made at whatever is the then-prevailing energy price but with ENO customers bearing the full cost of the investment in the new resources. Conversely, under certain Intervenors' proposals, which contemplate removal of nuclear energy from ENO's resource portfolio, when energy from intermittent resources is not available (*e.g.*, when solar resources are not producing energy during ENO's peak demand hours), ENO would be forced to rely on purchases from the MISO market to meet its customers need. The Council has previously found

[25] This fact is important to note when considering the C2ES proposals for mandatory CES targets of 90% in 2030 and 100% in 2050.

that relying on the MISO market to meet long term capacity needs is not acceptable.[26] Additionally, purchases from the MISO market tend to have a higher CO_2 emission rate than electricity from ENO sources.

While energy storage in the form of batteries might initially appear to have the potential to address these concerns, replacing ENO's existing clean baseload resources with significant quantities of renewables would require enormous quantities of storage capacity at a great expense to customers, as noted in the CATF correspondence to the Council. Not only would batteries need to be sized to transfer large quantities of energy from mid-day hours to evening peak and overnight hours, but sufficient capacity would also be needed to store energy over weeks or even months to account for seasonal generation and usage differences. The feasibility of such a scheme is unknown and untested, which poses a significant reliability concern.[27] Moreover, even if physically possible, the CATF analysis shows that, assuming the cost of battery storage **decreases by a multiple of 50**, the storage system required would still cost roughly $4.6 billion. As such, when taken to their logical conclusions, the positions taken by these Intervenors advocate for spending billions of dollars when a significantly cheaper and more effective way to further reduce carbon emissions exists.

2. The Mandatory RPS Proposed by Certain Parties Would Result in Massive Rate Increases.

The 55% RPS proposal made by several parties should be rejected by the Council in order to protect customers against significant rate increases. The costs of complying with such a mandate would increase ENO's system average rate by 30% or more, even before incorporating the enormous cost of any adequate battery storage capacity.

To illustrate the customer impacts of a 55% RPS (with half of the credits sourced locally), ENO conducted a high-level analysis of two potential compliance scenarios. In both Scenarios, the in-City requirement is met through net energy metered ("NEM") customer-sited solar installations representing over 25% of projected ENO sales, whether or not this level of adoption is technically feasible, which is by no means a given. At a minimum, ENO believes, and other parties (AAE,[28] PosiGen) have proposed, that some additional incentive mechanism beyond 1:1 full retail NEM would be required to facilitate such a high level of adoption. In Scenario A, a $0.50 per Watt incentive payable upon installation is modeled. Coupled with the federal Investment Tax Credit ("ITC"), which begins to phase down starting in 2020, and current

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[26] *See* Council Resolution No. R-18-65 at pg. 43 ("In light of the known volatility of MISO capacity market prices, the Council also agrees with ENO and the Advisors that it would not be appropriate for ENO to rely on the MISO capacity market to meet its long-term resource needs.").

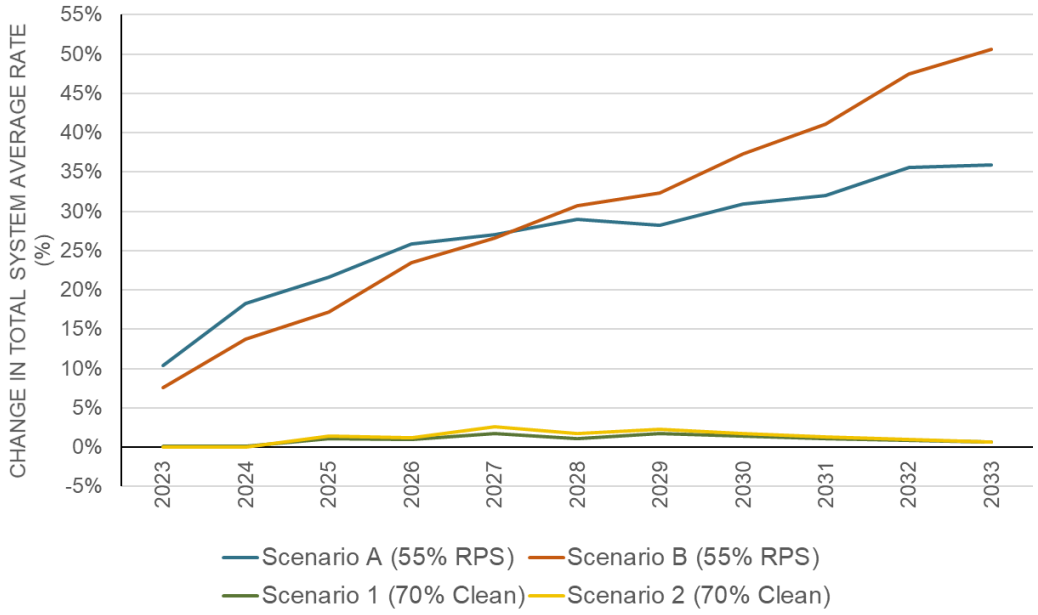
[27] *See*, National Academy of Sciences Study at pgs. 6722-23 ("There are no electric storage systems available today that can affordably and dependably store the vast amounts of energy needed over weeks to reliably satisfy demand using expanded wind and solar power generation alone. These facts have led many US and global energy system analyses to recognize the importance of a broad portfolio of electricity generation technologies, including sources that can be dispatched when needed.")

[28] While the AAE's initial comments do not discuss specific incentives, the organization has advocated for, and authored papers about, incenting distributed generation as a means of making investments in the same appear to be economically viable. *See, e.g.,* https://www.cleanegroup.org/wp-content/uploads/Resilient-Southeast-New-Orleans.pdf.

estimated installation costs of roughly $3 per Watt for rooftop-scale scale PV, Scenario A represents a situation where customers could cover half of their upfront installation cost with subsidies. Scenario B models a $0.50 per kilowatt-hour peak energy payment (proposed by PosiGen) for all customer-owned solar. In both Scenarios, the remaining non-local RPS requirement is met through additional grid-scale solar projects located outside of Orleans Parish.

The projected impact on ENO's total system average rate is shown in Figure 2 below. Two Scenarios modeled in ENO's initial Comments that achieve a 70% CES (Scenarios 1 and 2) are included in the figure as a reference.

Figure 2 – Illustrative Scenarios to Achieve a 55% RPS by 2033



Scenarios A and B both project that ENO's customers would bear considerable future cost increases and those costs are subject to a high level of risk based on the future level of solar penetration in the broader MISO South region. This is because selling large quantities of renewable energy at MISO market prices carries risk for customers whose rates would be determined in part by the uncertain wholesale revenue credits from the sale of that excess energy. In California, excess solar energy produced during mid-day hours has depressed wholesale prices (and even sent prices below zero at times, such that the California Independent System Operator has to **pay** loads to take the excess energy in order to balance supply and demand).[29] Similarly, the MISO capacity credit that the solar resources receive also impacts customer costs. MISO's Renewable Integration Impact Assessment[30] notes that as solar penetration increases, each megawatt of solar capacity contributes less to resource adequacy as the availability of additional solar generation move the hours of greatest system need later in the day when solar output is lower. Consistent with its 2018 Integrated Resource Plan ("IRP") and with MISO's Renewable

[29] *See* http://www.caiso.com/Documents/2018AnnualReportonMarketIssuesandPerformance.pdf at pgs. 4-5 (Figure E.3)

[30] *See* https://cdn.misoenergy.org/20180605%20RIIA%20Workshop%20Presentation213125.pdf

Integration Impact Assessment, the Scenarios depicted in Figure 2 assume capacity credits ranging from 50% to 10% of nameplate capacity depending on the total solar investment in each scenario.

It bears repeating that subjecting ENO's customers to potentially massive rate increases and exposing them to extreme market volatility when doing so is not necessary to reduce carbon emissions simply makes no sense.

3. The Example of Washington D.C. Provides Very Little Empirical Support for the Mandatory Local RPS Policy.

AAE and several other parties point to Washington D.C. ("D.C.") as a comparable jurisdiction to use as a model for an RPS in New Orleans. While ENO agrees that D.C. might serve as a useful (albeit cautionary) reference point, there are significant differences between New Orleans and D.C., as well as important data to consider relative to D.C.'s compliance thus far with its RPS. First, New Orleans and D.C. are primarily and significantly distinguished by their respective regulatory environments. Specifically, New Orleans has a regulated electricity market and therefore does not have retail open access, while D.C. has a fully deregulated retail electricity market with retail open access and a number of retail providers serving customers.

In a regulated jurisdiction, environmental goals such as increased use of renewable energy and clean energy are most often implemented through vertically-integrated utilities' long-term resource planning efforts, which are state-jurisdictional (or municipal-jurisdictional in the case of ENO). This ensures that utilities that have an obligation to provide safe, adequate, reliable, and affordable service to all customers are able to comply with clean energy goals in the most cost-effective way while also meeting reliability objectives. In contrast, retail suppliers in retail open access jurisdictions such as D.C. do not engage in actual generation procurement and instead must obtain Renewable Energy Credits ("REC") to comply with the renewable policy. Unlike Louisiana, there is a robust REC market in the greater D.C. region, which is part of the PJM wholesale market. Recent data from reports prepared by the D.C. Public Service Commission ("D.C. PSC") highlight the crucial role that RECs sourced from around the U.S. play in compliance as well as the escalating costs of the policy.[31]

Per the most recent D.C. PSC report,[32] in 2018 the estimated total cost of compliance with D.C.'s RPS, including the costs of RECs and compliance fees, amounted to $50.6 million, up from $42.7 million in 2017. The increase in the local solar requirement over time will continue to place upward pressure on the cost of compliance.[33] In other words, the cost of complying with D.C.'s RPS has grown substantially since implementation, and will likely continue to grow, especially following the 2018 extension to 100% renewables by 2032, and adoption of more aggressive solar-specific requirements.

To comply with the D.C. PSC's RPS, the incumbent default utility (PEPCO) and the approximately 40 electricity retailers that provide competitive generation supply procure RECs from a wide geographical region. D.C.'s original RPS policy defined a qualifying REC as a

[31] *See* https://dcpsc.org/PSCDC/media/Images/Report-on-REPS-for-2019-043019-final.pdf

[32] *Id.*

[33] *Id.*, page 20.

credit representing one MWh of electricity consumed within the PJM Interconnection region that is derived from a Tier I renewable source or a Tier II renewable source[34] that is located:

- In the PJM Interconnection region or in a state that is adjacent to the PJM Interconnection region; or
- In a control area that is adjacent to the PJM Interconnection region, if the electricity is delivered into the PJM Interconnection region.

The D.C. PSC adopted a broad definition of "adjacent" and determined that states adjacent to the PJM Interconnection region should help lessen the cost that customers would have to pay for the renewable portion of their fuel mix. Specifically, the following states were deemed "adjacent" to PJM: Alabama, Arkansas, Georgia, Iowa, Mississippi, Missouri, New York, South Carolina, and Wisconsin. Thus, from the beginning, D.C.'s RPS policy adopted a liberal geographical region for qualifying RECs that includes most of the eastern U.S. Subsequently, the definition of REC was amended in 2010 to mean a credit representing one MWh of energy produced by a tier one or tier two renewable source located within the PJM Interconnection region or within a state that is adjacent to the PJM Interconnection region, making it even easier for the Commission to approve renewable systems located in adjacent states.[35] The definition was further amended in 2018 and restricted the location of the energy produced from a renewable resource to the PJM Interconnection region. However, the legislation also allowed renewable resources located within an adjacent state and certified by the D.C. PSC as of the applicability date to continue to produce RECs through 2029.[36]

For 2018 compliance, a total of 1,865,173 RECs were used, the vast majority of which originated from outside of D.C. with wind accounting for 54% of the total. Solar-supplied RECs from the local carve-out requirement accounted for 3.6% of total RECs, but were vastly more expensive than any other renewable source at an average of $396.63 per REC (1 MWh).[37] From a capacity perspective, approximately 1.3% of total qualifying generator capacity, which in aggregate is greater than 10,000 MW, is actually located in D.C., meaning most of the renewable energy used for compliance is generated in other states.[38]

As stated above, despite RECs from the solar carve-out requirement adding up to only 67,892 RECs (MWh) out of the 1,865,173 (3.6%) total RECs used for compliance in 2018, the average cost for each REC from the solar carve-out requirement was $396.63, which dwarfs the average cost of a REC for any other renewable resource type by more than 100x. As a result, the total

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[34] In the case of D.C., RECs are divided into two categories, Tier I and Tier II, based on the source/technology. Tier I resources include solar energy, wind, biomass, methane, geothermal, ocean, fuel cells, and wastewater used as a heat source or sink. Tier II resources include biomass, hydroelectric power other than pumped storage generation, and waste-to-energy. In 2018, roughly 94% of all RECs used in compliance were from Tier I resources, with the remaining ~6% coming from Tier II resources. Of the 7,346 renewable generators approved by the D.C. PSC as eligible to participate in its RPS program as of April 2019, 7,298 (99.3%) use Tier I resources and 48 (0.7 %) use Tier II resources.

[35] *Id.*, page 22.

[36] *Id.*, page 23.

[37] *Id.*, page 19.

[38] *Id.*, page 27.

cost of locally-sourced solar RECs in 2018 was $26.3 million, accounting for 84.5% of total REC costs ($31.9 million), and 53% of the total cost of compliance ($50.6 million) with the RPS policy.[39] In summary, D.C.'s local solar carve-out provision makes up a small percentage of the total RECs used for compliance (less than 4%), but constitutes the **vast majority** of REC-associated costs, as well as **over half** of total RPS compliance costs. Rather than a policy model to be emulated, D.C. serves instead as a cautionary tale of the unintended consequences of how a well-intended provision of a policy can have an outsized effect on costs, which are ultimately borne by customers through higher electric bills.

As stated in the Company's initial Comments, ENO proposes a voluntary, goals-based CES that is comprehensive in nature, but also is consistent with the utility's ongoing obligation to provide safe, adequate, and reliable service at the lowest reasonable cost. Ensuring affordability for ENO's customers is a key element to a sound clean energy policy. As AAE and other parties have noted in recent years, New Orleans residents, owing to circumstances such as older housing stock and weather, have a higher "energy burden" than many other regulatory jurisdictions, including D.C., so careful attention must be paid to the long-term rate impacts of any Council-adopted energy-related policies. In fact, average income levels differ significantly between New Orleans and D.C. as do recent average electric bills (*see* Table 1 below). D.C. also has a large percentage of its commercial customer base that involves federal and other governmental agency buildings and operations. Given these important differences, D.C. has a customer base that is potentially much less vulnerable to rate fluctuations that an RPS would introduce.

Table 1 – Comparison Between New Orleans and Washington D.C.

	New Orleans	Washington D.C.
Total Population	391,006	702,455
Median Household Income	$38,721	$77,649
% Below Federal Poverty Line	25.4%	17.4%
Average 2017 Residential Electric Bill	$113	$89
Average 2017 Annual Usage (kWh)	11,995	8,945
Average 2017 Residential Rate (¢/kWh)	11.3	11.9
% of Residential Sales by Retailers	N/A	24%
% of Commercial Sales by Retailers	N/A	86%
% of Industrial Sales by Retailers	N/A	100%
% of Total Sales by Retailers	N/A	73%

Sources: U.S. Census Bureau and DOE's Energy Information Administration (2017)

[39] *Id.*, page 19.

B. Exclusion of Electrification

Other than ENO, none of the Intervenors recommend including electrification as an acceptable means of achieving cost-effective reductions to carbon and other greenhouse gas emissions. The Company believes, and industry and academic thought leaders agree, this is a critical omission and that any reasonable Clean Energy Standard must leverage the broad potential for reducing carbon and other pollutant emissions through electrification efforts of market sectors that rely principally on fossil fuel sources. The most significant opportunity, and one that is discussed extensively in the City's Climate Action Plan, is transportation, but there are many other opportunities to pursue beneficial electrification.[40] Even where such efforts will necessarily increase overall electricity generation, they are an effective means to achieving the Council's main goal of limiting carbon emissions and addressing the impacts of climate change by creating a significant net reduction in greenhouse gas emissions.

The City's Climate Action Plan expressly recognizes the importance of electrification to achieving the City's carbon reduction goals and highlights significant opportunities for reduction in the City's emissions through electrification. According to the Climate Action Plan, in 2014, 17% of the City government's greenhouse gas emissions came from the City's vehicle and transit fleets. This number increases for the greenhouse gas inventory conducted for the entirety of New Orleans, with 44% of emissions resulting from the transportation sector.[41] Based on these and other observations, the Climate Action Plan states that "We must dramatically clean the fuel mix of our transit fleet and have several options from renewable diesel to electrification drawing from our cleaner grid."[42] The Climate Action Plan also recommends expanding access to electric vehicles as an action item towards achieving emissions reductions goals.[43] The City Administration recently announced a commitment to begin transitioning the City's vehicle fleet to an electric one with an eye toward "helping to cut greenhouse gas emissions that are warming the planet, saving taxpayer money, improving public health, and reducing our nation's dependency on oil."[44] Additionally, the City's own audit of its emissions revealed that, in 2014, 62% of greenhouse gas emissions resulted from "water and wastewater treatment facilities."[45] These findings confirm what ENO's initial Comments discussed, namely, that there is a significant opportunity to reduce carbon and other pollutant emissions through electrification of the Sewerage and Water Board's facilities.

If electrification is excluded as means of reducing carbon emissions in compliance with the Council's policies, achieving the same amount of CO_2 reduction through NEM solar would require an average price increase 10 to 20 times as large as if electrification had been included,

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[40] Correspondence from the Edison Electric Institute, submitted on May 28, 2019 and also attached to ENO's June 3, 2019 Comments as Attachment E, note at page 2 that "Today, the transportation sector is the leading domestic source of CO_2 emissions and has been since 2016."

[41] *See* Climate Action Plan at pgs. 18-20.

[42] *Id.* at pg. 42.

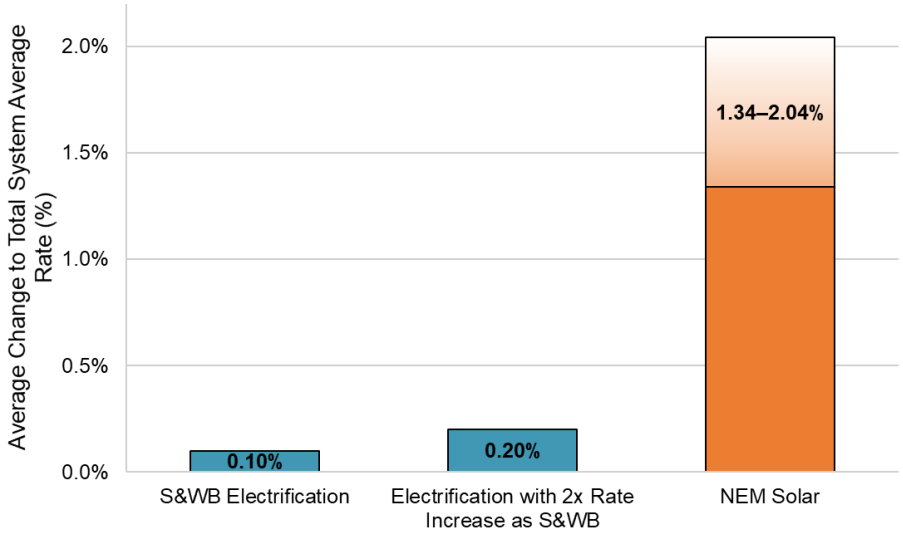
[43] *Id*. at pg. 43.

[44] *See* https://nola.gov/mayor/news/june-2019/city-of-new-orleans-announces-partnership-with-climate-mayors-ev-purchasing-collaborative,-one-of-12/

[45] *Id*. at pg. 20.

as shown in Figure 3 below.[46] Depending on the magnitude of cost-effective electrification, this unnecessary "tax" on ENO customers could be $10 to $50 million per year.

Figure 3 – Change to System Average Rates Required to Reduce CO_2 Emissions by 50,000 Tons Annually



Any goal or policy established for reducing carbon emissions from New Orleans will be much more effective and much less costly if that goal or policy includes beneficial electrification as a means of compliance.

C. Renewable Energy Credits

Many parties recommend limiting (PosiGen, SREA) or even excluding (VS/350) RECs as a means for complying with any renewable or clean energy standard the Council develops. On the other hand, Air Products and C2ES suggest RECs should be broadly allowed as a means to comply with any future policy adopted by the Council. As noted in its initial Comments, the Company's position is that allowing RECs to satisfy compliance requirements provides an important tool for limiting costs that would otherwise be borne by customers. Such flexibility is critical in designing a reasonable Clean Energy Standard; and, as noted above relative to the experience thus far in Washington D.C., the use of RECs is critical to actually complying with a clean energy policy. Limiting available tools, whether by restricting the types of clean energy resources that qualify as compliant or the role and source of RECs, would needlessly increase costs to ENO's customers and runs counter to good policymaking.

AAE, Sierra Club, and SREA all state that if RECs are allowed, they should be tracked and certified (AAE proposes the MRETS tool for tracking, SREA proposes Green-E for certification). The Company agrees that RECs should be tracked and certified for compliance purposes but suggests that other options aside from MRETS and Green-E could be worth

[46] Because electrification at the Sewerage and Water Board's facilities may be an unusually cost-effective electrification option, Figure 3 also considers an electrification option with twice the impact on total system average rates.

considering. As such, the Council should not mandate the use of particular vendors or platforms now, but instead allow the Company to evaluate available options at the appropriate time.

PosiGen proposes using a system of multipliers in connection with RECs, while AAE and Sierra Club urge the Council to avoid using multipliers. While PosiGen's proposal is not entirely clear with regard to treatment of RECs for compliance with an RPS, the Company suggests that the use of multipliers could create unintended consequences and lead to distorted or increased REC prices for customers. The Company does agree, however, with PosiGen's suggestion that any REC purchases allowed for compliance should be treated as a fuel cost and recovered through the fuel adjustment clause.

AAE and Sierra Club argue that any RECs should be retired within 12 months of certification and ENO should not be allowed to bank them. However, in some cases, holding RECs beyond 12 months may have more value for customers than would be realized through a forced retirement to offset compliance costs within 12 months. Rather than mandating a specific course of action at this time, the Council should design any program with sufficient flexibility to enable the Company to limit costs to customers to the extent possible, which may involve the Company banking RECs for eventual compliance rather than being forced needlessly to retire them unused.

D. Penalties

Certain Parties' comments support monetary penalties or what are mistakenly characterized as Alternative Compliance Payments ("ACPs") for non-compliance with Council mandates, all or part of which would be paid by shareholders and not recovered in rates. As ENO discussed in its initial Comments, ACPs are not, in fact, penalties but recoverable compliance costs that utilities or competitive suppliers may pay in lieu of excessive REC costs.[47] Default ACPs, as proposed by several Parties here, presume the utility has been imprudent in not incurring costs to comply with an RPS and deny the utility due process through the levying of automatic penalties. Such a penalty scheme would amount to a *de facto* finding of imprudence on the part of the Company without providing a fair opportunity for review, which in turn would violate well-settled case law from the Louisiana Supreme Court concerning the prudent investment rule.[48] APC correctly points out that the Company should only be required to pay penalties following an investigation that determines that it failed to comply due to imprudent actions.

SREA also alludes to a penalty mechanism whereby fines for RPS non-compliance would be paid to the City of New Orleans in shares of ENO stock, thereby making the City a shareholder of the Company: "One option may be a stock option where the city of New Orleans becomes a shareholder and fines are paid to the city in shares of company stock."[49] In addition to upsetting the traditional balance between the interests of the utility's shareholders and those of its

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[47] The C2ES comments seem to evidence an accurate understanding of ACPs. In deregulated markets, like D.C., where ACPs are typically employed, ACPs serve as a cost cap on the price of RECs to limit customers' exposure to the cost of complying with mandatory RPS policies.

[48] *See* *Gulf States Utilities Co. v. Louisiana Pub. Serv. Comm'n*, 578 So.2d 71, 85 (La.1991) ("a utility's investments are presumed to be prudent and allowable"); *S. Cent. Bell Tel. Co. v. Louisiana Pub. Serv. Comm'n*, 594 So.2d 357, 366 (La.1992) ("the utility is entitled to the presumption that the investments were prudent, unless the contrary is shown").

[49] SREA Comments, at 12.

customers as reflected in the prudent investment standard noted above, SREA's suggested arrangement disregards the constitutional prohibition against the subscription to the stock of a private enterprise by the State or its political subdivisions. Specifically, La. Const. art. VII, § 14(A) mandates that a municipality such as the City may not purchase or subscribe to the stock of a private corporation: "[N]either the state nor a political subdivision shall subscribe to or purchase the stock of a corporation or association or for any private enterprise." As noted by the Louisiana Supreme Court in *Public Housing Administration v. Housing Authority of City of Bogalusa*, 137 So. 2d 315 (La. 1962), the Louisiana Constitution "clearly bans any participation by the State or its political subdivision in the ownership and operation of a private enterprise."[50]

This prohibition makes perfect sense, particularly in the context of utility regulation, because, otherwise, ownership of ENO "stock" by the City may allow the City (through the Council) to do indirectly what it is not permitted to do directly, namely, participate in the management of ENO's business. Indeed, the Council has historically observed the following important limitation on its regulatory authority:

> While the Home Rule Charter of the City of New Orleans vests the Council with the authority to supervise, regulate and control all utilities providing service in the City, that authority does not allow the Council, or other parties for that matter, the ability to substitute their own decisions for those of the utility.[51]

The Council has likewise acknowledged that a utility has the "right to manage its own affairs to the fullest extent, consistent with the protection of the public's interest," and must be able to "plan and manage its business."[52] In other words, the Council's power of supervision, regulation, and control over public utilities providing service within the City of New Orleans cannot, by virtue of that regulation, be converted into private management of such utilities.[53]

Therefore, in addition to being unlawful, ownership of any part of the Company's "stock" in the manner suggested by the SREA would impermissibly blend the role of the Council as *regulator* of the utility with the City as part *owner* of the utility in contravention of the well-settled authorities protecting the independence of a utility's business judgment.[54]

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[50] *Housing Authority of City of Bogalusa* involved the interpretation of Article IV, § 12 of the Louisiana Constitution of 1921; however, the text of the specific constitutional provision in question is consistent with Article VII, § 14(A) of the Louisiana Constitution of 1974. *See also* La. Atty. Gen. Op. No. 13-0222, 2014 WL 517254 (Jan. 10, 2014) (finding that the Iberia Parish Airport Authority may not use public funds to purchase stock in a private cooperative established for the operation of a sugar mill).

[51] Council Resolution No. R-17-332, *In Re: Rulemaking Proceeding Regarding Integrated Resource Planning, Docket No. UD-17-01*, at 18.

[52] *Id.*

[53] *Georgia Power Co. v. Georgia Pub. Serv. Comm'n*, 85 S.E.2d 14 (Ga. 1954) ("Public regulation must not supplant private management.").

[54] *See, e.g., State of Missouri ex rel. Sw. Bell Tel. Co. v. Pub. Serv. Comm'n of Missouri*, 262 U.S. 276 (1923) ("It must never be forgotten that, while the state may regulate with a view to enforcing reasonable rates and charges, it is not the owner of the property of public utility companies, and is not clothed with the general power of management incident to ownership . . . . The commission is not the financial manager of the corporation, and it is not empowered to substitute its judgment for that of the directors of the corporation."); *United Fuel Gas Co. v. Pub. Serv. Comm'n*, 174 S.E.2d 304 (W.Va. 1969) ("The authority of a public utility commission can be exercised only when the public necessity and convenience require it. In accordance with these rules, except as

Rather than adopting the unconventional and unconstitutional proposals made by SREA and other renewable industry advocates, the Company suggests that the Council consider something similar to its process for reviewing annual compliance with Energy Smart requirements as a model framework. As with Energy Smart, the Council could employ a goal-based approach to achieve a CES coupled with due process-driven prudence reviews to assess ENO's compliance with the Council's goals. Years of successful implementation under Energy Smart have shown that such a process provides an adequate and effective incentive for the Company to comply with the Council's policy goals.

E. Rate Impacts

Perhaps aware of the exorbitant costs their proposals would foist on ENO's customers, AAE and PosiGen both suggest low-income customers should be exempt from paying any costs associated with RPS compliance (*e.g.*, through an RPS cost recovery rider). These Parties do not offer any definitions or parameters for determining "low-income" status, but it is possible that 30%+ of residential customers could be excluded from payment depending on the guidelines adopted. While the Company supports the need to minimize impacts on low-income customers, it should be noted that any exclusions would shift the tremendous cost of compliance with proposals advanced by AAE, SREA, PosiGen and other renewable industry advocates to the remaining customers. It is also unclear how a low-income exclusion would work given that a significant portion of ENO's existing resource portfolio produces clean energy and is already reflected in both base rates as well as the monthly fuel adjustment clause.

AAE, PosiGen, and VS/350 propose different types of cost caps such as overall caps on compliance costs (AAE) or maximum monthly bill charges by customer class (PosiGen and VS/350). The Company suggests that overall or monthly limits on bill impacts should be considered within the larger framework of any Council mandates so as not to be set unrealistically low. The Company notes that arbitrary cost caps may not provide sufficient flexibility for meeting Council mandates and that ENO should not be penalized for failing to adhere to cost caps absent a finding of imprudence. Amounts spent prudently above cost caps should be recovered through normal ratemaking processes such as an RPS cost recovery rider, a formula rate plan ("FRP") if one were to be adopted, or even the monthly fuel adjustments, and not through a regulatory asset as proposed by VS/350.

III. Other Regulatory and Planning Issues

A. Existing Power Purchase Agreements

AAE and Sierra Club argue that life-of-unit Purchase Power Agreements ("LOU PPAs") between ENO and other Entergy affiliates are too expensive and should be exited in favor of procuring renewable energy under new agreements. SREA suggests that energy from some of the Company's generators costs significantly more than what the Company could procure from a

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far as is necessarily curtailed for regulatory purposes, all the incidents of ownership are retained by a utility over its property and affairs, and it has the right in the first instance to make such rules and regulations for the conduct of its business as it may deem best, and to manage its own affairs to the fullest extent consistent with the protection of the public's interest.").

competitive solicitation for utility-scale solar and wind. However, the comparison SREA and the AAE[55] attempt to draw between LOU PPAs and market energy purchase is inapt because it willfully ignores the long-term capacity value provided by these PPAs. Long-term PPAs from physical generating units provide capacity that counts toward meeting capacity adequacy, which is expressed as annual Planning Reserve Margin Requirements in MISO. Absent these PPAs and instead relying on market energy purchases, ENO would require additional capacity and capacity credits to meet MISO annual Planning Reserve Margin Requirements. The cost of these capacity credits and the exposure to uncertain capacity credit prices would increase the cost and risk of relying on energy market purchases. As such, the SREA and AAE argument is fundamentally flawed and suggests an approach to resource planning that the Council has already thoroughly examined and rejected.[56]

In addition to being based on factually inaccurate information and unsound resource planning practices, the suggestion that the Council can or should order ENO to exit or terminate existing LOU PPAs (which are jurisdictional to the Federal Energy Regulatory Commission ("FERC")) in order to achieve RPS compliance contravenes well-established principles of law articulated and enforced by the United States Supreme Court. As such, the position advanced by certain Parties would not result in either savings to customers or achievement of the Council's broader policy goals around emissions reductions and climate change, but would instead result in costly, years-long litigation at FERC.

As alluded to in comments from AAE and SREA, ENO purchases energy and capacity from several generating units pursuant to tariffs and rate schedules with System Energy Resources, Inc. ("SERI") and other ENO affiliates, which tariffs and schedules are approved and on file at FERC. First, ENO buys a portion of the output from Grand Gulf Nuclear Station ("Grand Gulf") from SERI under the Unit Power Sales Agreement ("UPSA"). The UPSA is a wholesale rate schedule approved and on file at FERC. The UPSA contains the rates, terms, and conditions for ENO's purchase from SERI of 17% of the output of Grand Gulf and provides in relevant part that it "shall continue until terminated by mutual agreement of all parties." This provision does not include any unilateral rights of termination. As such, ENO does not have a unilateral right to terminate the UPSA; to pursue termination, the Council would have to file a complaint at FERC.

Second, ENO buys capacity and energy from Entergy Arkansas, LLC and Entergy Louisiana, LLC under the MSS-4 Replacement Tariff. The generating units covered by service agreements under the MSS-4 Replacement Tariff include, among others, Grand Gulf, Arkansas Nuclear One ("ANO"), Waterford, Ninemile, River Bend Station ("River Bend"), the Independence Steam Electric Station ("ISES") and the White Bluff Generating Plant ("White Bluff"). The MSS-4 Replacement Tariff is a wholesale tariff approved and on file at FERC.

Parties enter into service agreements under the MSS-4 Replacement Tariff memorializing the rates, terms, and conditions for specific transactions, and such PPAs are effective for "the operating life of [the generating facility]." "Operating life" includes any periods the plant continues to operate until retirement. The PPAs under the MSS-4 Replacement Tariff also

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[55] *See* https://www.all4energy.org/energy-matters-blog/this-crazy-trick-could-help-new-orleans-utility-customers-save-money

[56] *See* Council Resolution No. R-18-65 at pg. 43.

provide that "[n]either party shall have the right to terminate the unit power purchase and sale required by this Agreement without the express written consent of the other party." This provision does not include any rights of unilateral termination. As such, ENO does not have a unilateral right to terminate the PPAs in question; to pursue termination, the Council would have to file a complaint at FERC.

The United States Supreme Court ("USSC") has ruled that, "The reasonableness of rates and agreements regulated by FERC may not be collaterally attacked in state or federal courts. The only appropriate forum for such a challenge is before the [FERC] or a court reviewing the [FERC]'s order."[57] In that case, the Mississippi Attorney General and other parties had filed suit to challenge an increase in rates approved by the Mississippi Public Service Commission ("MPSC") to fund the purchase of energy and capacity from Grand Gulf by Energy Mississippi, LLC's predecessor in interest, the Mississippi Power and Light Company ("MP&L"). MP&L's purchase of energy and capacity from Grand Gulf and the prices associated therewith had been previously approved by FERC. The Mississippi Attorney General filed suit with the Mississippi Supreme Court, arguing that the MPSC should have required MP&L to demonstrate the prudence of costs associated with Grand Gulf prior to authorizing the rate increase. The Mississippi Supreme Court agreed, and MP&L appealed to the USSC. The USSC reversed the Mississippi Supreme Court, holding that FERC proceedings preempted a prudence inquiry at the MPSC related to Grand Gulf.[58] In so holding, the USSC stated as follows:

> States may not regulate in areas where FERC has properly exercised its jurisdiction to determine just and reasonable wholesale rates or to insure that agreements affecting wholesale rates are reasonable. FERC's jurisdiction to adjust the allocations of Grand Gulf power in the UPSA has been established. Mississippi, therefore, may not consistent with the Supremacy Clause conduct any proceedings that challenge the reasonableness of FERC's allocation.[59]

The USSC also noted that, because of the prior determinations by FERC related to the rate MP&L should pay in exchange for its share of Grand Gulf, "we conclude that the Supremacy Clause compels the MPSC to permit MP&L to recover as a reasonable operating expense costs incurred as the result of paying a FERC-determined wholesale rate for a FERC-mandated allocation of power."[60] The implication from Intervenors that the Council should, as part of this proceeding, require ENO to exit FERC-approved agreements in order to facilitate the ability to impose a mandatory RPS on ENO ignores these well-settled legal precedents; and if such actions were to be pursued, they would result in years of costly litigation at FERC.

B. Available Solar/Google Project Sunroof

AAE, PosiGen, and VS/350 all point to Google Project Sunroof data as proof that 94% of roofs in New Orleans could host an aggregate of 2.7 gigawatt ("GW") of solar PV, which seeks

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[57] *Mississippi Power & Light Co. v. Mississippi ex rel. Moore*, 487 U.S. 354, 375; 108 S.Ct. 2428, 2441; 101 L.Ed.2d 322 (1988).

[58] *Id*, 487 U.S. 354, 355; 108 S.Ct. 2428, 2430.

[59] *Id*, 487 U.S. 354, 374; 108 S.Ct. 2428, 2440–41.

[60] *Id*, 487 U.S. 354, 373; 108 S.Ct. 2428, 2440.

to imply that all of ENO's load could be met with locally-sited renewable generation; a physical impossibility. These Parties' proposal and the arguments underpinning it represent a superficial and unsound approach to resource planning that withers under the slightest scrutiny. Project Sunroof is a tool that provides a generic, high-level, and theoretical estimate, much like an estimate of technical DSM potential. Once the impacts of issues such as shading, roof condition, customer interest, and renter-vs.-owner occupancy are factored in, the achievable potential is a fraction of the theoretical amount represented by these Parties.

This reality is evidenced by ENO's recent experience with commercial and residential rooftop solar projects. Research from Brightergy Louisiana, LLC ("Brightergy")[61] in connection with supporting the ENO commercial 5 MW rooftop project, approved by the Council in Docket UD-17-05, shows that the Google Project Sunroof estimate is vastly overstated. As described in testimony filed in that docket,[62] Brightergy undertook a three-level analysis of available, suitable commercial rooftops in New Orleans that could accommodate at least 100 kW of solar PV. The first level of the analysis, which utilized the Google tool, identified a total potential solar capacity of approximately 260 MW which was further refined to address the downtown network grid.[63] The resulting ~200 MW of technical potential is approximately 7.4% of the 2.7 GW that these parties have represented to the Council as being available in New Orleans. A similar exercise performed for residential rooftops would likely yield a comparable result. Even acknowledging that there are likely many residential and commercial roofs that could accommodate solar PV installations of less than 100 kW, it is clear that the 2.7 GW estimate is of no practical value in a discussion of potentially available solar capacity in New Orleans and is a misleading representation to the Council.

Additionally, a final point to consider here is that any penetration of rooftop solar even remotely approaching the Google estimate would carry with it huge impacts to the reliability of the existing distribution system and the allocation of costs under the utility rate design structure. Whether or how these impacts could be mitigated in a manner that is fair and affordable to customers is unknown at this time. Moreover, as noted above, drastic rate increases would result from mandating the RPS standard proposed in the filed comments.

C. Resource Planning

PosiGen states that ENO should be barred from adding any new fossil generators after 2022 and only resources allowed through an RPS should be eligible for modeling or consideration in future IRPs. The Company notes that arbitrarily excluding resources other than wind, solar, and battery storage from future consideration would be inconsistent with both prudent utility resource planning and the Council's IRP rules.[64] The National Academy of Sciences Study expounded

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[61] Brightergy Louisiana, LLC is the contractor leading the construction of the 5 MW solar project approved by the Council in Docket UD-17-05.

[62] *See* Direct Testimony of D. Andrew Owens, filed October 2017, Council Docket UD-17-05 ("Owens Direct").

[63] Owens Direct, at 13-16.

[64] *See* Council Resolution No. R-17-429, approved August 10, 2017, which adopted the current rules for the Council's IRP process. The preamble of the Rules, which was adopted at the request of the AAE, states that "It is the Council's desire that a comprehensive IRP conducted in accordance with these IRP Rules provide a full picture of **all reasonably available resource options** in light of current and expected market conditions and technology trends, and generate an informed understanding of the economic, reliability, and risk evaluation of

upon the reasons that relying solely upon intermittent does not constitute prudent resource planning, stating:

> Wind and solar are variable energy sources, and some way must be found to address the issue of how to provide energy if their immediate output cannot continuously meet instantaneous demand. The main options are to (i) curtail load (i.e., modify or fail to satisfy demand) at times when energy is not available, (ii) deploy very large amounts of energy storage, or (iii) provide supplemental energy sources that can be dispatched when needed. It is not yet clear how much it is possible to curtail loads, especially over long durations, without incurring large economic costs. There are no electric storage systems available today that can affordably and dependably store the vast amounts of energy needed over weeks to reliably satisfy demand using expanded wind and solar power generation alone. These facts have led many US and global energy system analyses to recognize the importance of a broad portfolio of electricity generation technologies, including sources that can be dispatched when needed.[65]

SREA states ENO should stop relying on capacity-only planning and instead focus on energy-based planning. SREA seems to mischaracterize the Company's planning processes which are both consistent with prudent industry practice for meeting customer needs reliably at the lowest reasonable cost and supportive of ENO's role as a Load Serving Entity in MISO that is required to serve its customers' native load. Further, it should be noted that under the Council's IRP rules, the Company is required to assess both the demand and energy needs of its customers over the planning horizon, not simply one or the other.[66] These Parties' proposals contravene well-established, prudent resource planning principles, which the Council recently reaffirmed following a year-long rulemaking proceeding through which the Council adopted its IRP Rules.

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utility resource planning as well as the associated social and environmental impacts." (emphasis added). *See also*, IRP Rules at Section 5.A. ("The Utility shall identify and evaluate all existing supply-side and demand-side resources and identify a variety of potential supply-side and demand-side resources which can be reasonably expected to meet the Utility's projected resource needs during the Planning Period.").

[65] *See* National Academy of Sciences Study at pgs. 6722-23 (citing MacDonald AE, Clack CTM, Alexander A, Dunbar A, Wilczak J, Xie Y (2016) Future cost-competitive electricity systems and their impact on US CO2 emissions. *Nat Clim. Change* 6:526–531; NREL (2012) *Renewable Electricity Futures Study* (National Renewable Energy Laboratory, Golden, CO), Tech Rep NREL/TP-6A20-52409; Deep Decarbonization Pathways Project (2015) *Pathways to Deep Decarbonization* (Sustainable Development Solutions Network and Institute for Sustainable Development and International Relations, Paris); Fawcett AA, Clarke LE, Weyant JP, eds, The EMF24 study on U.S. technology and climate policy strategies. *The Energy Journal*. June 1, 2017; Krey V, Luderer G, Clarke L, Kriegler E (2014) Getting from here to there – energy technology transformation pathways in the EMF27 scenarios. *Clim. Change* 123:369–382; Williams JH, et al. (2012) The technology path to deep greenhouse gas emissions cuts by 2050: The pivotal role of electricity. *Science* 335:53–59; Mileva A, Johnston J, Nelson JH, Kammen DM (2016) Power system balancing for deep decarbonization of the electricity sector. *Appl. Energy* 162:1001–1009; IEA (2015) Energy Technology Perspectives 2015: Mobilising innovation to accelerate climate action (International Energy Agency, Paris); Energy and Research Partnership (2015) *Managing Flexibility Whilst Decarbonising the GB Electricity System* (Energy Research Partnership, London); IPCC (2014) *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, eds Pachauri RK, Meyer LA (IPCC, Geneva)).

[66] *See* IRP Rules at Section 4.

IV. Conclusion

ENO shares the Council's goal of reducing carbon emissions to address future risks associated with climate change. To accomplish this goal, ENO recommends that the Council adopt a comprehensive Clean Energy Standard focused on carbon reductions across all sectors of New Orleans, using all tools available, including increased utilization of solar and other renewable resources, electrification and other measures that reduce the City's carbon footprint, demand-side management, and the incorporation of existing emission-free nuclear and hydro generation. Climate advocates, industry experts, and academic research confirm that choosing this comprehensive, flexible, technology-inclusive approach will provide the best hope for achieving the Council's goals with the least impact to electric rates.

Conversely, the work of these same thought leaders, as well as empirical evidence from other jurisdictions, has shown that the establishment of a restrictive RPS that only allows certain kinds of technologies to be used in the effort to reduce carbon emissions is not the most rational or cost-effective way to achieve significant carbon emission reductions. The Parties that advocate for this approach would have the Council adopt restrictive mandates that would be costly to ENO's customers and jeopardize the reliability of electric service in New Orleans. Therefore, in keeping with the views of leading industry experts, ENO and several other commenters recommend that the Council establish a Clean Energy Standard that builds on ENO's existing clean fleet, adding additional renewables, electrification efforts, and other innovative measures and technologies that will drive further carbon emissions reductions for the betterment of the City of New Orleans and all of ENO's customers.

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CERTIFICATE OF SERVICE
Docket No. UD-19-01

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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