



August 15, 2017

**By Hand Delivery**

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

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

Dear Ms. Johnson:

Please find enclosed an original and three (3) copies of the Alliance for Affordable Energy's comments and draft RFQ in the above mentioned docket. Please file the attached communication and this letter in the record of the proceeding and return one timestamped copy to our courier, in accordance with normal procedures. If you have any questions, please do not hesitate to contact me.

Thank you for your time and attention.

Sincerely,

Logan Burke  
Executive Director  
Alliance for Affordable Energy

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BY:

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BEFORE THE  
COUNCIL OF THE CITY OF NEW ORLEANS

IN RE: 2018 TRIENNIAL	)	
INTEGRATED RESOURCE PLAN OF	)	DOCKET NO. UD-17-03
ENTERGY NEW ORLEANS, INC.	)	

**Comments by the Alliance for Affordable Energy**  
**Concerning the Council’s Independent Demand Side Management Potential Study**  
**- Recommendations and Draft RFP -**

**I. PURPOSE AND SCOPE OF INDEPENDENT DEMAND SIDE MANAGEMENT POTENTIAL STUDY**

The New Orleans City Council has chosen to issue a Request for Proposals (RFP) to perform a Demand Side Management (DSM) Potential Study. The RFP would request the completion of a comprehensive assessment of measures, technologies, and programs by which New Orleans can reduce the consumption of fossil fuels and the need for centralized power supply, and customers can reduce their electricity consumption and demand. This study will go well beyond past potential studies performed for the Entergy New Orleans service territory, both in terms of scope and depth, and will address all means for achieving demand and energy reductions including:

- Energy Efficiency and Conservation
- Demand response, including storage
- Rate design
- Customer generation, including PV and combined heat and power
- Conservation voltage regulation (CVR)

Past DSM potential studies performed for the Entergy New Orleans service territory have historically focused more narrowly on energy efficiency, reflecting in part the then current state of the utility industries’ interest in reducing energy consumption and demand. However, the last several years have seen a huge expansion in the options being considered, developed, and deployed by utilities across the country to reduce energy and demand needs. Any DSM

Potential Study performed for the City Council must fully reflect the current state of the art regarding the options and opportunities available to it. Anything else would be incomplete and inadequate for the Council's purposes and the public interest.

The results of the proposed DSM Potential Study would help answer and inform the following:

- How can New Orleans maximize the benefits of DSM for its customers and its grid infrastructure system?
- How can DSM activities best be incorporated into Entergy's Integrated Resource Planning and distribution planning?
- Can the Council's goal of attaining annual energy efficiency savings equivalent to 2% of sales be met?
- Can the aggressive implementation of a suite of DSM programs and technologies forestall the need for new capacity additions by Entergy?
- What is the magnitude of dollar savings (for both kWhs and kW) to New Orleans' residents, municipal government, and businesses from pursuing aggressive DSM activities?
- What DSM activities should be considered for addressing system reliability, resilience and the potential creation of microgrids in New Orleans, and what are the potential financial benefits of doing so?

Over the past decade, Entergy has performed several potential studies for its New Orleans service territory. They have identified modest energy savings opportunities and Entergy's energy efficiency efforts in New Orleans have been similarly modest. The proposed DSM Potential Study would assess a more complete set of DSM activities than has been considered by past Entergy studies. In multiple jurisdictions across the country the provision of customer-side energy services is being reassessed and expanded. New Orleans needs to undertake a similar process and the proposed DSM Potential Study will be a critical step in that direction.

Another benefit of a Council supported study of DSM potential is that it will allow the Council and others to benchmark and contrast the results from recent efficiency potential studies completed for Entergy. While the savings predicted from recent Entergy sponsored studies

have been largely comparable to savings estimated for other utilities in the region, they have fallen considerably short of actual savings levels currently being attained in industry leading jurisdictions.

While the proposed study will represent a considerable expansion of measures and technologies that could be deployed by Entergy, energy efficiency will still likely play a key role in the study and in future efforts to reduce energy consumption and demand in New Orleans. Huge strides have been made in the efficiency of residential and commercial lighting, HVAC equipment, home appliances, computers and consumer electronics, etc. Some of this efficiency will find its way into homes and businesses on its own over time. But interventions in the market by Entergy, thoughtfully designed to influence customer decision making and trade ally specification practices, can significantly accelerate the rate and magnitude at which these and other efficiency technologies and practices are adopted in homes and businesses.

Demand response is an area that has seen explosive growth over the past few years. While utility control of customer loads to reduce peak demand impacts has been a practice for decades, new technologies make these efforts potentially more pervasive and less costly. For example, utilities have piloted and deployed numerous programs across the country to use smart thermostats to allow for control of cooling equipment at the time of system peak. Manufacturers are now embedding demand-enabled capabilities into their heat pumps, water heaters, and refrigerators. Similarly, utilities are now implementing storage technologies at both the utility and customer scale as a means to flatten loads and to avoid investments in transmission and distribution upgrades. Customer sited battery storage prices have also fallen dramatically in the last few years and represent a potentially significant demand response and renewable integration technology opportunity. All of these demand response technologies need to be considered and assessed in the planned DSM Potential Study.

Rate structures, including those made accessible via smart meters, would also be addressed in the proposed study. If on-peak electricity usage – and the associated demand impacts - is to be avoided, then rates can be structured to provide customers with the appropriate economic

signals to shift their load to off-peak periods and produce power to the grid during peak periods.

The study would also quantify the impact of customer-sited and customer-owned generation. This would include, but not be limited to, photovoltaics, solar hot water, and combined heat and power. More wide-scale implementation of such technologies could have a significant impact on reducing both utility sales and peak demand.

Finally, the proposed study would address conservation voltage reduction (CVR). While not necessarily a customer-side undertaking, it does reduce energy waste between the generator and consumer, and represent a modest, but significant cost effective savings opportunity that would be achieved through better control of Entergy's distribution system. Utilities have been successfully implementing CVR across the country for decades.

We envision that the proposed study would involve the open and active participation of all interested stakeholders. No one individual, firm, or even teaming of firms will have all of the right answers. The end products from this study will only benefit from an open and transparent process through encouraging the involvement of all interested parties to bring multiple perspectives to the table.

We would also encourage that the proposed DSM Potential Study explicitly address the energy and dollar savings opportunities of New Orleans' low income population. For these customers, energy costs can represent a significant burden. Providing services to these customers can be a challenge due to lack of economic resources, an aging housing stock in which one may encounter a myriad and health and safety issues, and the need to engage a landlord when rental housing is involved. Quantifying the costs and benefits for this customer segment should be a specified output from the Study.

The attached, detailed request for proposal (RFP) outline is informed, in part, by recent RFPs released in other jurisdictions. These RFPs, like the one proposed for the City Council's planned DSM Potential Study, require a broader look at customer-sited opportunities than just energy efficiency. The RFP for National Grid's upstate New York retail subsidiaries (see Attachment A) most resembles the scope of work being proposed for the City Council's DSM Potential Study.

## II. DEMAND SIDE MANAGEMENT RFP OUTLINE

### Introduction

Focus is on a broad definition of Demand Side Management (DSM) and will include the following:

- Energy Efficiency and Conservation
- Demand response, including storage
- Rate design
- Customer generation, including PV and combined heat and power
- Conservation voltage regulation (CVR)

Study objectives and how the study results will/may be used:

- Inform IRP docket UD-17-03
- Inform long-term DSM commitments, including Council's stated objective of achieving 2% of energy efficiency savings relative to sales
- Evaluate the potential for DSM to offset the need for near-term addition of generation capacity
- Inform Council decision making related to resource acquisitions and future policy matters
- Quantify customer savings
- Inform distribution system planning, including reliability, resilience and microgrids

The contractor will need to provide technical, economic and achievable potential estimates.

The Total Resource Cost (TRC), Societal, and Program Administrator tests will be used and non-cost effective measures may be included in the results.

No primary data collection is expected to be undertaken for this study, though contractors may propose limited primary data collection as an option clearly noting its impact on the project timeline.

A working version of the model will be provided to the Council at project completion.

Note and describe the open nature of the stakeholder process.

Specify proposal and project timelines.

Selected firm must also be able to review and comment on Entergy's IRP modeling as it relates to DSM and utility-scale renewable energy, as well as Entergy and MISO's projections as they relate to avoided costs, load forecasts and efficiency baselines.

## **Task 1 – Kick-off meeting and Final Workplan**

The contractor will attend an in-person presentation to the Council and stakeholders to address and discuss:

- Proposed scope of work and analytical approach
- Study objectives
- Proposed sector/market segmentation
- Project deliverables
- Project timeline
- Stakeholder input process. Discussion of what type of turn-around time is needed for review and comments of draft deliverables?
- Project data requirements

Based on discussions and any presentation follow-up, the contractor will provide draft and final workplans.

### **Deliverables:**

Draft and final Council presentations

Draft and final workplans

## **Task 2 – Review Relevant Entergy and MISO Studies and Documents**

Review Entergy filings related to the IRP and proposed generation capacity additions, including, but not limited to, most recent potential study and the Entergy and MISO forecasts.

- Assess avoided cost projections, including, but not limited to, inclusion of avoided T&D and traditional fuel costs, (natural gas, coal, etc).
- Assess how naturally occurring efficiency is embedded in the Entergy and MISO load forecasts. Are there “missed” efficiency load reductions that are not included in the forecasts? This could be due to failures to properly consider technology transformation resulting in rising baselines, updated codes and standards, and other factors that would increase the amount of naturally occurring efficiency in the load forecasts.

Assess and request data needed from Entergy to perform the DSM Potential Study

### **Deliverables:**

Draft and final memos summarizing assessment of reviewed documents and project data needs. Memo should also propose how the customer population will be segmented for the Potential Study, e.g., low income residential, market rate single family, market rate multifamily, small business, etc.

Entergy data requests

### **Task 3 – Develop Measure and Technology Characterizations**

Provide characterizations of all measures and technologies to be included in the Potential Study. Characterizations should at minimum address the items below, including sources for the values. Characterizations may vary based on sector or market segment.

- Baseline and high efficiency assumptions including any expected baseline changes due to codes and standards upgrades as well as whether – and how – multiple efficiency tiers will be addressed. For new construction, assessing savings against different code baselines may be required.
- Costs
- Technical and effective measure life. For some measures, e.g., lighting, the effective measure life may be shorter than the technical measure life due to codes and standards and/or technology transformation
- Gross and net electricity energy and demand savings
- Gross and net fossil fuel savings
- Non-energy impacts for low-income measures to be incorporated into the Societal test cost effectiveness screenings.
- Gross and net carbon savings

Discuss how net-to-gross values will be developed.

While the NOLA TRM should be used to inform measure and technology characterizations, the contractor may propose characterizations that differ from the TRM.

Behavior measures will be included and characterized. Opt-in vs. opt-out program designs will be considered based on highest, overall savings.

The study should include non-technology based education and information activities like building benchmarking, code support, and disclosure at time of sale.

Measure characterizations must address the City's unique/atypical housing stock as well as other savings opportunities that may be unique to New Orleans, most notably the significant amount of energy expended for stormwater and sewage pumps.

The characterizations should include both replace at failure and early retirement measures and the contractor must specify how they will model the savings and cost stream for early retirement measures, i.e., how will they address the baseline shift.

The characterization response must discuss how savings and demand shifts from rate changes and financing will be modeled, including any uncertainty in likely customer responses.

#### **Deliverables:**

[Draft and final measure characterization workbooks](#)



## **Task 4 – Define Market Penetration Modeling Approach**

How will measure and measure bundle penetrations be modeled, particularly in the achievable potential analyses? What are the basis for any measure penetration curves?

How will the model address the impact of declining measure costs and codes and standards on measure penetrations?

### **Deliverables:**

[Draft and final memos detailing measure penetration methodologies and assumptions](#)

## **Task 5 – Perform Technical and Economic Potential Analyses**

Discuss how the model works. Will multiple models be run to address the different DSM components, i.e., efficiency, demand response, rate design, etc.?

Discuss whether and how a top down model may allow for lower costs and/or quicker project completion than if a bottoms-up model were employed. What level of accuracy might be sacrificed in using this approach?

How will the analysis model uncertainty and yet-to-be commercialized technologies?

How will the analysis treat/model competing measures and interactive effects – both from a measure savings and from a measure penetration perspective - including replace at failure vs. early retirement measures competing for the same end use?

Note that the Total Resource Cost, Societal, and Program Administrator tests will be used for screening purposes and to generate estimates of benefits, costs, net benefits, and benefit-cost ratios (BCRs).

Given the study's objective of portfolio-level cost effectiveness, how will non-cost effective measures be evaluated and included into the overall portfolio? A minimum benefit-cost ratio for non-cost effective measures may be established.

Define the minimum model output requirements which must include the below as a minimum. The model outputs must be reported out by each of the DSM categories defined in the Introduction; by end use; and by measure and by sector/market segment.

- Electric energy and demand savings
- Fossil fuel savings
- Carbon savings
- Measure and total costs
- Customer energy dollar savings
- Cost effectiveness: net benefits and benefit cost ratios (BCRs)

What additional model outputs are there and how are they presented?

How will the model combine and report out impacts from the different DSM components?

What is the model input interface? How easy is it to make input changes?

Benchmark the technical and economic potential findings against similar, recent studies.

Present draft findings in a webinar to the Council and stakeholders.

### **Deliverables:**

[Draft and final technical and economic potential study results](#)

[Draft and final webinar presentations](#)

## **Task 6 – Perform Maximum Achievable Potential Analysis**

The contractor will perform three achievable potential analyses including a business as usual, a maximum achievable scenario and one other to-be-defined achievable scenario.

Develop year-by-year and annual cumulative estimates for each achievable potential scenario.

Define how measures will be grouped into measure bundles and programs and how program costs will be developed. How will measure savings and cost synergies be addressed through measure bundling, e.g., whole house retrofits?

Discuss how incentive levels will be developed. How, if at all, do incentive levels affect measure penetration estimates?

Report out annual and cumulative results by the DSM categories defined in the Introduction; by end use; by measure by program and sector/market segment.

- Electric energy and demand savings
- Fossil fuel savings
- Carbon savings
- Utility and customer costs
- Customer fuel dollar savings
- Cost effectiveness: net benefits and BCRs

Benchmark findings against similar, recent studies including the most recent Entergy study.

Assess the ability of cumulative DSM impacts to obviate the need for additional, near-term capacity additions.

Provide recommendations regarding policy and regulatory changes that would help ensure the attainment of all available DSM resources.

Provide recommendations as to Advanced Metering Infrastructure (AMI) functionalities that would facilitate customer behavioral engagement, demand response, and rate design, e.g., time varying rates, efforts.

Present draft findings in-person to the Council.

**Deliverables:**

Draft and final memo defining measure groupings into programs and development of measure costs and incentive levels

Draft and final technical and achievable potential study results

Draft and final presentations

**Task 7 – Draft and Final Report**

Provide to the Council and designated parties draft and final reports both summarizing and detailing the study’s methodologies, assumption, findings and conclusions.

**Deliverables:**

Draft and final reports

**Task 8 – Provide Model(s) to Council and Provide On-Site Training**

Contractor will provide working versions of the model(s) to the Council for its use and for use by a defined set of other parties, as agreed to between the City Council and the contractor and will include reasonable considerations of confidentiality.

Contractor will provide on-site training on how to use the model(s).

Contractor will be available, on a time and materials basis, to support the Council and designated parties on the use of the model for one year.

**Task 9 – Provide Post-Study Support to the Council**

On a time and materials basis the contractor will provide support to the Council on, but not limited to:

- How the study’s findings are incorporated into Entergy’s IRP
- Review and comment on the draft and final versions of the IRP
- Other technical assistance as deemed necessary by the Council

**Other Proposal Requirements**

**Contractor proposals must include**

- Staffing and management plan, including org chart. Bio sketches and resumes of key staff
- Project timeline (Gantt chart) that specifies all required deliverables and provides sufficient time for stakeholder review and comment. Allow for submission of optional bottoms-up modeling timeline

- Discussion of any proposed primary data collection
- List of similar projects completed within the past five years
- Project budget by task specifying hours and rates by staff and expenses. Allow for submission of optional bottoms-up modeling budget and budget for primary data collection activities.

### III. ADDITIONAL RFP AND CONTRACTOR SELECTION RECOMMENDATIONS

City Council to specify proposal timeframe. Should be a minimum of five weeks.

Contractor to note any conflicts of interest.

City Council to append appropriate materials related to the Entergy IRP and requested capacity additions.

The RFP should clearly specify how access to Entergy data will be handled, what data will be available and in what form.

RFP should allow for submission of questions by a set date; typically, two weeks following RFP release. Provide responses to all parties within one week.

RFP should allow for in-person best and finals if required.

RFP should note that submitted proposals will be reviewed and ranked based on the following considerations and scoring weights:

- Demonstrated understanding of the required scope of work: 50%
  - Does the proposal fully and adequately address the proposed scope of work?
  - Is the proposed approach reasonable and complete and will it provide the required answers to the City Council?
  - Is the allocation of senior and junior staff hours to each of the required tasks consistent with the expected level of effort for each task?
  - Does the proposal adequately address how the different DSM study components will be integrated?
- Corporate qualifications/recent experience: 20%
  - Has the contractor performed similar work covering all of the requested DSM components?
- Staff qualifications: 10%
  - Have the senior staff performed studies similar to the requested scope of work?
  - Is there the appropriate mix of junior and senior staff?
- Budget: 20%
  - Is the proposed budget reasonable given the proposed scope of work?
  - What are staff hourly rates?
  - How does the mix of senior and junior staff hours affect the total project budget?
- Project timeline: 10%
  - Can the proposed project be completed on time?
  - Will the project provide the required deliverables in a timely manner?

The RFP should specify that the contractor will participate in monthly project update conference calls/webinars with the City Council and stakeholders and provide meeting minutes within three business days following the calls.

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

**Certificate of Service Docket No. UD-17-03**

I hereby certify that I have this 15th Day of August, 2017, served the required number of copies of the foregoing correspondence upon all other known parties of this proceeding, by USPS or electronic mail.

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Logan Atkinson Burke  
Alliance for Affordable Energy

**Lora W. Johnson**, [lwjohnson@nola.gov](mailto:lwjohnson@nola.gov)

Clerk of Council  
City Hall - Room 1E09  
1300 Perdido Street  
New Orleans, LA 70112  
(504) 658-1085 - office  
(504) 658-1140 – fax

**Pearlina Thomas**, [pthomas@nola.gov](mailto:pthomas@nola.gov)

Chief of Staff, Council Utilities Regulatory Office  
**W. Thomas Stratton, Jr.**, [wstrattonjr@nola.gov](mailto:wstrattonjr@nola.gov)  
Director, Council Utilities Regulatory Office  
City Hall - Room 6E07  
1300 Perdido Street  
New Orleans, LA 70112  
(504) 658-1110 - office  
(504) 658-1117 – fax

**Rebecca Dietz**, [rhdietz@nola.gov](mailto:rhdietz@nola.gov)

City Attorney

Law Department  
City Hall- 5<sup>th</sup> Floor  
New Orleans, LA 70112  
(504) 658-9800 – office  
(504) 658-9869 – fax

**Norman S. Foster**, [nfoster@nola.gov](mailto:nfoster@nola.gov)

Department of Finance  
City Hall - Room 3W06  
1300 Perdido Street  
New Orleans, LA 70112  
(504) 658-1519- office  
(504) 658-1705 – fax

#### **ADMINISTRATIVE HEARING OFFICER**

**Hon. Jeffrey S. Gulin**, [jgulin@verizon.net](mailto:jgulin@verizon.net)

3203 Bridle Ridge Lane  
Lutherville, MD 21093  
(410) 627-5357

#### **NEW ORLEANS CITY COUNCIL CONSULTANTS**

**Clinton A. Vince**, [clinton.vince@dentons.com](mailto:clinton.vince@dentons.com)

**Presley Reed**, [presley.reedjr@dentons.com](mailto:presley.reedjr@dentons.com)

**Emma F. Hand**, [emma.hand@dentons.com](mailto:emma.hand@dentons.com)

DENTONS US LLP  
1301 K Street NW  
Suite 600, East Tower  
Washington, DC 20005  
(202) 408-6400 - office  
(202) 408-6399 - fax

**Basile J. Uddo** (504) 583-8604 cell, [buddo@earthlink.net](mailto:buddo@earthlink.net)

**J. A. “Jay” Beatmann, Jr.** (504) 256-6142 cell, (504) 524-5446 office direct, [jay.beatmann@dentons.com](mailto:jay.beatmann@dentons.com)

c/o DENTONS US LLP  
650 Poydras Street  
Suite 2850  
New Orleans, LA 70130

**Walter J. Wilkerson**, [wwilkerson@wilkersonplc.com](mailto:wwilkerson@wilkersonplc.com)

**Kelley Bazile**, [kbazile@wilkersonplc.com](mailto:kbazile@wilkersonplc.com)

Wilkerson and Associates, PLC  
650 Poydras Street - Suite 1913



New Orleans, LA 70130  
(504) 522-4572 - office  
(504) 522-0728 - fax

**Joseph Vumbaco**, [jvumbaco@ergconsulting.com](mailto:jvumbaco@ergconsulting.com)

**Joseph W. Rogers**, [jrogers@ergconsulting.com](mailto:jrogers@ergconsulting.com)

**Victor M. Prep**, [vprep@ergconsulting.com](mailto:vprep@ergconsulting.com)

**Byron S. Watson**, [bwatson@ergconsulting.com](mailto:bwatson@ergconsulting.com)

Legend Consulting Group  
8055 East Tufts Ave., Suite 1250  
Denver, CO 80237-2835  
(303) 843-0351 - office  
(303) 843-0529 – fax

**Errol Smith**, [ersmith@btcpas.com](mailto:ersmith@btcpas.com)

Bruno and Tervalon  
4298 Elysian Fields Avenue  
New Orleans, LA 70122  
(504) 284-8733 - office  
(504) 284-8296 – fax

#### **ENTERGY NEW ORLEANS, INC.**

**Gary E. Huntley**, [ghuntle@entergy.com](mailto:ghuntle@entergy.com)

Entergy New Orleans, Inc.  
Vice-President, Regulatory Affairs  
1600 Perdido Street, L-MAG 505B  
New Orleans, LA 70112  
(504) 670-3680 - office  
(504) 670-3615 - fax

**Seth Cureington**, [scurein@entergy.com](mailto:scurein@entergy.com)

Entergy New Orleans, Inc.  
Manager, Resource Planning  
1600 Perdido Street, L-MAG 505B  
New Orleans, LA 70112  
504-670-3602 office  
504-670-3615 fax

**Kathryn J. Lichtenberg** (504) 576-2763 office, [klichte@entergy.com](mailto:klichte@entergy.com)

**Tim Cragin** (504) 576-6523 office, [tcragin@entergy.com](mailto:tcragin@entergy.com)

**Brian L. Guillot** (504) 576-2603 office, [bguill1@entergy.com](mailto:bguill1@entergy.com)

**Alyssa Maurice-Anderson** (504) 576-6523 office, [amauric@entergy.com](mailto:amauric@entergy.com)

**Harry Barton** (504) 576-2984 office, [hbarton@entergy.com](mailto:hbarton@entergy.com)

Entergy Services, Inc.  
Mail Unit L-ENT-26E  
639 Loyola Avenue  
New Orleans, LA 70113

**Joe Romano, III** (504) 576-4764, [jroman1@entergy.com](mailto:jroman1@entergy.com)  
**Suzanne Fontan** (504) 576-7497, [sfontan@entergy.com](mailto:sfontan@entergy.com)  
**Danielle Burleigh** (504) 576-6185, [dburlei@entergy.com](mailto:dburlei@entergy.com)  
**Therese Perrault** (504-576-6950), [tperrau@entergy.com](mailto:tperrau@entergy.com)

Entergy Services, Inc.  
Mail Unit L-ENT-4C  
639 Loyola Avenue  
New Orleans, LA 70113  
(504)576-6029 - fax

# **ATTACHEMENT A**

## **National Grid/NYSEG/RG&E**

### **Request for Proposal**

#### **Introduction and Background**

National Grid/NYSEG/RG&E requests proposals for a consultant to conduct a study to assess the potential energy and demand savings from promoting energy efficiency strategies and services and high efficiency equipment installation within National Grid's New York gas and electric territory for the residential and non-residential customer segments for the years 2019-2025. This should include study Demand Response (DR) and Distributed Generation (DG) and Renewable (RE) technologies to the extent possible.

“The results of potential studies can help the Program Administrators understand the remaining technical, economic, and achievable energy efficiency opportunities within their service territories, which play a key role in helping Program Administrators set savings goals. Further, potential studies provide Program Administrators with insights specific to their customer base, allowing for further tailoring of program offerings and customer engagement. In addition, the results from each Program Administrator's potential study may provide important insights for other Program Administrators. While potential studies are one component of the planning process, they do play an important role in program design and provide an important objective measure of savings potential. We expect that the potential studies will provide valuable input to the energy efficiency planning process and savings goals development. The potential studies should be completed before the Program Administrators submit their draft ETIP. This work may be granted to one or more firms, or teams of firms, with such expertise to provide assistance as needed, for the period commencing on February 1, 2017 (or earlier). Bidders may submit proposals to conduct the potential study for both the Non-Residential (C&I) and Residential sectors or either sector separately as well as each fuel type gas or electric. Bidders are encouraged to partner with other firms and educational institutions in New York. Preference to response with 80% or more of the personnel physically working in the state of New York.

Bidders must show expertise in:

- estimating technical, economic, and achievable potential;
- spreadsheet energy modelling and data analysis including simplified cost benefit analysis using regional avoided cost data;
- on-site and telephone data collection and interpretation as well as resourcefulness in procuring relevant data from outside NY sources for penetration/saturation, applicability, etc.;
- deep technical understanding of the current market of residential and non-residential efficiency measures and services that provide savings in NY;
- ability to calculate up to date energy and demand savings and cost estimates using National Grid, regional, and national data in that order of preference;
- projecting the impact of EISA on both residential and commercial lighting measures for 2019-2025, with a particular emphasis on the effects in the residential screw-in lamp market

In addition to the tasks included in the scope below, all members of the bidding team must be available to provide on-going regulatory support on a time and materials basis once the final report has been submitted to the New York Department of Public Service (DPS).

#### **Study Objectives**

## ATTACHEMENT A

National Grid's primary objective is to obtain defensible estimates of achievable energy efficiency potential for years 2019-2025 by the end of 2017 for the forthcoming 3-year planning cycle (draft plan will be due at the end of April 2018). The estimates should inform the planning process to not only help set overall energy efficiency goals but also determine target areas that offer clear opportunities for bringing existing energy efficiency measures and services, as well as newer ones not yet in the portfolio, to market. For the non-residential retrofit and new construction/end of useful life sectors, energy efficiency potential should be determined for gas and electric technologies and, if appropriate, key segments within the non-residential customer population (e.g., large industrial or small commercial customers). For the residential sector, energy efficiency potential should be determined for gas, electric, oil and propane technologies. The bidder must also take into consideration the different segments within the residential sector such as low income and non-low income for both single family and multi-family in order to better refine estimates of technical potential and to provide meaningful insights to guide planning and future implementation efforts.

In addition to the sector level estimates the bidder should also consider the following markets within each sector:

- 1) New buildings and major renovations;
- 2) New and end of useful life replacement equipment purchases;
- 3) Early replacement/retrofit in existing buildings (using dual baselines where applicable);
- 4) Upstream (if an upstream initiative exists or is envisioned to exist).
- 5) Demand Response
- 6) Distributed Generation and Renewables
- 7) Tiered Incentives

Due to a renewed emphasis on future demand savings, all modeling should consider the rigor of demand savings at the same level as energy savings and should quantify any possible non-energy impacts.

### Scope of Work

In order to develop credible estimates of technical, economic and achievable potential, the following steps must, at a minimum, be included in the scope:

- Produce an up to date list of current commercially available and soon to be (within 6 years) commercially available technologies and services (such as retro-commissioning) which may play a part in future efficiency services. The bidder will be responsible for reviewing National Grid/NYSEG/RG&E recent program activity to make sure most major measures are included in the model either specifically or in some aggregated package of measure. The list will not have to include all measures but must include the ones that contribute most of the savings in aggregate currently and for the near future. This task should include a separate well documented investigation of new technologies that could play a role in 2019-2025 savings and include those in the modeling. Proposed measures should take into account EISA updates for these years.
  - Retrofit or early replacement measures should incorporate a dual baseline approach in an acceptable way which takes into account the savings for the remaining useful life (RUL) of the in-place measure as well the savings for the new measure.
- To the extent possible, include inputs from the NY Technical Reference Manual (TRM) regarding measure characterizations (energy and demand savings and lifetimes) as well as market insights from

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past program performance and NY specific EM&V studies. Bidder should assume that costs (incremental or total, depending on the market) are not available from National Grid;

- Estimate current saturations and penetrations of energy efficiency equipment and practices identified above in each sector (residential, non-residential) for the markets described above:
  - Conducting surveys of market acceptance and what drives efficiency uptake;
  - Reviewing data from nearby regions and the bidders experience and best judgment.
  - Using existing National Grid/NYSEG/RG&E data from recent baseline studies. Specific National Grid/NYSEG/RG&E data which must be used when applicable includes:
    - The NY PA's completed a Residential Baseline study in 2015 to collect saturation and usage behavior data for all major appliances, mechanical equipment, and electronics in NY homes.
- Develop an Excel model to assess the technical, economic and achievable potential for electricity and gas (as well as oil and propane for residential) savings over the 6 years required. The model shall use a residential and non-residential load forecast without energy efficiency induced by programs to be supplied by National Grid. The non-residential sales forecast will likely be broken out as commercial and industrial market and the residential market by low income and non-low income for both single family and multi-family. The commercial market should be further broken down into build/market types (campuses, healthcare, etc.) by the contractor with help from National Grid/NYSEG/RG&E data.
- The model should be calibrated against the most recently completed year of energy efficiency program activity, likely 2016 year-end numbers, to within an acceptable percentage to be agreed upon; on the order of 5 to 25 percent. The variables that should be considered during the calibration process are energy savings, demand savings (for electric) and cost. This means the model should be run for that year and the savings and cost output of the model overall, after calibrated, should predict a level of energy and demand savings and cost within that limit for residential and non-residential savings. There could be greater flexibility in how to calibrate/adjust the model to match the predicted results, but the final calibration steps should be reviewed by the bidder with National Grid. This calibration assures the model is grounded in actual program performance. If the bidder feels that the calibration to past performance constrains their model as to not produce credible potential results, alternative calibration schemes may be recommended by the contractor.
- Using the model, estimate the technical and economic potential for energy efficiency resources and the cost required to achieve that potential. The technical potential does not consider technology cost effectiveness and would be all non-overlapping technically feasible measures installed (basically all markets retrofit to the most efficient equipment in a reasonable amount of time). The economic potential represents the portion of the technical potential that is cost effective using the NY Total Resource Cost (TRC) and Societal (SOC) tests over the six years of the model and feasible with normal turnover and splits between retrofit and replace on burnout/new equipment/new construction. National Grid/NYSEG/RG&E will provide the current avoided costs but the analysis will need to be updated when new avoided costs are available;
- The model should include model inputs such as incentive levels that drive program participation through some sort of market penetration model based on key inputs;

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- Using estimates of market acceptance developed from the interviews for this project, calibration using past achievements in NY and data from similar programs in other regions, develop estimates of achievable potential. The achievable potential can be a function of variables the bidder sees fit to drive higher participation, be that incentive as measured as a percent of cost or dollar per energy unit saved, marketing resources, new program designs, etc. The consultant should possess or develop a market acceptance model based on key drivers and describe those proposed key drivers in the proposal

The consultant should perform the following tasks:

### Task 1: Conduct Project Initiation Meeting

The Consultant shall conduct a project initiation meeting.

The purpose of the meeting is to:

- Review and refine the technical requirements, research objectives and methods, discuss pros and cons of alternative methodologies (order of measure installation, dual baseline, etc.) or data sources, discuss data requirements, and clarify current data availability and quality;
- Discuss what required data may be supplied by the Company
- Review and reconfirm the schedule for the project, including key milestone dates;
- Review and adjust (as necessary) the project approach outlined in the RFP and proposal; and
- Develop project management and communication protocols to ensure that the information needs of both National Grid/NYSEG/RG&E and the Consultant are satisfied;

The Consultant shall prepare and submit to National Grid/NYSEG/RG&E for approval, a detailed memorandum documenting the results of the project initiation meeting within five (5) business days. If modifications to the memorandum are needed, National Grid/NYSEG/RG&E will submit the request for modifications to the Consultant within five (5) working days of receipt of the memorandum. The Consultant shall incorporate the comments and changes in scope and cost, and shall again submit the memorandum for review and approval.

### Task 2: Develop Research Plan

The Consultant shall prepare a draft of the final Research Plan to carry out all items discussed in the scope above. The Research Plan shall provide a detailed description of all activities required to complete the project. At a minimum, the Consultant shall include in the Research Plan complete information regarding:

- Step by step plans to complete the project including key milestones and deliverable dates;
- Sources of data for efficiency measures and building code information as well as default information for penetrations and end-use breakdowns;
- A more detailed description of the model used to calculate savings potential including algorithms used to calculate savings and cost using all proposed data sources;
- Provide the Company with a detailed data request of all information needed to complete the study;
- Proposed method for taking in account dual baselines for retrofit/early replacement measures;
- Brief summary of the impact of EISA on measure selection;
- Detailed sampling plan for surveys and on-site visits where necessary;
- An outline describing what will be included in the final report.

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- Research may be conducted in a phased approach
  - a. Efficiency Measures
  - b. Delivery Mechanisms such as upstream or tiered rebates
  - c. Demand Response
  - d. Distributed Generation and Renewables

### Task 3: Conduct Research Identified in the Research Plan.

- The Consultant shall prepare an updated list of all the efficiency technologies to be included in the assessment of technical potential. Each measure should have an estimate of typical savings and costs per measure, per customer, per building or per square footage and reference to associated documentation
  - Documentation of references should be explicit. Where studies or reports are referenced, study title, author, date, page number and table numbers should be included. Consultants should be expected to defend these savings and cost assumptions through detailed technical review.
  - The measure list including savings and cost will be reviewed and approved by National Grid/NYSEG/RG&E staff with expertise in that end-use or sector before going forward with the next stages of the research.
  - As a defined subtask the bidder must conduct an investigation of new technologies not currently offered that could play a role in 2019-2025 savings and include those in the modeling.
    - Less than 25% of these new technologies may be measures or services that are currently offered but for some reason, have shown low participation in current programs. For these the contractor must have new approaches to accelerate their adoption.
    - Over 50% of the new technologies must be cost effective when subjected to screening.

This task is to be documented in a stand-alone summary memorandum describing the results.

- Estimate current and future saturations and penetrations of energy efficiency equipment and practices identified above using the data sources discussed above.
- Conduct surveys or other well documented ways to develop market acceptance/adoption based on some inputs as well as penetration/saturation information not included in the most recent National Grid/NYSEG/RG&E on-site and baseline data collection. The proposal should discuss proposed key drivers to such a model.

### Task 4: Develop and Run the Model

- Develop the savings forecasting and screening aspect of the potential model in Excel. For this task, the bidder should expect to make a detailed presentation of the model, including important formulas and a reasonable question and answer period on the algorithms and documentation behind the model before the final model runs are done. The bidder should be prepared to explain in detail how the model handles competition between measures that cover the same baseline customer, equipment or building.
- The Excel model should be transparent enough so that National Grid/NYSEG/RG&E staff can examine and verify the formulas, used in the model to do specific calculations and must be easily

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updated by the selected *consultant* (not National Grid/NYSEG/RG&E staff) for key variables such as avoided cost, discount rate, measure specific costs and savings, saturations/penetrations, incentive strategies (\$/energy unit or % of cost). A “locked” version of the Excel model may need to be shared under a confidentiality agreement with NYDPS staff under a protected seal.

- Run the model producing a minimum estimate of technical potential, economic potential and at least three scenarios of achievable potential

### Task 5: Summarize results in a draft report to National Grid/NYSEG/RG&E by October 30, 2017

- The Consultant should prepare a draft report that follows the outline developed under Task 2. National Grid/NYSEG/RG&E will submit comments to the Consultant within twenty one (21) working days of receipt of the draft report. The Consultant shall address the comments submitted by National Grid/NYSEG/RG&E and will resubmit an updated report for review and approval.
- The draft report is likely to result in some questions and requests for further explanations. This will likely lead to requests to rerun the model with some revised or new information. This task should include resources to address such requests, re-running of the model, and explanation of the updated results.

### Task 6: Produce Final Report based on draft report and comments received from National Grid. Report is to be completed no later than November 30, 2017

### Task 7: Update final results to take into account updated avoided cost information that will be available around March 2018.

### Task 8: Regulatory Support both during project and after completion of the final report.

- The bidding team must be available to provide on-going regulatory support on a time and materials basis once the final report has been submitted to the New York Department of Public Service. The cost for up to two presentations of draft findings to the Council should be included in the proposed budget.

## Preparation of Proposal

Bidders should submit a proposal (max 15 pages) which presents a clear understanding of the items listed in the Scope of Work and Task description sections above and a description of how the bidder will accomplish the outlined goals in sufficient detail as to demonstrate their expertise. It should also include qualifications, prior experience, references, proposed hourly compensation, timeline and a brief response of comments, ideas, or reflections on the objectives and responsibilities contained herein.

Bidder qualifications should include:

- A specific team of professionals with the expertise to conduct the activities described above with expected hours and hourly rates for each team member (resumes will not be counted in the 15 page limit);
- Sufficient demonstrated technical experience in the energy efficiency field. That expertise should include savings estimating procedures including developing energy and demand savings using existing TRM algorithms, familiarity with recent NY EM&V results (and other regions if needed) and access to up to date measure cost data not provided by National Grid;
- Demonstrated familiarity with assessments of technical potential of efficiency including examples of recent studies conducted (examples are not included in the 15 page limit);



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- Demonstrated familiarity with NY energy efficiency programs and cost-effectiveness guidelines;
- Statement about availability to do work over the period February 2016 through March 2018 and to meet the required schedule.
- Demonstrated expertise in predicting the effect of EISA on lighting markets for the 2019-2025 time-frame as well as incorporating dual baseline calculations in such a model;
- Information about the amount of time it will take to update this analysis to take into account new avoided costs.

### **Selection Criteria**

National Grid/NYSEG/RG&E will evaluate the proposals according to the criteria listed below. This list is not necessarily provided in order of relative importance.

- Past performance and experience of the bidding firm(s) and proposed subcontractors in successfully completing similar research and ability to provide on-time, in-budget research
- Reasonableness of the proposed approach in meeting the research objectives and for completing the tasks described in this RFP
- Dedicated resources to provide the services requested within the expected timeframe
- Technical experience of staff performing the work, particularly technical expertise in developing cost and energy and demand savings estimates relative to the NY market
- Bidders that have extensive in-house databases of measure cost should demonstrate that in their proposal
- Quality and completeness of the proposal (in terms of coverage, organization, graphics, grammar, spelling, etc.). The quality of the proposal (along with the example reports) will be considered an indication of the likely appearance of deliverables from the respondent
- Cost