**DELAY THE NOPS VOTE UNTIL WE EXAMINE ALL OPTIONS**– ver. Feb 19

Just stopping NOPS is not the right goal ***AND*** for James Gray and most of the Council it is LIKELY TO BE "***a bridge too far***". Thus, we are forced to focus upon NOPS now... but we do not need to DEFEAT NOPS, instead, we should instead focus upon DELAYING THE NOPS VOTE while we require the Utility Committee to examine all options ***within Utility Committee meetings***: and while we're at it, refocus the council's utility committee on their jobs: to openly

1) **Review the NOPS docket's evidence and its implications**. (Appendix A is the executive summary of one such brief.)

2) **Receive evidence from Marcie Edwards**, interim executive director of the Sewerage and Water Board [S&WB] to answer: “What are S&WB’s greatest problems that have anything to do with services ENO can/should provide, e.g., electricity capacity, at the right frequency, reliability and energy efficiency investments on or off S&WB’s fiscal plant?”[[1]](#endnote-1)

3) **Receive testimony from the two Demand-Side-Management Potential-Study Contractors**:

    a) Jan Vrins, i.e., ENO's hired gun, Navigant,[[2]](#endnote-2) and   b) Optima Energy and ACEEE, i.e., the Council's hired gun. 45

4) **Receive more testimony from NRRI**.[[3]](#endnote-3), 48, 51, 58

5) **Examine the full economic costs and alternatives of all competing ways to increase NOLA's access to Renewable Energy [RE] using the metrics of:**

   a) ENO's return on investment in each case[[4]](#endnote-4), [[5]](#endnote-5)

 b) Capital-cost using ratepayer funds vs harnessing private investment[[6]](#endnote-6)

   c) Speed of acquisition.[[7]](#endnote-7)

   d) Benefits associated with increasing Distribution System Reliability.[[8]](#endnote-8)

   e) Benefits of battery investments incented at a rate just below the cost that ENO would pay for the same services.[[9]](#endnote-9)

   f) Benefits these batteries installed by customers to increase reliability and buy negatively priced electricity from IOWA every night and let ENO make a profit (albeit a much smaller ROI) on these customer-sited battery purchases…[[10]](#endnote-10)

   g) Turn on, Community Solar, as was recommended in 2007 in the New Orleans Energy Policy Task Force report.[[11]](#endnote-11), [[12]](#endnote-12)

   h) Turn on our nascent and growing RE & Microgrid industry and will stimulate 50 x as many jobs.[[13]](#endnote-13),[[14]](#endnote-14)

 6) **Explain that the LONG-ACCEPTED COUNCIL RESOLUTION (of 2008) that ENO shall do an IRP every three years REQUIRES that the NOPS issue MUST BE DECIDED within the 2018 IRP process and if NOPS fails the 2018 IRP test, it can be brought up again 3 years later**.  The Council should accept its own decision from 2008 to not make new generation upgrades outside of THE INDUSTRY-STANDARD proven process, and, recognize the ENO made its arguments for NOPS within the 2015 IRP cycle and failed.

 7) **Explain that all previous ENO IRP's have been defective in all these ways:**

   a) There was no 3rd party, independent DSM potential study... previously work was done by contractors working for ENO.[[15]](#endnote-15)

   b) Until January 2017, the Utility Committee was led to believe, that the scope and details of a DSM was an output of an IRP instead of an input.[[16]](#endnote-16)

   c) IRP work can be effectively done or grossly effected by an auction — but this has never been tried.[[17]](#endnote-17)

  d) Rate design, e.g., *Time of Use* rates, can be more effective — but this has never been tried.[[18]](#endnote-18)

 e) All of ENO's IRPs have ignored ENO system and customer ***reliability***both: in the choice of ENO investments: whether in generation, transmission or distribution AND in the choice of ENO's customer's investments.[[19]](#endnote-19)

8) **The Scope of DSM work has also been grossly deficient**:

   a) None of the DSM work done has ever addressed the needs of ENO's largest customer, the S&WB, and this has materially contributed to the S&WB's lack of reliability and suppressed energy efficiency with the results of: greater losses in floods, longer outages during freezes, greater S&WB bills and no synergy between S&WB and ENO’s services and costs.31, [[20]](#endnote-20)

   b) Until last year, no previous DSM work included Demand Response.

   c) However, as Tom Stanton pointed out in December, DSM Potential should not be limited to investments on the Demand Side of the Meter; it should include Distribution Resource Planning and investments there.[[21]](#endnote-21)

   d) DSM potential should not be limited to consequences generated by investments by ratepayers via a utility-administered program, namely "utility-managed".[[22]](#endnote-22)

   e) DSM potential should not be limited to spending with a SPENDING CAP of a few tens of millions / year but instead allowed to be wide open to include ALL COST-EFFECTIVE INVESTMENTS.  This was the assertion of Chris Neme when he testified at the September 2017 meeting... and through this approach DSM can confidently attain more than a 3% drop in kWh consumption as has been proven in NH, MA, and VT.[[23]](#endnote-23)

   f) DSM should not be narrowly focused upon decreasing energy consumption but instead, BECAUSE a DSM's main purpose is to inform a quality IRP process, its primary goal should be upon decreasing peak demand measured in KWs, not kWh’s.[[24]](#endnote-24)

   g) Nevertheless, Energy Smart is decreasing demand at $0.50/W and if allowed to continue along its current trajectory using the current ES administrator, ES will decrease peak demand by more than 200 MW by 2023... and all such expenditures have a NET-PRESENT VALUE, negative cost to ratepayers.[[25]](#endnote-25)

  h) Deemed savings is clearly not working.  Investments must shift to performance-based compensation for ratepayer-funded investments.  Consider the grossly high, energy bills from January.44, 55

  i) 2018 is FINALLY THE YEAR of the RATE CASE... and the Utility Committee has just voted unanimously in favor of smart meters.  But, there is no pilot program that will fully use smart meters coupled with Time of Use [TOU] rates and/or CLEP to examine the potential to ameliorate the need for new generation that way... a way that has an international track record of reducing peak demand by 15%. namely more than 2/3 the peak demand avoided than the NOPS generation option can provide just with TOU. But TOU has much less potential than CLEP to affect peak demand and customer-side investments that are only incented by performance.  TOU has a projected net cost of less than $0.30 / W compared to the $1/W which is NOPS's price tag.48,49,[[26]](#endnote-26)

 j) Pursuit of Reliability is not separable from pursuit of energy efficiency nor pursuit of decreased need for peaking generation capacity.

9) **How does a vote for NOPS favorably comport with these decisions by the Council and other, very important issues?**

  a) The Council's decision to only vaguely support the Mayor's Climate Action Plan — which, instead, if fully implemented will make NOLA 100% renewable by 2030.[[27]](#endnote-27)

  b) The Utility Committee's unanimous decision to pursue deployment of Smart Meters. 48,49,[[28]](#endnote-28)

  c) The ongoing and apparently increasing: more than 2500 outages a year.[[29]](#endnote-29)

  d) Lack of good much less very, very good reliability needed for NOLA' s critical infrastructure.[[30]](#endnote-30)

  e) Limited funding sources that ratepayers = tax payers = S&WB customers can financially bear?[[31]](#endnote-31)

10) **Refuting assertions by ENO.**

  a) NOPS is likely to flood in a major hurricane.[[32]](#endnote-32)

  b) Even if NOPS does not flood, the Distribution system will fail with a 100% probability.[[33]](#endnote-33)

  c) During the winter HARD FREEZE, NOPS would have provided less than 1/2 of one percent additional power to NOLA because ENO must share all assets with MISO.[[34]](#endnote-34)

  d) NOPS is no help whatsoever to the S&WB; and never will be.  ENO's has undermined S&WB's reliability and refused to contribute to its efficiency.[[35]](#endnote-35)

  e) If NOPS is so good, let ENO build it as a Merchant Plant and take all the risks and benefits. ENO does not need Council approval to build NOPS to use for pure wholesale electricity sales.[[36]](#endnote-36)

  f) If ENO will not take the Deal in e) perhaps it will accept a new regulatory contract, like that used in CA and only require its customers to pay for investments that are deemed used and useful... and any time it is no longer deemed used or useful, ENO will have to eat the residual costs of investments.[[37]](#endnote-37)

11) **The timing of the NOPS vote is bad.**

  a) It is not fair to the Council-elect to have to deal with a mess that is not in their control... That council will have to set rates AFTER NOPS is accepted as a *fait-accompli*, instead of making the decision within the Rate Case.

  b) The current regulatory climate is grossly hampered by both Mardi Gras and the Winter Olympics that will jeopardize public attention on this issue as well as the time, current Council members can devote to it.

  c) The New Orleans Coalition has just passed a resolution opposed to NOPS only available a two days before the vote... and NOC has endorsed the election campaign of every member of the current council and the council and mayor-elect.

  d) No newspaper has run any in-depth treatments of the issue, nor reported on the findings of the NOPS docket.

  e) The public meetings held by ENO did not allow public comments to the contrary of their goals via a process that could be called DUE PROCESS...this did not serve the public interest; it only promulgated confusion.

  f) the major trade industries have been confused by this process.

  g) the Council is confused because they do not understand the complexity of the issue.

  h) the last meeting of the utility committee stifled discussion on NOPS instead of promoted it.[[38]](#endnote-38)

Thus, we think we should be working together to write up a prototype, FIRST DRAFT, of a

**Motion to Delay a Vote on NOPS until a Specific Set of Issues are Settled.**

The plan, as I see it, will include all the preceding (or a more salient, easier to appreciate and concise subset) written into the WHEREAS SECTION.

Principal author: Myron Katz, PhD, Building Science Innovators, 302 Walnut Street, NOLA, 70118, dated 19 Feb 2018.

Cosigners are:

**Appendix A “… the Public Interest Intervenors respectfully submit this Post-Hearing Brief.”**

 Pursuant to the City Council of New Orleans Resolution R-17-426, the Alliance for Affordable Energy, Deep South Center for Environmental Justice, 350 – New Orleans, and Sierra Club (collectively, “the Public Interest Intervenors”) respectfully submit this Post-Hearing Brief. Based on the evidence and record in this proceeding, as set forth below, the Public Interest Intervenors request the City Council of New Orleans deny the Application of Entergy New Orleans, Inc. (“ENO” or the “Company”) for Approval to Construct New Orleans Power Station and Request for Cost Recovery and Timely Relief. ***Signed by Michael Brown, attorney, Waltzer, Wiygul & Garside, LLC, January 22, 2018***

INTRODUCTION

 Today, the City Council of New Orleans (“Council”) stands at a crossroads. One path, the path proposed by Entergy New Orleans (“ENO” or “the Company”), is old, worn, and well past its usefulness. Essentially, ENO wants New Orleans to remain mired in the past, to build yet another fossil-fueled power plant that is unnecessary, will cost New Orleans ratepayers millions of dollars, will subject residents to increased levels of air pollution, and contribute to climate change.

 The other path is recognition of the future of clean, sustainable energy generation and the harmful impacts of fossil-fuel generation. It is a path already selected by regulated utilities, states and local governments across this country. Utilities are abandoning reliance on fossil fuels and adopting a mix of new technologies. Technologies such as solar and battery storage, combined with innovative energy efficiency programs and demand response are replacing proposed fossil-fueled power plants across the country. This is the path that the Council should choose.

 More important, ENO has utterly failed to prove that building either a 226 MW CT plant or a 128 MW RICE unit is in the public interest. As the intervenors and the Advisors have demonstrated, ENO has failed to establish that it will have a capacity need for either size gas-fired plant in the next ten years. Evidence actually supports the conclusion that ENO will not need additional capacity for fifteen years. Moreover, ENO’s proposed gas-fired plant would put New Orleans customers at unnecessary financial risk by requiring residents and businesses to pay for generation that they do not need and will also place at risk future investment in either renewable generation or demand-side management.

 Similarly, while ENO created a reliability need by its decision to close Michoud Units 2 and 3, that need can be met far more cheaply and more quickly by alternatives to the gas-fired plant that ENO steadfastly refused to fully consider. The evidence demonstrates that gas-fired generation is not needed to meet reliability standards, and that neither NOPS alternative would mitigate reliability concerns in any way in the next two years. In fact, ENO’s own data show that transmission upgrades, in combination with energy efficiency measures and solar generation, could resolve reliability violations more cheaply than either gas-fired plant. ENO’s reliability arguments offer no support for approval of either gas-fired plant. Furthermore, the gas-fired plants are not the least-cost alternatives and, in fact, would cost ratepayers more than transmission and solar-powered solutions. As the Advisor witnesses conclude, upgrading New Orleans’ transmission lines and installing utility-scale solar, instead of constructing a gas-fired plant, would be the “economically preferred alternative.” Moreover, ENO failed to adequately assess the impacts of constructing a gas-fired plant on the environment. These impacts include increased air pollution, subsidence or flooding. Similarly, ENO failed to adequately assess the impacts on the predominantly African American and Vietnamese American communities living near the Michoud site.

 Thus, the Council should find that 1) there is no need for the capacity; 2) reliability concerns can be addressed through less costly and more timely means; and 3) neither proposal is in the public interest. Based on these finding, the Council should reject both ENO applications. The Council also should institute a transmission reliability proceeding to fully examine all the alternatives available to resolve the reliability concerns created by the deactivation of Michoud units 2 & 3.

SUMMARY OF ARGUMENT

 In this docket, Entergy New Orleans, LLC (“ENO” or “the Company”) is asking the City Council to approve its application to build a gas-fired power plant in New Orleans East. ENO’s latest, supplemental and amending application represents the culmination of nearly four years in which ENO has sought to convince the City Council that some sort of gas plant in New Orleans East is the Council’s only option. In this effort, ENO has provided the Council with a series of shifting and illusory claims about the need for a gas plant. In this docket proceeding, ENO has proposed varying sizes of a proposed gas plant and presented different reasons to justify a new gas plant. ENO has switched its justification for a new gas plant from an emphasis on capacity need1 to an emphasis on reliability need.2 The driving purpose of these inconsistencies is ENO’s desire to build, and add to its rate base, a $200-plus million-dollar, gas-fired facility. ENO’s desire for a new gas plant has resulted in its failure to seriously evaluate any alternative other than a gas plant to meet the City’s capacity or reliability needs.

 ENO’s plan to close Michoud Units 2 and 3 and build a new gas plant apparently had been set in motion by 2014.3 At this time, ENO had been conducting transmission system assessments, which suggested the need for system upgrades—such as transmission line upgrades or adding generation — in the event of Michoud Units 2 and 3 are decommissioned.4 Apparently, these assessments were done internally. ENO witness Charles Long revealed that “all along,” ENO concluded that it would not make the transmission line upgrades, even though they would resolve the reliability problems associated with decommissioning Michoud Units 2 and 3, but, instead ENO chose to add new generation.5 ENO’s decision to decommission Michoud Units 2 and 3 was made unilaterally. ENO never sought Council approval prior to closing Michoud Units 2 and 3, or informed the Council or its Advisors of any near-term, serious reliability risks attending the closure.6

 ENO’s reliability concerns would have been news to the public and to the City Council and its Advisors, who, apparently, never learned that the closure of the old Michoud units posed an immediate reliability risk, as modeled in the NERC, P-6 contingency, until at the earliest late 2016, and only then after reviewing studies produced in this docket.7 A study conducted by MISO in 2014 found that, based on existing planned transmission upgrades, there were no reliability constraints and no voltage reliability concerns posed by ENO’s plan to close Michoud Units 2 and 3.8 It is worth noting that MISO did not specify that ENO should replace the shuttered units and did not recommend designating the closing units a “System Support Resource.”9

 In 2015 and 2016, ENO began to lay the groundwork to convince the City Council that it had little option but to build a gas plant at Michoud. In August 2015, ENO entered into a settlement agreement, later approved by the City Council on the recommendation of its Advisors. The overall purpose of the settlement agreement was to terminate the System Agreement governing the relationship between ENO and other ENO affiliates. The settlement agreement also included a term that essentially committed ENO to putting forward the second application it made in this docket, containing a combustion turbine and a 128 MW gas option:

 As part of this commitment, ENO will fully evaluate Michoud or Paterson, along with any other appropriate sites in the City of New Orleans, as the potential site for a combustion turbine (“CT”) or other peaking unit to be owned by ENO, or by a third party with an agreed-to PPA to ENO.10

 This settlement term was adopted verbatim in Council Resolution 15-524. After agreeing to purchase a unit of the Union Power Station in 2014, ENO concluded that it would have sufficient capacity, when combined with purchases on MISO’s capacity market, to operate its system through at least 2020.11

 However, ENO later claimed in its 2015 Integrated Resource Plan (“IRP”) that a gas plant was needed to help meet a capacity shortfall of more than 340 MW by 2034.12 For this IRP, ENO modeled the cost of potential resource options to meet its claim of capacity need using AURORA, which selected a combined-cycle turbine or solar resources as preferred options, not one of the gas plants that ENO proposes here. ENO then manually adjusted the results of its AURORA model, to instead focus on a combustion-turbine peaking resource. ENO included either a 194 MW or a 250 MW combustion turbine not just in its preferred portfolio, but in every single one of the four alternative portfolios ENO evaluated for the IRP.13

 Prior to filing its first gas plant application in 2016, ENO began to include a 250 MW gas plant, and only a gas plant, in its NERC Corrective Action Plans and in the Company’s “base case assumptions that [it] made from that point forward.”14 ENO also decommissioned Michoud Units 2 and 3 just before filing the application.15

 In June 2016, ENO filed its initial application in this docket, seeking Council approval to build a new 226-MW combustion turbine in New Orleans East. Just as in the 2015 IRP, ENO’s principal argument for the gas plant was that it was necessary to meet a capacity shortfall.16 Although, by this time, the Company’s load forecasts had begun to decline,17 and the capacity shortfall of 340 MW claimed by ENO fell to 205 MW by 2030.18 Despite the Council’s directive in Resolution 16-506 for this docket, ENO never did an economic model of (1) making transmission upgrades to maintain reliability, (2) addressing any capacity shortfall with new solar or battery storage, and (3) continuing to reduce load by meeting the Council’s two percent energy savings goal.19 In early 2017, ENO received its updated load forecast. This forecast showed further decline in customer demand,20 and the Company moved to suspend this docket to study the implications of the declining forecast on its application to build a gas plant.21 Under the new load forecast, even ENO agrees, the proposed combustion turbine would result in substantially more capacity than the City needs through the next two decades, and far more than the City needs in the next 10 years.22 In other words, ENO cannot justify a gas plant as big as the combustion turbine based on capacity need.

 Rather than withdraw its request to build the combustion turbine, however, ENO reiterated its request to build the 226-MW unit. It also offered the Council the alternative of building a 128-MW set of 7 reciprocating internal combustion engines (the “RICE” units).23 While smaller than the CT, the RICE units would also provide substantially more capacity than New Orleans actually needs, under ENO’s own revised forecast, through at least 2032.24 As a result, ENO changed its argument. Instead of focusing on a pressing capacity need, which no longer exists, ENO now calls attention to the speculative possibility of a “long-term” capacity need.25 But far more stridently, the Company is now claiming that “if incremental generation is not added, and costly transmission upgrades are not performed, the Company's service territory will face the extraordinary reliability risk of cascading (or uncontrolled) outages under certain scenarios that would affect most of the New Orleans area.”26 ENO’s new claim of reliability need to justify a new gas plant also rests heavily on the argument that the gas generators supposedly would assist in hurricane response if New Orleans were to become “islanded” from the rest of the electric grid,27 although it failed to conduct any system modeling for a hurricane or for system conditions resembling an islanding incident.28 Moreover, ENO’s selected location for the proposed gas plants is in an area designated as a high flood risk by FEMA, which discourages the construction of new power generating facilities in such areas. As before, ENO persisted in its refusal to examine a solution that would instead focus on less costly transmission upgrades, batteries, and renewable resources, claiming it was too difficult to determine how much the transmission upgrades would cost and dismissing batteries and solar power.29 Never missing an opportunity to alter its argument in support of building a gas plant, for the first time in its rebuttal testimony in November 2017, ENO also suggested that the gas plant might be able — “subject to further study” — to assist in backing up Sewerage and Water Board facilities in the event of an outage.30

What was once ENO’s claim that a gas plant was necessary to resolve a 340MW capacity shortfall has evolved into a reliability argument for gas plants that are now too large from a capacity standpoint. ENO’s central premise now is that regardless of the fact that the gas plants it is proposing cost more than the alternatives studied, regardless of the fact that ENO never fully evaluated the transmission-upgrades solution, regardless of the fact that the gas plants would create a very large and risky capacity surplus for the City, regardless of the fact that the gas plants would create significant health and flood risks for New Orleans East communities, regardless of the fact that the units’ would contribute air and climate pollution, the Council must immediately approve them for purported reliability reasons.

 As outlined in the sections that follow, none of ENO’s claimed reasons for building the gas plant, whether the original capacity arguments or the new reliability arguments, justify this project. And in fact, ENO failed to study cheaper, faster, and less polluting means to resolve the reliability issues the City faces. The Council must reject ENO’s application as against the public interest.

 **Endnotes for Appendix A.**

1  Rice-1 at 3:6-11. All citations to pre-filed testimony and admitted exhibits refer to the exhibit number assigned in the Administrative Record, Docket No. UD-16-02.

2  Dec. 15, 2017 Tr. 62:2-10.

3  See Dec. 15, 2017 Tr. 185:5–12 (Charles Long cross examination).

4  Id.

5  Id. at 186:20–187:4.

6  Dec. 21, 2017 Tr. 88:19-24; 89:6–7; 89:24-90:1; 90:11–20 (Vumbaco cross examination) (specifying, at December 20, 2017 hearing, that Advisors (and to Mr. Vumbaco’s knowledge, the Council) had only been aware of the potential for a P6 contingency to occur by 2019 on ENO’s system “within the last year” and, at any rate, never prior to the June 2016 commencement of the instant docket).

7  Dec. 21, 2017 Tr. 88:19-24; 89:6–7; 89:24-90:1; 90:11–20 (Vumbaco cross examination).

8  C. Long-2 at CWL-5 at 11 (Attachment Y Study); Lanzalotta-2 at 11:10–11 & n. 7; see also C. Long-1 at Ex. CWL-5, p.11 (concluding that Michoud generation is not required to maintain reliability because of MISO transmission projects).

9  C. Long-2 CWL-5 at 11 (Attachment Y Study).

10 Council Res. 15-524 at p. 12 (Nov. 11, 2015); ENO Arkansas, Inc., et al. – Settlement Agreement, FERC Docket Nos. ER14-75-000, ER14-75-001, ER14-76-000, ER14-76-001, ER14-77-000, ER14-77-001, ER14-78-000, ER14-78-001, ER14-79-000, ER14-79-001, ER14-80-000, ER14-80-001, ER14-128-000, ER14-1328-000, and ER14-1329 at p. 13 (Aug. 14, 2015).

11 See Cureington-2 at 19:12–14.

12 ENO 2015 IRP at 47 (Feb. 1, 2016).

13 Id. at 54–55, 76, 79.

14 Dec. 15, 2017 Tr. 185:19–21; 186:20–187:4; 187:24–188:21 (Charles Long cross examination).

15 See Cureington-2 at 4:13.

16 See, e.g., ENO Original Application at 2–3; Rice-2 at 3:6–7.

17 See Rogers-2 at 8:13–15, 9:1 (Fig 1) (showing ENO’s continually declining load forecasts from the time of the 2015 IRP to 2017). This analysis comports with the analysis by the Deep South Center for Environmental Justice that was filed earlier in Wright-2 at 9:6–10:3 (DSCEJ-3).

18 Rice-2 at 3:6–7.

19 Res. 16-506 at 8, 9; SC- 5 (chart containing production cost model runs ENO was required by the Council to run); Dec. 18, 2017 Tr. 139:16– 139:8; 140:13-15; 172:9-175:15; 177:9 (confirming that ENO did not run the Case 2, transmission and energy efficiency portfolio requested).

20 See Cureington-6 at 5–8.

21 ENO Mot. to Suspend Procedural Schedule, CNO UD-16-02, filed Feb. 14, 2017.

22 See Cureington-6 SEC 12 at 12.

23 Supplemental and Amending Application, CNO UD-16-02, at 1.

24 See Cureington-6 SEC 12 at 11. 25 See, e.g., Rice-3 at 4-5.

26 Id. at 5–6.

27 Id. at 6.

28 Dec. 15, 2017 Tr. at 204:18–25.

29 Dec. 15, 2017 Tr. 216:9 (C. Long: “We did not explore batteries”); id. at 218:22-219:1 (C. Long: “we didn't look at batteries because it's not technically a feasible solution. But did we look at combination of that? No, we didn't, and the reason we would not is solar is intermittent.”); Dec. 21, 2017 Tr. 85:13-17 (“Q. And ENO has not quantified those constructability risks that you reference there by assigning them a dollar value; is that correct? A. To my knowledge, they have not”).

30 Rice-4 at 20:4-7.

**Appendix B Councilmember Gray wants to know more about the details underlined herein.**

1. **California “Used and Useful” - Myron’s Memo 10 (f).** Why not have ENO build the power plant under the standard used in CA and only require its customers to pay for investments that are deemed used and useful, and any time it is no longer deemed used or useful, ENO would have to eat the residual cost of the investment. Myron asserted that some power plants in California have recently been deemed not used and useful and that consumers no longer have to pay for them. What is this standard? How many plants have been deemed not used and useful, and What are the circumstances and age of these plants? See endnote 67.

2. **Sewerage and Water Board.  - Myron’s Memos 2 and 8(a).** Myron raised the issue that none of the DSM work has ever addressed the needs of the S&WB, Entergy’s biggest customer.  Myron and Gray talked about the power conversion necessary (60 hz to 25 hz) and Myron raised the point that in the event of a major storm event, the new power plant will not increase reliability for the S&WB pumps which are distributed all over the city because the either of the critical links that will surely get cut are access to power via the transmission and distribution systems. Myron noted that one of our sources has stated that there are quality converters which can now cleanly convert 60 hz to 25 hz without destroying the pumps, therefore, ENO’s DSM should have helped S&WB obtain these, and if so, would have doubled S&WB’s energy efficiency, and that placing substations next to critical infrastructure will increase reliability — both for better access to power and to allow the S&WB to use all pumps simultaneously which is currently not possible (as Gray told us in the same meeting).

 Gray stated that he still has not gotten clear answers from S&WB about the recent flooding, but that S&WB has not once talked about having a reliable supply of energy being a problem. Therefore, he doesn’t know if the flooding had anything to do with getting power to the pumps. As a matter of fact, he said that S&WB cannot run all the pumps at one time because that would overload the system. See endnote 31.

3) **DSM cheaper than NOPS - Myron Memo 8(e)(f)(g).** Myron pointed out that he has long argued and repeatedly placed this assertion into the 2015 ENO IRP docket, that crawl spaces should be enclosed. But that this point never gets anywhere because the people designing Energy Smart are not from New Orleans, don’t understand the significance, focusing on saving kWh’s instead of reducing peak demand in KW, ignoring major durability and health problems, or just do not know how to do this — particularly regarding decreasing peak demand to the tune of roughly 50 MW both in the summer and winter peak times. Myron noted that enclosing crawl spaces has another benefit, i.e. preventing bursting water pipes during a hard freeze, and had this been done — at least 1/3 of S&WB’s recent problems in mid-January would have been ameliorated.  Myron also pointed out that a lot more can be done economically on DSM and that DSM and renewables are increasing to such a degree that peaking plants are not necessary and that GE and Siemens is laying off people because of the reduced demand for peaking plants. See <https://www.greentechmedia.com/articles/read/siemens-layoffs-renewables-traditional-power-generation#gs.LKcWZGw> , <https://www.bloomberg.com/news/articles/2017-12-07/ge-is-said-to-plan-12-000-job-cuts-as-new-ceo-revamps-power-unit> , and <https://www.bloomberg.com/news/articles/2018-02-12/a-powerful-mix-of-solar-and-batteries-is-beating-natural-gas>

4) **Entergy’s solar power plant. Myron Memo 5(a).**  Myron pointed out the utilities should not own solar because it is always more expensive than solar owned by the private market because of utilities’ overhead expenses and the federal law that guarantees a 16% ROE (return on equity) to utility-owned assets for equipment purchases via the Investment Tax Credit. See Endnotes 34 & 35.

5) **MISO transmission bottleneck. Myron Memo 5(f).**  Myron raised the point that NO should be purchasing cheap night-time MISO power and storing that power in batteries that can be discharged during the day, particularly at peak times, thereby obviating the need for NOPS. Gray said that what Myron’s point conflicts with what Mario Zervigon had just told him, that is that there is not enough transmission capacity within MISO to import energy. Note: We need to find out what Mario said. It may be that means ***during peak hours***, i.e., Mario meant that there is a transmission bottleneck during peak hours, but during night time hours there is no such bottleneck. We need to clarify this and get back to Gray on this. However, within [https://www.eeba.org/Data/Sites/1/conference/2014/presentations/Katz-Inverted-Demand-Compliant-Construction.pdf , on slides 47](https://www.eeba.org/Data/Sites/1/conference/2014/presentations/Katz-Inverted-Demand-Compliant-Construction.pdfthis%20talk%20on%20slides%2047), 48 & 49, it is clear that MISO had (at least in 2014) no transmission bottleneck at night.

6) **50 hours running time.** Myron made the point that the NOPS plant will only run 50 hours a year to meet ENO’s customers’ demand and an additional 100 to 200 hours a year to meet demand more cheaply elsewhere on the MISO system. Gray clearly had not heard this point. We need to provide documentation of this. <https://www.all4energy.org/entergys-proposed-gas-plant.html>

7) **Winter Power Loss.** **Myron Memo 10(c).**  Myron stated that Charles Rice has stated that the power loss in the recent freeze demonstrates the need for NOPS.  Nobody was familiar with any power loss in Orleans Parish, so Rice must have been referring to a power loss elsewhere. Myron pointed out the even if the power loss was in New Orleans, NOPS would do very little to solve the problem because of Entergy’s participation in MISO.  Under MISO, over 99.5% of NOPS would flow out of Orleans Parish to MISO.  Myron also made what I think is a very powerful point —energy efficiency, batteries and generators on the customers’ side of the meter, i.e., private Microgrids, are not part of ENO’s obligations to MISO and the energy produced in those sites remains in those microgrids. Therefore, if ENO builds microgrids to power critical infrastructure, that power does not have to be shared with MISO.  Personally, I think this is a critical point to share with the Council. Gray wants to see the public statement where the assertion was made that NOPS would address power shortages. See <http://www.theadvocate.com/article_3c23aef2-0137-11e8-b1f4-5b8c6ef724d6.html> .

8) **Reliability of Transmission Upgrades vs. NOPS.** **Myron Memo 7(e).**  A presentation was made at the Sept 2017 Utility meeting that showed that a transmission upgrade would avoid twice as many major outages than NOPS by 2027.

“No improvements => 5 outages With NOPS => 2 outages No NOPS but with Transmission upgrade => 1 outage.” See Endnote 59. However, the advisers forced ENO to testify in the NOPS proceeding that $57 million is price tag for this upgrade. ADVISORS 1-19 SS11.

9) **MISO idle capacity.** Myron said that MISO has 8 GW of idle capacity. See <https://www.rtoinsider.com/miso-planning-resource-auction-41524/> Note that $1.50/MW-day is roughly equal to $0.50/KW-year. <https://www.rtoinsider.com/oms-miso-survey-27622/> “Jun 10, 2016 - Dynegy said it will idle as much as 30% of the generating capacity in Southern Illinois because their units can't recover their costs from MISO's energy and capacity markets.” <http://energytransition.umn.edu/wp-content/uploads/2017/08/Clair-Moeller_MISO-the-Midwest-and-Energy-Storage_Sept15-2017.pdf> “Midwest Energy Storage Summit. September 15, 2017. MISO, the Midwest, and. Energy Storage. 1 ... Generation Capacity: ‒ 175 GW (market). ‒ 191 GW (reliability)”

10) **Mississippi Transmission Line.** Myron said that Mississippi PSC recently received a request for permission to build a transmission line across Louisiana to access Texas’s wind energy. See <https://www.usnews.com/news/best-states/mississippi/articles/2017-04-26/power-line-builder-asks-mississippi-to-approve-14b-project> and <http://stoppathwv.com/stoppath-wv-blog/mississippi-economic-development-org-makes-announcement-about-approval-of-southern-cross-transmission>

Endnotes for all but Appendix A

1. ENO suggested that NOPS might be able — “subject to further study” — to assist in backing up Sewerage and Water Board facilities in the event of an outage. (Rice-4 at 20:4-7. In the NOPS docket. Only after ENO found that virtually all other rationales for NOPS were not persuasive, ENO tried a new tactic in its rebuttal testimony in November 2017, [a month before the end of a many-year argument].)

	* 1. ENO never provided that study.
		2. Because it is critical infrastructure, the S&WB needs two, independent ways to power its pumps: via combinations of externally-supplied power, self-generation and storage.
		3. The SWB plans to have sufficient, self-generated power on its Carrollton campus to run all its pumps by May 1, 2018; namely, 80 MW will be on site before the beginning of the next hurricane season, and the SWB is also in the process of building two water towers.
		4. The S&WB’s primary link to ENO-supplied power is through easily-interrupted, inherently unreliable, distribution-grade feeders; upgrading that to transmission-grade would help and that is far, far less costly and more helpful than building NOPS.
		5. Even with that upgrade, S&WB’s antique pumps are sensitive to voltage drops in ENO’s system that a) can turn off or damage these old pumps but b) ENO asserts that such voltage drops are within the industry-standard for grid-supplied power.
		6. There is no, higher, standard for grid-supplied power that will meet the S&WB’s reliability or power-quality needs -- nor can ENO or MISO meet such a standard.
		7. MISO has no capacity shortage, but NOLA has a minor transmission deficiency to MISO.
		8. Because NOPS is not part of a plan to solve any, much less, all the last four problems, no generation upgrade in ENO or MISO will help the S&WB in a non-storm scenario.
		9. Even if access to generation from ENO were a worthy concern in some storm-related scenario, there are still three more substantial questions about whether obtaining power from NOPS to energize the S&WB’s main, Carrollton campus is the most reliable, externally-supplied power source for the S&WB.
		10. Why isn’t Entergy’s Nine Mile Point power plant, which is directly across the river from the SWB’s Carrollton campus, less than a mile away, better suited?
		11. NOPS, as proposed, will be located 15 miles from the SWB’s Carrollton campus.
		12. NOPS is proposed to be constructed in an area designated as a high flood risk by FEMA.
		13. Consequently, during or following a major storm event, even if NOPS is still operating after all closer and much, more likely to operate transmission and facilities fail, NOPS is still not capable of alleviating the far more likely event in a storm: failure along the distribution lines that feed it.
		14. Moreover, the S&WB’s has power-reliability problems that go well beyond powering its Carrollton campus: the S&WB distributes the 25 Hz power to its old pumps via distribution-grade feeders which power 50-year-old, antique, and custom-made pumps. This problem is both a greater risk to S&WB operations and far more expensive to fully alleviate than the cost of NOPS. (Some have suggested siting ENO substations and S&WB frequency converters at each distributed pumping station, but that way is not recommended, cheap, fast or smart. This is because other experts state that the right way forward for the long term is to replace all antique 25 hz pumps with modern 60 hz pumps; although this is much more expensive, it avoids the need for the frequency converters, but still benefits from an ENO substation at each pumping station. Either of these ways will make S&WB services much more reliable and have much lower operating costs. However, the 2nd choice will also be less sensitive to poor power quality and have equipment that is much cheaper to repair or replace.)
		15. Thus, NOPS is not likely to be any help in any reasonably-likely scenario to the S&WB, and the money needed to really fix the S&WB will be that much harder to levy on consumers if ¼ $ billion has already been spent on NOPS.
		16. Finally, if the S&WB’s, Carrollton campus sited, self-generation assets were modern, high-efficiency generators with clutches that were directly connected to ENO’s transmission system with an industry-grade substation, they could also be used help provide both peaking power to the rest of ENO’s customers and voltage support against common problems in MISO. And if S&WB owns such generation instead of ENO, NOLA would not have to pay a rate-of-return to an investor-owned utility!
		17. “Although less than the $1/W price tag of NOPS, invested in retrofitting open crawl spaces to closed has been repeated ignored by Energy Smart; had this been well implemented before the hard freeze of Jan 2018, S&WB’s reliability problems would have been substantially ameliorated” Myron Katz 2018. [↑](#endnote-ref-1)
2. ENO’s DSM potential Study Contractor, Navigant, on 13 September 2017, has already testified that it will only consider improvements in EE toward the Council’s 2%/y goal but not any other goal listed in #8 below. However, Jan Vrins, also from Navigant, on 1 December 2017 stated that “Building any central station power plant would be risky.” National Governors’ Assn Meeting, Orlando, Fl. <https://www.nga.org/files/live/sites/NGA/files/pdf/2017/Navigant%20Energy%20Transition%20November%20%202017%20NGA%20FINAL.PDF> [↑](#endnote-ref-2)
3. National Regulatory Research Institute, the research arm of the National Association of Regulatory Utility Commissioners. E.g., Tom Stanton testified on the importance of Distributed Energy Resources [DER] and Distributed Resource Planning [DRP] in December 2017 — and that both belong within DSM in preparation for an IRP; this was game changer. His colleague in NRRI, Nancy Brockway, published ***Advanced Metering Infrastructure: What Regulators Need to Know About Its Value to Residential Customers***, in February 13, 2008. <https://www.smartgrid.gov/document/advanced_metering_infrastructure_what_regulators_need_know_about_its_value_residential_cust> Wherein she wrote: “**The primary resource cost that can be deferred or avoided via persistent AMI-supported demand response is the cost of incremental generation capacity**.” on p37.  And put this in perspective with the fact that at the January 31st, 2018, utility committee meeting, “moving forward with AMI” passed unanimously after that quote was read. [↑](#endnote-ref-3)
4. From: William Marcus <bill@mcpmeconomics.com>
Sent: Wednesday, December 20, 2017 5:57 PM
To: V. John White <vjw@ceert.org>; greencowboysdf@gmail.com
Cc: jhcaldwelljr@gmail.com
Subject: RE: Today's Discussion between Myron Katz and V John White

	* I know where Entergy buries bodies in rates, since I have worked on their cases in both Arkansas and Texas in the past.
	* And any solar owned by the utility is excessively expensive because they earn a 16% return on it due to tax normalization accounting required by the Feds that doesn’t apply if they buy it from third parties!!! No new utility-owned solar, anywhere, ever!
	* <http://interchange.puc.state.tx.us/WebApp/Interchange/Documents/46368_81_939294.PDF> [↑](#endnote-ref-4)
5. ENO’s lack of answer to a direct question on this issue is a kind of admission to this assertion. Explicitly consider this: via ENO’s website explicitly set up to answer questions about the 5 MW distributed generation proposal this question was asked:

 #2. Please state your opinion about this claim: "Any solar owned by the utility is excessively expensive because they earn a 16% return on it due to tax normalization accounting required by the Feds that doesn’t apply if they buy it from third parties!"

                   NOT ANSWERED and IGNORED.

 Sent to Myron Katz Date: Tue, Jan 23, 2018 at 8:07 AM
Subject: Responses to Questions Submitted Via Entergy New Orleans Web Portal
To: "Myron.Katz@EnergyRater.com" <Myron.Katz@energyrater.com>
Dr. Katz,

 Please see the attached document for responses to your questions that were submitted via the web portal for the Entergy New Orleans Rooftop Solar Project.

 Thanks,

 Ross Thevenot

From: **Myron Katz** <myron.bernard.katz@gmail.com>
Date: Tue, Jan 23, 2018 at 10:57 AM
Subject: Fwd: Responses to Questions Submitted Via Entergy New Orleans Web Portal
Please note that I have received a reply to most of my questions but not all.  I would not call these replies, ***ANSWERS***... but there are replies to most questions.

**SPECIFICALLY: Vague, significantly unresponsive or completely unresponsive are the answers to those in GREEN. In some cases, it is clear, that ENO never tried to compare their proposal to the alternative offered.  Their simple answer is found paraphrased here in BLUE. *Completely missing are references to, much less answers for the following questions in RED.***

#1. Please send a copy of the resolution passed by the City Council that states in the "THEREFORE BE RESOLVED SECTION" that the Council wants ENO to procure 100 MW of renewables or anything to that effect.

                                      **NOT ANSWERED and IGNORED.**

#2. Please state your opinion about this claim: “Any solar owned by the utility is excessively expensive because they earn a 16% return on it due to tax normalization accounting required by the Feds that doesn’t apply if they buy it from third parties!"

                                      **NOT ANSWERED and IGNORED.**

#3. **This link:** [**https://www.greentechmedia.com/articles/read/doe-officially-hits-sunshot-1-per-watt-goal-for-utility-scale-solar#gs.ozb4dSc**](https://www.greentechmedia.com/articles/read/doe-officially-hits-sunshot-1-per-watt-goal-for-utility-scale-solar#gs.ozb4dSc) **mentions $1.85 per watt for commercial. Even prices for residential ($2.80) are now cheaper than ENO's proposal. If so, why and how can ENO economically justify its proposal against these assertions?**

**#4. Please provide the data you gathered from an ESCO to do an Energy Performance Contract for each building where you have considered siting rooftop solar, what was the average $ per avoided peak watt for each building?**

**NOT CONSIDERED.**

#5. What is the $/ peak W avoided for a battery installed in any building assuming that the battery is only charged near 2 AM when Iowa's wind farms are selling to MISO at minus one cent / kWh?                                       **NOT ANSWERED and IGNORED.**

**#5. How does siting a rooftop array at any particular building in your current plan ameliorate the distribution failures occurring in New Orleans and how does this answer comport with Tom Stanton's 13Dec17 testimony on Distribution Resource Planning?**

**#6. Why is it in the City's best interest to have out-of-town installers put up rooftop solar on commercial buildings when we already have a mature industry group in this city already providing that service?**

**#7. Explain why your Distributed Generation proposal is better than all other submissions to the Renewable Energy RFP ENO allowed even though your 3rd party administrator said that it was not the best according to the stated metric of success in the RFP?**

**#8. Explain why your proposal is better than Community Solar which will allow similar or larger solar farms to be built without any ratepayer funds?**

**NOT CONSIDERED.**

**#9. Is there any quid-pro-quo deal between ENO's NOPS project and this project?  And if so, who confected and agreed to this deal?**

**Superficially what they say is correct... But, I don't believe their answer.**

**#10 About comparison of their proposal to installing an ice-making AC:**

**NOT CONSIDERED.** [↑](#endnote-ref-5)
6. As ENO’s 5 MW plant acquisition process proves: 50% more cost for rooftop solar on commercial building their way vs standard pricing using private contractors directly hired by consumers. See previous Endnote; Mr. Thevenot’s confirmed this in an answer to a question. [↑](#endnote-ref-6)
7. During the one-year plus that ENO has been contemplating building a 5 MW plant and still has not started, GSREIA has built that much and more. [↑](#endnote-ref-7)
8. Tom pointed out that ConEd has software that can instantaneously model reliability benefits from placing solar assets on a feeder. ENO is still not thinking about it. [↑](#endnote-ref-8)
9. Reliability “at the outlet” is greatly improved even in the face of a grossly unreliable distribution system. Transitions NOLA to a 100% renewable energy future because RE sources are not dispatchable but can be made much more than adequately plentiful. NOLA already has access to more than adequate Wind-generated electricity from IOWA with some transmission upgrades; these are more of the same upgrades that ENO’s expert testified will work better than NOPS to avoid cascading power outages. [↑](#endnote-ref-9)
10. This may have the benefit to lower the average wholesale cost of electricity from $0.03 to $0.01/kWh while both fully financing battery investments in all building and allowing ENO to receive its normal rate of return on the same investments. [↑](#endnote-ref-10)
11. Although called “remote displaced generation” in 2007, it was the same concept now called Community Solar and would have been the first in the nation… but NOLA is still waiting for its approval. This is by far the most cost-effective way to deploy PV. It can be expected to increase the PV development in NOLA from its current size of roughly 40 MW to at least 120 MW and quite possibly 400 MW without any ratepayer funds and should be turned on very soon. [↑](#endnote-ref-11)
12. <https://www.eia.gov/todayinenergy/detail.php?id=34852> from Trump’s Dept of Energy states that 2/3 of all new generation through 2050 will be solar: 400 GW. [↑](#endnote-ref-12)
13. This needs comments by Jeff Cantin and/or Dr. William E. Bertrand; his publications are found at: https://www.ncbi.nlm.nih.gov/myncbi/browse/collection/49422286/?sort=date&direction=descending [↑](#endnote-ref-13)
14. **CA committed 20 times as much money on their PV industry as LA and produced 50 times as many jobs.**

A good comparison between PRICE-BASED and PERFORMANCE-BASED is to look what happened in CA vs the rest of the US regarding incentivizing PV installs.  While the rest of the country used priced-based incentives, CA primarily used performance-based incentives.  The state of LA and the Fed spent roughly $200 million in LA on Investment Tax Credits and put 2000 PV installers to work for most of a decade. This produced around 100 MW statewide and $35 MW in NOLA.  This was based upon price of the system and ignored performance altogether.   Now Solar PV in La is far less than 5% of total capacity and that leads the nation except for around 5 states.

However, as found at <http://programs.dsireusa.org/system/program/detail/2362> , Regarding the CA PERFORMANCE-BASED residential incentive; it was set at $2.50/W AC .. with Start date in 2007 and $1.95 billion over 10 years.  This was the program goal for all sectors including commercial, residential, non-profit and government buildings.  PV has been so successful in CA that the utility demand curve actually dips during the daytime below the relative highs at 10 AM and 7 PM. and has been doing this since 2014. see recent Bialek's 2014 talk attached. AND WHAT ABOUT THE JOBS?  consider this: <https://www.desertsun.com/story/tech/science/energy/2017/02/07/california-hits-100000-solar-jobs-industry-grows-record-pace/97448780/>  Even though this $2.5/W looks expensive compared to NOPS, CA factored in the economic values of job growth... Even if you ignore that, the CA Energy Commission pointed out that this program would been cost effective against utility rates for the average customer by 2020.  <http://www.energy.ca.gov/2013publications/CEC-400-2013-005/CEC-400-2013-005-D.pdf> [↑](#endnote-ref-14)
15. That is consistent with: Navigant introduced itself, at the 13 September 2017 utility committee meeting, to be newly hired DSM Potential Study contractor for ENO. Navigant’s spokesperson stated that “for all intents and purposes” all it was going to consider was EE within the traditional set of customers with a hardly different palette of “upgrades” than what has been used before. <http://www.nolacitycouncil.com/video/video_legislative.asp> 13September2017 video.

 In fact, it was not until Pres Kabacoff and Forest Bradley-Wright testified at the 28 June 2017 meeting, that any effort was started to hire a 3rd party independent DSM potential study contractor. <http://www.nolacitycouncil.com/video/video_legislative.asp> 28 June 2017 video. Theirs speeches “won the day` and as a result, Optima Energy allied with ACEEE, et. al. was hired at the 13 December 2017 Meeting. 13 December 2017 video within: <http://www.nolacitycouncil.com/video/video_legislative.asp> . [↑](#endnote-ref-15)
16. Indeed, Building Science Innovators has EVER only intervened in two dockets those for Net Metering and the 2015 ENO IRP. Because of the 2nd intervention, BSI is continually informed about the process and development of ENO’s DSM program, Energy Smart; the last of which was 30 January 2018 even though the IRP part of that docket was deemed closed in January 2017. [↑](#endnote-ref-16)
17. "New renewable energy plants’ success beating fossil fuel keeps spreading, and surprising experts.  The [results Xcel found for solar, wind with storage](http://www.startribune.com/xcel-energy-has-hopes-for-wind-and-solar-projects-with-battery-storage/470207143/) from bids in Colorado made headlines. Median bid prices of 2.1 cents per kilowatt-hour for wind with storage and 3.6 cents per kilowatt-hour for solar plus storage sent shockwaves." <https://blog.ucsusa.org/mike-jacobs/when-renewable-energy-costs-fall-quickly-how-should-buyers-get-good-information>

 This is not wholly headed; Xcel is not a fluffy, green-headed utility...  Xcel asked for bids and got these ridiculously low prices.

 Consider that price against the price promoted by ENO, $1/W to install for a 200+MW plant, i.e., over $250 million and then only run it a few hundred hours a year.  Let's say they operate it 500 hours a year for 30 years. (which may be as much as 10 times what they say they are planning to do.)  That's 15,000 hours x 200 MW = 3 million MWH = 3 billion kWh... and let's completely ignore the fuel cost.  Then $250,000,000 / 3 billion kWh = $0.083 / kWh.  See attachment for ENO's latest assertion it made last week at the New Orleans Business Council "•Most economic resource."

 Thus, solar plus storage costs (3.6 cents per kilowatt hour) less than 1/2 as much as this peaker will cost to run even if the fuel cost is zero.

 Thus, NOPS, our gas-fired peaking plant, costs 2x as much as solar plus storage. [↑](#endnote-ref-17)
18. See NRRI report of Nancy Brockway who stated about smart meters, which normally are used to allow Time of Use rates, that “**The primary resource cost that can be deferred or avoided via persistent AMI-supported demand response is the cost of incremental generation capacity**.” Also see Endnote 33. [↑](#endnote-ref-18)
19. Investments that enhance customer reliability are energy efficiency [EE], onsite generation coupled with storage or batteries (i.e., customer side microgrids) on the customer side of the meter as well as a microgrids, solar and smart meters on the utility side of the meter and placing sub-stations adjacent to critical infrastructure. Smart meters enhance distribution system reliability because they help inform utility maintenance crews of potential problems before outages can occur. <https://www.smartgrid.gov/files/Distribution_Reliability_Report_-_Final.pdf> None of these have ever been studied in any DSM potential study for ENO and most seem to still be off the table. [↑](#endnote-ref-19)
20. Various “remedies” seem to proliferate: these include placing ENO-owned substations at pumping stations and letting ENO help pay for pure sinewave 60hz to 25 hz inverters. Another option that may win the day is putting one or two of the 28 MW RICE units ENO has stated it wants to build at the Michoud site at the main campus of the S&WB. Another option is to revisit and focus Energy Smart on EE retrofits that can decrease stress on water pipes of its customers — especially if these also ameliorate high demand at either summer or winter peak demand as is the case for “the” close the open crawl space retrofit. [↑](#endnote-ref-20)
21. Tom Stanton stated that various effort to place elements of Distributed Energy Resources (i.e., Energy Efficiency, Batteries, PV or other very small electricity generators) has been shown to increase Distribution System reliability and thereby accomplish what has been exclusively the job of central station power plants at 1/5 the cost, deployed 3 times faster and provide six “9’s” of reliability. See Tom’s Non-Wires Alternatives, NRRI report <http://nrri.org/wp-content/uploads/2016/04/2015-Feb-Tom-Stanton-Non-Transmission-Alternatives.pdf>, <https://www.nga.org/files/live/sites/NGA/files/pdf/2017/Tom%20Stanton_Lessons%20from%20State%20and%20Local%20Efforts%20to%20Enhance%20Energy%20Resiliency.pdf> or <http://www.nolacitycouncil.com/video/video_legislative.asp> 13 December 2017 video. [↑](#endnote-ref-21)
22. Tom also pointed that a variety of alternative ways to deploy DER exists, ranging from ***On Bill Financing***, ***Property Assessed Clean Energy*** (PACE) or incented with novel rates like ***Net Energy Metering*** or CLEP <https://www.buildingscienceinnovators.com/customer-lowered-electricity-price.html> . <http://www.nolacitycouncil.com/video/video_legislative.asp> 13 December 2017 video. [↑](#endnote-ref-22)
23. <http://www.nolacitycouncil.com/video/video_legislative.asp> 13September2017 video. [↑](#endnote-ref-23)
24. It is fundamentally flawed to think that DSM should ever have been focused upon EE, which is measured in kWh’s because that result cannot be compared to generation investments which is measured in KW’s, BECAUSE DSM is primarily an INPUT process for an IRP which needs to know how much demand, measured in KW, can be avoided by DSM in order to size the generator needed to complement DSM meet future peak load needs. [↑](#endnote-ref-24)
25. This is the VERY NATURE of DSM’s focused EE. A specific set of measures are chosen that are “deemed probably effective” in that they can be implemented at a first cost /kWh-year under 10 times the current wholesale price. Since such measures typically have a useful life of roughly 10 years or more, the net-present value of DSM programs is negative. It a DSM program produces any other benefit, e.g., drop in peak demand or improved reliability, that benefit also come with negative costs. However, the mere fact that a program measure generates “deemed savings” does not guarantee actual realized savings. To get that, a variety of Measurement and Verification efforts are done to assure everyone that we’re getting what we think we want. It is not uncommon that there are some mismatches between what we think we will get and what happens. We do know that DSM is more likely to make the error whenever there is a poorly-trained work-force and/or the programs depend upon projected yardsticks of success that apply well as viewed nationally, but not so well, as viewed in the actual circumstances. This is likely, in New Orleans, because of our highly unusual: subsidence, high dew points, balloon framing, and high rainfall. Thus, DSM can be hard to do well, and this is likely to be the case for NOLA. However, DSM via an administrator need not be the only model. 3rd party companies offer performance-based remuneration… This may be a much better fit for NOLA. [↑](#endnote-ref-25)
26. But CLEP can and should be run closer to NOPS’s project cost in $/W to maximally acquire EE, RE and Batteries from private investments. CLEP is a ticket to a 100% renewable energy future that lowers the cost of power for all and only NOPS has a real chance of allowing NOLA to be around for its 400th birthday in February 2118. [↑](#endnote-ref-26)
27. Incompatible. Note that the Mayor’s Climate Action Plan calls for 50% RE by 2030, but (in Myron Katz’s opinion) will make NOLA 100% RE by 2030, because a major part of the Mayor’s plan is a 3.3% drop in consumption / year which will bring with it a 500 to 600 MW drop in peak demand in the 13-year projection. Another part is a 500MW RE source. Putting those together is not far from the 1200 MWs that ENO thinks we have now. However, wasting ¼ $billion on NOPS takes money away from that plan and puts it where we do not want to go: making more CO2. [↑](#endnote-ref-27)
28. As already stated, Tom Stanton’s colleague in NRRI, Nancy Brockway, published ***Advanced Metering Infrastructure: What Regulators Need to Know About Its Value to Residential Customers***, in February 13, 2008. Wherein she wrote: “**The primary resource cost that can be deferred or avoided via persistent AMI-supported demand response is the cost of incremental generation capacity**.” on p37.  And put this in perspective with the fact that at the January 31st, 2018 utility committee meeting, “moving forward with AMI” passed unanimously after that quote was read. [↑](#endnote-ref-28)
29. There is no connection between ENO’s outages in the last year, while these outages have received much attention, they have had nothing to do with either generation or transmission insufficiencies. There is a highly unlikely potential of “cascading outages” from a transmission failure; but the best solution for that problem is an upgrade the transmission system — not build generation. See testimony of Mehriar Tabrizi, Ph.D., P.E., DNV-GL Energy at <http://www.nolacitycouncil.com/video/video_legislative.asp> 13September2017 video. And See Appendix A. The good news is that this same transmission upgrade that may only help us only 5 times by 2027, according to Dr. Tabrizi, to avoid this hypothetical cascading outages problem, can help us every day, to ship cheap renewable energy from IOWA: more of it and more cheaply. [↑](#endnote-ref-29)
30. The kind of reliability NOLA needs for its critical infrastructure like S&WB, hospitals, schools etc., is not going to be served by NOPS… in fact, most such facilities already have their own back-up systems. That is, they already have microgrids. Why, because they need many more “9’s” of reliability after 99.%. Their needs for reliability are critical. Typical electricity grids cannot meet this need. This has been known for decades. The point is that electricity reliability has never been really available from grid... it must be locally generated or stored. This is a paradigm error going back to the onset of the age of the electric grid. Just like homes make their own heating, cooling, lighting and TV viewing potential with equipment installed in a home, so should batteries and/or local generation be installed. [↑](#endnote-ref-30)
31. There are just too many demands for NOLA’s citizens’ funds… If government takes more than can be easily borne and it will have exploited poor people and indirectly cast them out of NOLA… this is another kind of racism. [↑](#endnote-ref-31)
32. FEMA thinks so. See Appendix A. [↑](#endnote-ref-32)
33. Take my word for it. I’ve lived in NOLA for almost 70 years and we see it happen whenever a Cat 1 storm comes by… EVERY TIME. [↑](#endnote-ref-33)
34. According to MISO’s site, there is roughly 170GW in the entire system. 200 MW/170GW is far, far less than ½%. NOLA must share assets with all of MISO… that’s the deal. [↑](#endnote-ref-34)
35. Whether this is from, abandoning 25Hz generators and switching to the industry standard 60Hz, refusing to site ENO Sub-stations at S&WB’s pumps or refusing to roll out Closing Crawl Spaces as a DSM measure, some combination of these things has impacted S&WB reliability and there is no credible evidence that NOPS can help. See Appendix A. [↑](#endnote-ref-35)
36. ENO must not think the market for NOPS’s electricity is good. ENO’s goal is not to produce electricity cheaply and make a profit on the wholesale market, i.e., MISO, from the investment, but instead to stick NOLA with the cost in order to reap the roughly 10% ROI guaranteed by building something approved by the Council. [↑](#endnote-ref-36)
37. This assertion really means adopt the approach in CA wherein, since 2003 because of the ENRON fiasco, the CPUC ruled that investor-owned utilities were no longer allowed to “RATE\_BASE” future generation assets. This created the need for a vigorous Merchant Power market. One such company, Pacific Pines, built a 500 MW combined-cycle gas-fired plant that is losing market share and can no longer compete with solar with or without batteries. This has led to a wave of decisions that have compromised the finances of existing generators, as well as, those on the drawing board.

<http://www.latimes.com/business/la-fi-pge-cpuc-batteries-power-plant-20180115-story.html>

<https://www.utilitydive.com/news/has-california-built-its-last-natural-gas-plant/511267/>

<https://www.solarpowerworldonline.com/2017/10/southern-california-ellwood-gas-peaker-plant-unanimously-rejected-opportunity-solarstorage/>

<http://www.solarpaces.org/chance-csp-california-outlaws-gas-fired-peaker-plants/>

<http://www.latimes.com/business/la-fi-puente-gas-plant-20171016-story.html> [↑](#endnote-ref-37)
38. <http://www.nolacitycouncil.com/video/video_legislative.asp> 31January2018 video. [↑](#endnote-ref-38)