

Myron Katz, PhD, (504)-343-1243
Primary Consultant and Innovator Myron.Katz@EnergyRater.com

VIA HAND DELIVERY
January 17, 2016

Re: CNO Docket No: UD-08-02

Ms. Lara W. Johnson, CMC
Clerk of Council
Room 1E09, City Hall
1300 Perdido Street
New Orleans, La 70112

Re: CNO Docket No: UD-08-02

**MOTION BY BUILDING SCIENCE INNOVATORS, LLC FOR
RESOLUTION OF ALL ISSUES
WITHIN THE 2015 ENTERGY NEW ORLEANS (ENO) INTEGRATED RESOURCE PLAN**

Dear Ms. Johnson:

Enclosed is an original and three copies of Motion by BSI for City Council approval to "Resolve All Issues" within the 2015 Entergy New Orleans Integrated Resource Plan.

Thank you for your time and attention.

Sincerely,



Myron Katz, PhD

Building Science Innovators, LLC

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BEFORE THE
COUNCIL OF THE CITY OF NEW ORLEANS

IN RE: RESOLUTION REGARDING
PROPOSED RULEMAKING TO
ESTABLISH INTEGRATED RESOURCE
PLANNING COMPONENTS AND
REPORTING REQUIREMENTS FOR
ENTERGY NEW ORLEANS, INC.

DOCKET NO. UD-08-02

JANUARY 17, 2017

MOTION BY BUILDING SCIENCE INNOVATORS, LLC FOR
RESOLUTION OF ALL ISSUES
WITHIN THE 2015 ENTERGY NEW ORLEANS (ENO) INTEGRATED RESOURCE PLAN

ON MOTION OF BUILDING SCIENCE INNOVATORS, LLC (BSI), APPEARING HEREIN THROUGH UNDERSIGNED PRINCIPAL, AND UPON REPRESENTING THE FOLLOWING:

WHEREAS, CLIMATE CHANGE WILL LIKELY BE A PRIMARY FACTOR IN THE GROWTH OR DECLINE OF THE CITY OF NEW ORLEANS FOR GENERATIONS;

WHEREAS, TOMORROW, WITH THE INAUGURATION OF PRESIDENT-ELECT TRUMP, CONCERN FOR CLIMATE CHANGE SHOULD NOT BE EXPECTED TO BE A NATIONAL PRIORITY.

WHEREAS, TOMORROW, WITH THE INAUGURATION OF PRESIDENT-ELECT TRUMP THE GOP WILL CONTROL TWO BRANCHES OF THE NATIONAL GOVERNMENT AND PROGRESSIVE ENERGY POLICY IS LIKELY TO BE REPLACED BY PROMOTING ECONOMIC GROWTH WITHOUT CONCERN FOR ENVIRONMENTAL ISSUES.

WHEREAS, AS EXPLAINED BELOW, MARKET-BASED ACQUISITION AS AN ALTERNATIVE MEANS OF INTEGRATED RESOURCE PLANNING, IS THEREFORE LIKELY TO BE EMBRACED BY THE NATIONAL GOVERNMENT.

WHEREAS, AS EXPLAINED BELOW, MARKET-BASED ACQUISITION SPEEDS UP DEPLOYMENT OF RENEWABLE ENERGY GENERATION.

WHEREAS, ELECTRICITY GENERATION FACILITIES ARE RESPONSIBLE FOR ALMOST 30% OF THE CARBON DIOXIDE EMISSIONS — THE MOST SIGNIFICANT SINGLE CONTRIBUTOR TO CLIMATE CHANGE — IN THE COUNTRY;

WHEREAS, REDUCING THE EMISSIONS OF CARBON DIOXIDE AND OTHER GREENHOUSE GASES SHOULD BE A PRIORITY FOR ANY RESOURCE PLANNING DECISIONS;

WHEREAS, ENVIRONMENTAL RACISM IS VERY MUCH AN ISSUE THAT IMPACTS LOCAL MINORITY AS WELL AS COMMUNITIES AROUND THE GLOBE;

WHEREAS, PURSUIT OF REDUCTION OF UTILITY COSTS ALONE HAS ALREADY ARRESTED A LARGE AND RAPIDLY GROWING PERCENTAGE OF FOSSIL-FUEL DEVELOPMENT ALL BY ITSELF;

WHEREAS, A LACK OF DEMAND RESPONSE OR TIME-OF-USE ELECTRICITY RATE STRUCTURES FAILS TO ENCOURAGE COST-EFFECTIVE USE AND TRUE-VALUING OF IMPORTANT GRID RESOURCES;

WHEREAS, ENTERGY NEW ORLEANS, INC HAS ANNOUNCED AN INTENTION TO DEPLOY ADVANCED METERING INFRASTRUCTURE, ENABLING TIME-OF-USE RATES IN THE NEAR FUTURE;

WHEREAS, OTHER JURISDICTIONS SUCH AS WEST LOS ANGELES HAVE PROVEN THAT MARKET-BASED RESOURCE PLANNING CAN EXPLOIT INHERENT EFFICIENCIES AND AT SIGNIFICANT COST SAVINGS;

WHEREAS, ENERGY STORAGE IN THE FORM OF BATTERY SYSTEMS ON BOTH THE “SUPPLY-SIDE” AND “BEHIND-THE-METER” HAS BEEN SHOWN TO BE AMONG THE MOST COST-EFFECTIVE PEAKING POWER RESOURCES;

WHEREAS, DISTRIBUTED ENERGY RESOURCES SUCH AS BEHIND-THE-METER SOLAR ENERGY AND ENERGY STORAGE HAS BEEN SHOWN TO CREATE LONG-LASTING LOCAL EMPLOYMENT OPPORTUNITIES;

WHEREAS, ENERGY EFFICIENCY AND DEMAND-SIDE MANAGEMENT PROGRAMS MUST BE PROPERLY DEPLOYED AND SIZED TO BE OPTIMALLY EFFECTIVE;

WHEREAS, THE COUNCIL HAS APPROVED A MEASURE TO EXPAND DEMAND-SIDE MANAGEMENT PROGRAMS TO DEFER 2% OF THE CITY’S CAPACITY NEEDS;

WHEREAS, THE PROPOSED ADVANCED METERING INFRASTRUCTURE SHOULD BE EXPECTED TO BE CAPABLE OF ENABLING PILOT PROJECTS AMONG RATEPAYERS TO TEST AND PROVE NEW TECHNOLOGIES AND BENEFICIAL RATE STRUCTURES;

WHEREAS, VIRTUAL NET METERING CAN BE A CRITICAL COMPONENT OF SUCCESSFUL COMMUNITY SOLAR PROGRAMS,

WHEREAS, CURRENTLY AVAILABLE TECHNOLOGY ALLOWS UTILITY DISPATCHERS OR OTHER COMMERCIAL AGGREGATORS TO FULLY EXPLOIT DISTRIBUTED BEHIND-THE-METER DEMAND RESPONSE AND ENERGY STORAGE SYSTEMS,

WHEREAS TOM STANTON PUBLISHED “*GETTING THE SIGNALS STRAIGHT: MODELING, PLANNING, AND IMPLEMENTING NON-TRANSMISSION ALTERNATIVES STUDY*”, (NTA) FEB 2015, AS PART OF HIS JOB AT THE NATIONAL REGULATORY RESEARCH INSTITUTE—AVAILABLE AT [HTTP://NRRI.ORG/DOWNLOAD/NRRI-15-02-NRRI-NON-TRANSMISSION-ALTERNATIVES/](http://nrri.org/download/nrri-15-02-nrri-non-transmission-alternatives/),

WHEREAS TOM HAS EXPRESSED TO MYRON KATZ OF BSI THAT BEFORE OR IN THE PROCESS OF WRITING THE NTA PAPER, HE REALIZED THAT AN IRP CANNOT BE CALCULATED.

WHEREAS MYRON EXPRESSED TO TOM THAT IN THE PROCESS OF PREPARING BSI'S INTERVENTION DOCUMENT SUBMITTED ON AUGUST 30, 2015, HE ALSO CAME TO THE REALIZATION THAT AN IRP CANNOT BE CALCULATED.

WHEREAS, BOTH TOM AND MYRON CONTINUED TO EMBRACE THE GOAL OF AN IRP PROCESS BUT NOT THE STANDARD WAY TO REACH THAT GOAL; EACH IN HIS OWN WAY LOOKED FOR AND FOUND A WAY TO APPROACH THE GOAL OF AN IRP BUT DO IT WITHOUT CALCULATING A SOLUTION.

WHEREAS, MYRON INVENTED THE CLEP IDEA AND MOLDED IT TO HELP BOTH RESIDENT RATE-PAYERS AND OWNERS OF COMMUNITY SOLAR MAKE FINANCIAL INVESTMENTS THAT SIMULTANEOUSLY LOWER THEIR COST OF ELECTRICITY AND THE COST OF OPERATING A UTILITY,

ALTHOUGH THESE TWO RESEARCHERS MADE SIMILAR DECISIONS AND TOOK PARALLEL PATHS TO CREATE ALTERNATIVES TO CALCULATING AN IRP, THEY DIDN'T MEET OR BECOME AWARE OF EITHER OTHER'S WORK UNTIL THE LATE SPRING OF 2016.

WHEREAS, TOM PROVIDED VALUABLE AND EXTENSIVE HELP TO BSI TO SUBMIT THE CLEP PILOT MOTIONS IN AUGUST OF 2016.

WHEREAS, ALTHOUGH CLEP IS EXTENSIVELY DESCRIBED IN HUNDREDS OF PAGES OF CLEP MOTIONS FILED IN THIS DOCKET, ITS DEFINITION IS FOUND ON A SINGLE PAGE OF THIS MOTION. HOWEVER, BSI DOES NOT EXPECT THE READER OF THIS DOCUMENT TO FULLY UNDERSTAND CLEP FROM ONE PAGE AND URGES THE READER TO READ THE RELEVANT DOCUMENTS FOUND IN [HTTPS://WWW.DROPBOX.COM/SH/A70HWFD2LPQFDAJ/AADOCI7FVR9-JDEB_SBJ7UBSA?DL=0](https://www.dropbox.com/sh/A70HWFD2LPQFDAJ/AADOCI7FVR9-JDEB_SBJ7UBSA?DL=0) .

WHEREAS, MYRON BELIEVES THAT HIS READING OF TOM'S APPROACH IS DESCRIBED ON THE NEXT PAGE AND ENTITLED "INTEGRATED RESOURCE PLANNING BY MARKET BASED ACQUISITION".

WHEREAS, EMMA HAND OF DENTONS, REQUESTED ON JANUARY 12, 2017 THAT A DOCKET SHOULD BE OPENED TO REVISE THE ORDINANCES THAT DESCRIBE HOW TO DO IRP WORK AND REQUESTED EXPLICIT RECOMMENDATIONS.

WHEREAS, FOLLOWING THOSE TWO PAGES, BSI PRESENTS ITS OPINION THAT THERE ARE 18 BROKEN PARADIGMS IN NEW ORLEANS IRP PROCESS. BSI SUBMITS THAT MANY OF BSI'S OPINIONS ON THESE MATTERS ARE SHARED BY MANY NATIONAL EXPERTS.

Definition of Customer Lowered Electricity Price, (CLEP)

For a residential rate-payer who voluntarily accepts the CLEP tariff,

$$\text{A Monthly CLEP Payment} = \text{CLEP}_m + \sum \text{CLEP}_5$$

Where: $\text{CLEP}_5 = p * n * (e - w)$ is calculated every 5 min

p = Utility-regulator determined, “percent” and $0 < p < 2$;

n = Number of kWh purchased by the customer.

If the flow is outbound (i.e., a sale), n is negative;

w = Wholesale cost of power

e = Monthly average cost of energy (*fuel cost adjustment*)

Where: $\text{CLEP}_m = q * \$50 * d$ is calculated monthly

d = *Average demand during peak hours* avoided

(i.e., d = observed reference building demand **minus** observed demand)

q = Utility-regulator determined “percent” and $0 < q < 2$.

When CLEP is used to finance Community Solar is the same as defined for residential rate-payers except,

CLEP₅ is redefined and replaced by

$$\text{CLEP}_5 = p * n * w \text{ is calculated every 5 min}$$

Integrated Resource Planning by Market-Based Acquisition (IRPbMBA) means enabling and empowering the marketplace, to achieve all cost-effective supply- and demand-side distributed energy resources, in order to minimize future utility investments while ensuring reliable electricity service at the lowest practical total resource cost.

IRPbMBA requires continuously effective as well as iterative actions by the regulator, utility and customers.

Although CLEP, as yet untested, may be the only “complete” means of IRPbMBA that is continuous (i.e., without interruptions and not stimulated by substantial, discrete events),

CLEP tariff requires acts by the regulator and causes cash flows by and for the consumer after (s)he voluntarily accepts the CLEP tariff. (For a full explanation of CLEP, see https://www.dropbox.com/sh/a7ohwfd2lpqfdaj/AAD0ci7fvR9-JDEB_sbj7ubSa?dl=0.)

a host of states already provide complementary programs, rates or reverse auctions, etc. that facilitate MBA, a.k.a. “non-wires” or Non-Transmission Alternatives,¹ some are continuously effective and others are iterative;

these include VT, ME, CA, NY, HI, MI, NJ, MN, WI, MA, MD, and CT.

The following is a three-part proposal for iterative IRPbMBA.

1. The utility regulator shall determine a threshold dollar value for utility investments. Prior to the regulator pre-approving any combined utility investments above that threshold value, the utility must initiate an IRP process, subject to public review and input, and the result of that process (described in steps 2 and 3) shall be to determine that the new investment is the most reasonable and prudent available option. The appropriate dollar value threshold can be determined by review of the utility’s largest annual expenditures over the most recent decade. The dollar value should be low enough to trigger market-based review prior to pre-approval of any major transmission, distribution or central station power plant expenditures.
2. The utility shall prepare its justification for such an expenditure using the kinds of tools it has traditionally used to initiate an IRP, but only execute the IRP work up to the first or second public hearing. Nothing akin to creating a set of alternative portfolios or guesses at future sizes of demand side management will be included in those hearings. No decisions shall be reached on a preferred plan until step 3 is implemented; that is, all available distributed energy resources have been fully evaluated and compared to the identified transmission, distribution, or central station power alternatives proposed by the utility.
3. The preferred approach to market-based analysis is for the regulator to engage a third-party consultant to investigate distributed energy resources, non-wires, and market-based alternatives, using an open, public, community-driven process for investigating these options. If that investigation identifies practical market-based alternatives, then the same or another third-party should manage the process of acquiring and implementing those solutions. That acquisition and implementation could utilize reverse-auction mechanisms combined with the advantages available through appropriate utility rate designs, so that the alternatives will be procured in a timely manner at the lowest practical *utility* resource cost and *total* resource cost. This generally describes the mechanisms already demonstrated successfully in the State of Maine, and proceeding now in multiple New York state utility jurisdictions.

¹ i.e., “energy efficiency, demand management, and distributed generation”, <https://microgridknowledge.com/utilities-embracing-disruptive-energy-non-wires-alternatives/> also add “electricity and thermal storage, load management, and rate design” according to <http://nrri.org/download/nrri-15-02-nrri-non-transmission-alternatives/>

18 Broken Paradigms of New Orleans's Integrated Resource Planning Processes

1. **"Energy Efficiency in Buildings" is not the right concept to describe the full set of retrofits to a building to reduce the grid's cost to provide the needed electricity; the right concept is "Primary Energy Conservation in Buildings".** *Energy Efficiency* is measured in avoided kWh use. *Primary Energy* is the fuel consumed to make electricity. *Primary Energy Conservation* can be measured in avoided CO₂ production. *Control* as an energy saving strategy is purposely not exploited by standard energy design software for residences and *timing* (which generally does not decrease kWh use but does reduce CO₂ production) is hardly exploited by standard software.
2. **None of the optimal size, cost or variety of Demand Side Management (MSM) can be calculated...** because the needed software to fully consider both *timing* and *control* strategies does not exist for most building types.
3. **A host of Distributed Energy Resources (DER) are not modelled by current "Integrated Resource Planning" (IRP) software.** DER include batteries, community solar, and a variety of other technologies.
4. **Resource Planning is practiced in New Orleans under the name "Integrated Resource Planning".** The distinction is important because without concentrating upon "Integrating", i.e., generating, comparing and optimizing, the best choice of supply- and demand-side options against each other, one cannot confirm that either choice is optimal.
5. **Integrated Resource Planning cannot be calculated.** Since neither a full set of demand side nor supply side choices are currently modelled by IRP software, the "best" choices are not even generated for comparison.
6. **No conclusion derived from any IRP calculation is credible.**
7. **It is likely that many utilities are aware of these defects in IRP software and "game" IRPs to their advantage.**
8. **Publishing the size and cost of DSM programs at the end of an IRP process is a kind of hoax on the public.** This is because both the size and cost of DSM are inputs of all IRP calculations, not outputs.
9. **Iterative IRP is done at the wrong time; it should be done every time a major investment decision is under consideration.** Otherwise, how can the regulator know that the *best* choice is being made?
10. **An IRP's goal can be very well approached without calculation; market-based acquisition may be the best way.**
11. **Integrated Resource Planning is not always iterative.** That is, "very good" resource planning can happen "continuously". Such rule-making helps to push the mixture of deployed demand and supply-side investments towards the "best" mixture, can be *continuously effective as opposed to iterative* and get started at other times than following a major IRP process or auction. Such programs include: *DSM, Renewable Energy Portfolios, Demand Response, Community Solar, Battery deployments, Smart Meters, Pilot Programs involving novel rate design, providing two thousand dollar Rebates for battery installations that avoid a kW of peak demand, etc.*
12. **The best way to reach the IRP goal is to "fully" employ both continuously effective and iterative rule-making.**
13. **Customer Lowered Electric Price (CLEP) may be the only continuously effective method that avoids iterative IRPs.**
14. **Neither CURO staff nor the Council's Advisers have identified the above problems and solutions.**
15. **The Entergy New Orleans is has not shown itself competent and reliable to:** do resource planning under advisers and intervenors prodding, plan and execute DSM, run auctions or RFP's for renewable energy, properly estimate the economic feasibility of any of a variety DER, or even optimally promote its own best economic interests.
16. **Time of use (TOU) electricity pricing must be mandatory.** In fact, TOU rates can be optional. Mandatory TOU rates do not reliably generate the desired effects. Optional TOU rates and pricing, using aggregators may work very well.
17. **Net Energy Metering is either the right way or the wrong way to compensate consumer-side solar.** In fact, we will not know for sure either way without smart meters. Moreover, there are a variety of alternative ways to compensate consumer-owned solar and some of these clearly do not involve any subsidies.
18. **The lack of an Intervenor Compensation Rule has under-funded and thus undermined optimal pursuit of the public's welfare.** The city's electricity regulation is not adequately protected by adequately funded interveners.

THEREFORE, BE IT RESOLVED,

THAT ENO HAS DEMONSTRATED THAT IT HAS NOT BEEN ABLE TO RUN THE 2015 IRP PROCESS CREDIBLY.

THAT ALL CONCLUSIONS GENERATED BY THE 2015 IRP ARE REJECTED.

THAT THE 2009, 2012 AND 2015 IRP PROCESSES ARE CONSIDERED CLOSED AND COMPLETE;

THAT THE COUNCIL WILL IMMEDIATELY PURSUE A GOAL OF 150MW OF SOLAR ENERGY RESOURCES FOR THE CITY USING AN INDEPENDENT MARKET-BASED RFP, INCLUDING A MINIMUM OF 50MW OF BEHIND-THE-METER RESOURCES;

THAT FUTURE RESOURCE PLANNING WILL PRIORITIZE MARKET-BASED ACQUISITIONS GUIDED BY ENVIRONMENTAL AND TOTAL RESOURCE PLANNING;

THAT THE COUNCIL WILL ADOPT A RULE TO ALLOW UNLIMITED COMMUNITY SOLAR IN NEW ORLEANS.

THAT VIRTUAL NET METERING SHALL BE MADE AVAILABLE TO RATEPAYERS AS AT LEAST ONE OF MANY WAYS TO FINANCE COMMUNITY SOLAR PROGRAMS;

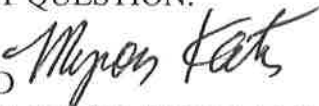
THAT THE COUNCIL WILL PURSUE A 25MW COMMUNITY SOLAR PROGRAM TO ASSIST LOW AND MODERATE INCOME FAMILIES TO ENJOY THE BENEFITS OF CLEAN ENERGY;

THAT THE COUNCIL SHALL CONSIDER THE IDEA THAT ANY ADVANCED METERING INFRASTRUCTURE IMPLEMENTATION SHOULD INCLUDE THE ABILITY TO CONTROL AGGREGATED DISTRIBUTED RESOURCES;

THAT, AS ADVANCED METERING INFRASTRUCTURE IS IMPLEMENTED, AN RFP PROCESS FOR PILOT RATE STRUCTURES, BATTERIES AND COMMUNITY SOLAR SHALL BE DEVELOPED TO ALLOW GREATER INCORPORATION OF COMMUNITY KNOWLEDGE AND PRIMARY ENERGY SAVINGS POTENTIAL;

THAT FURTHER CONSIDERATION OF SPECIFIC PRE-PLANNED RESOURCE INITIATIVES SUCH AS THE PROPOSED COMBUSTION TURBINE (CT) FACILITY ARE CONTINGENT UPON PREVIOUS STEPS BEING COMPLETED; AND,

THAT THE CT ISSUE MUST BE RESOLVED WITHIN AN IRP PROCESS SPECIFICALLY DEVOTED TO THAT QUESTION.


MYRON KATZ, PHD
BUILDING SCIENCE INNOVATORS, LLC
302 WALNUT ST
NEW ORLEANS, LA 70118
504-343-1243
MYRON.KATZ@ENERGYRATER.COM