nationalgrid

Janet M. Audunson, P.E., Esq.
Senior Counsel II

March 11, 2016

VIA ELECTRONIC DELIVERY

Honorable Kathleen H. Burgess
Secretary
New York State Public Service Commission
Three Empire State Plaza, 19th Floor
Albany, New York 12223-1350

RE: Case 14-M-0101 – Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV)

RFP FOR NON-WIRES ALTERNATIVE SOLUTIONS FOR BALDWINSVILLE, NEW YORK AREA

Dear Secretary Burgess:

In accordance with the requirements of New York Public Service Law ("PSL") Section 27, Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid") hereby submits for filing in Case 14-M-0101 the Request for Proposal ("RFP") for Non-Wires Alternative Solutions for an area of electrical stress in the Baldwinsville, New York area issued on February 19, 2016.

Please direct any questions regarding this RFP to:

John Spring
Global Procurement – Category Manager Goods, Services and Energy Efficiency
National Grid
40 Sylvan Road
Waltham, MA 02451
Tel.: 781-907-3694
Mobile: 781-382-8251
Email: john.spring@nationalgrid.com

300 Erie Blvd. West, A-4, Syracuse, New York 13202
T: 315/428-3411 ■ M: 315/401-7891 ■ Janet.Audunson@nationalgrid.com ■ www.nationalgrid.com

Thank you.

Respectfully submitted,

/s/ Janet M. Audunson

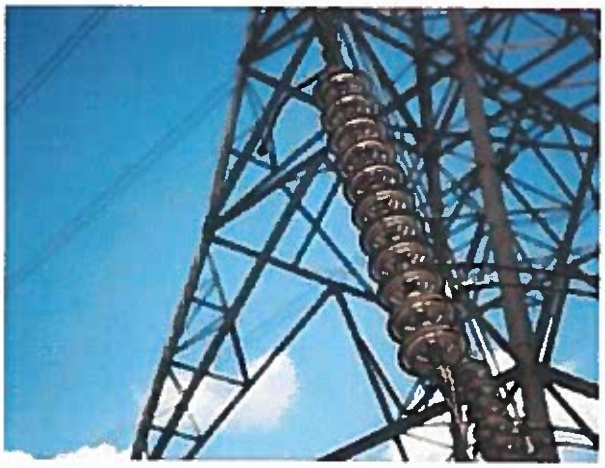
Janet M. Audunson, P.E., Esq.
Senior Counsel II

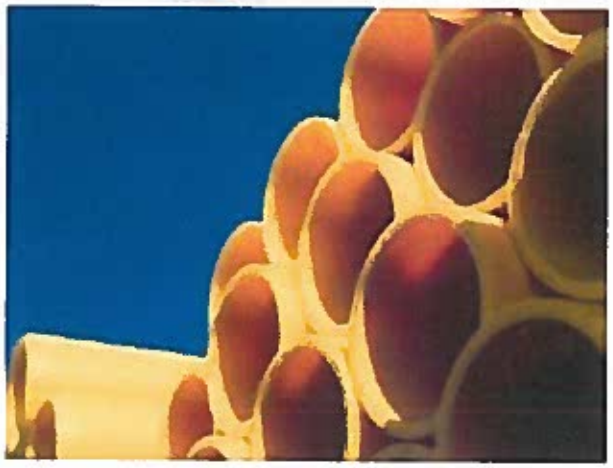
Enc.

cc: Tammy Mitchell, DPS Staff, w/enclosure (via electronic mail)
Marco Padula, DPS Staff, w/enclosure (via electronic mail)
Denise Gerbsch, DPS Staff, w/enclosure (via electronic mail)
Cathy Hughto-Delzer, w/enclosure (via electronic mail)
Allen Chieco, w/enclosure (via electronic mail)
Fouad Dagher, w/enclosure (via electronic mail)
Mark Harbaugh, w/enclosure (via electronic mail)
John Leana, w/enclosure (via electronic mail)
Robert Sheridan, w/enclosure (via electronic mail)
John Spring, w/enclosure (via electronic mail)
Stacey Hughes, w/enclosure (via electronic mail)
Pamela Dise, w/enclosure (via electronic mail)
Carol Teixeira, w/enclosure (via electronic mail)

300 Erie Blvd. West, A-4, Syracuse, New York 13202
T: 315/428-3411 ■ M: 315/401-7891 ■ Janet.Audunson@nationalgrid.com ■ www.nationalgrid.com

nationalgrid





Request for Proposal

Non- Wires Alternative Solutions

Professional Services

Statement of Work
(SOW)

February 2016

Table of Contents

1 Introduction 3

2 Definitions 3

3 Our Goals 3

4 NWA Phases 4

5 Project Overview: Baldwinsville, NY 5

6 Deliverables and Main Tasks 6

7 Instructions for Bidders 7

7.1 Proposal 7

7.2 Timeline 7

7.3 Previous Experience 7

7.4 Partnering 8

7.5 RFP Schedule 8

8 Attachments 8

1 Introduction

National Grid is a gas and electric investor-owned utility serving nearly 3.3 million electric and 3.5 million gas customers through its subsidiary companies in Massachusetts, New York and Rhode Island.

National Grid is committed to providing safe, reliable and affordable energy to all customers throughout our service territory. As a part of providing this service, National Grid is pursuing the potential implementation of Non-Wires Alternatives solutions in Upstate NY. Such implementation aligns with principles set forth by the NYS PSC Case 14-M-0101 – Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV).

National Grid has been pursuing Non-Wires Alternative Projects ("NWA's") across its service territories since 2011. Demand Response, solar, CHP microgrid and other Distributed Energy Resources (DERs) have been studied and in some cases implemented in pilot projects intended to defer traditional electrical distribution equipment upgrades or "wires projects." National Grid has identified an area of electrical stress located in and around Baldwinsville, NY, a suburb of Syracuse, NY and has filed with the NYS Public Service Commission to pursue potential relief of this area through the implementation of Non-Wires Alternative solutions (Attachment A).

2 Definitions

"Non-Wires Solutions" (NWS), sometimes referred to as Non-Wires Alternatives (NWA), is the umbrella term for ensuring that a portfolio of alternatives to distribution and/or transmission lines is analyzed and considered in the planning and possible permitting of such facilities.

A NWS could include any action or strategy that could help defer or eliminate the need to construct or upgrade components of a transmission and/or distribution system affected by loading that is estimated to exceed equipment limits.

NWA's are defined and referred to as any demand response, distributed generation, conservation or energy efficiency measure, generation altering pricing strategies that individually or in combination delay or eliminate need for upgrades to transmission and/or distribution system.

3 Our Goals

The Request for Proposal (RFP) seeks to identify specific market based DER proposals that, if implemented, would provide Non-Wire Alternative Solutions for an area of electrical stress located in the Baldwinsville, New York area.

To assist qualified bidders, who opt to respond, this document provides an overview of the project objectives, detailed business requirements and proposal submission information.

As outlined in the Request for Proposal Schedule section of this document, bidders will have the opportunity to submit questions that assist in creating a proposal for this initiative. Please see the RFP Timeline Schedule for dates associated with submitting questions and main RFP milestones in section 7.5 below. The specific delivery terms and conditions will be worked out with the vendor in a formal contract following award notification.

4 NWA Phases

There are five main components or "phases" of developing and delivering NWA Solutions. This RFP is specifically covering and requesting detail on phases I, III, IV and V as described in Section 6.

1. **High Level Screening Study (Phase I)**

    - **Create a demographic analysis of the identified area**
    - **Evaluate the potential that NWA measures may be likely to replace or defer the need for the proposed transmission/distribution project**
    - **Identify technology categories that may be a best fit to address the specific capacity constraints in the defined area**
    - **Support the development of appropriate documentation to solicit solution measures from the market through a competitive process**

2. NWA Solutions Solicitation (Phase II)

    - Document/Bid NWA solutions that are responsive to the local electric system needs as defined in Attachment A
    - Determine the implementation requirements to utilize the NWA solution most cost effectively to address electric system needs
    - Determine availability and reliability of available NWA
    - Identify all costs and benefits
    - Determine availability of resources and time to implement
    - Identify Project/Program Management requirements to implement each proposal, including roles and responsibilities of all parties
    - Leverage available State and Federal solution funding

3. **Detailed Solutions Evaluation & Procurement (Phase III)**

   - **Evaluate the feasibility of the proposals received by solution providers received in phase II**
   - **Assess the impact of DER proposals on the local area load forecast**
   - **Update power flow model with proposed DER solutions and evaluate impacts on power system performance**
   - **Develop an optimal portfolio of wires and non-wires solutions to resolve the system constraints**

4. **Management/Oversight of NWA Solution Measures (Phase IV)**

   - **Project management of the NWA**
   - **Deployment oversight of selected solution measures**
   - **Periodic reporting on progress**

5. **NWA Performance Assessment (Phase V)**

   - **Evaluate the capacity and reliability impacts of the deployed solution measures**
   - **Evaluate the economic impact of the deployed solution measures**
   - **Identify risks and their impacts on the load relief**
   - **Discuss warranties of load relief/reward and penalties for not delivering**

5 Project Overview: Baldwinsville, NY

Loading on the substations serving portions of the Towns of Lysander & Van Buren and all of the Village of Baldwinsville has increased to a level in which the load at risk for a single T&D contingency exceeds the risk threshold accepted in National Grid's Distribution Planning Criteria. The Company is looking to evaluate alternatives to reduce the area load at risk to maintain or improve reliability performance.

Please see Attachment A for detailed information about the Baldwinsville NWA area.

6 Deliverables and Main Tasks

This section describes the list of tasks and deliverables required for the bidder. Please provide detail in your proposal as to how you your firm can perform each of the tasks below. All tasks should be responded to in the context of the NWA in Baldwinsville (Attachment A).

To Support Phase I

- Analyze the areas of constraint as identified by National Grid to determine how much load relief can reasonably be achieved in each area from various DER. The results should include, at a minimum:
    - An analysis of customer demographics as well as rate class
    - An assessment of the load reduction needs by hour of the day, day of the week and months in the year.
    - An assessment of how well different technologies can be expected to perform in providing load relief based on the requirements. Technologies should include but are not limited to: Demand Response, Energy Efficiency, Distributed Generation/Renewables and Energy Storage
    - Estimate a range of total load relief potential through the use of the assessed technologies

To Support Phase III

- Assess the overall NWA feasibility by analyzing the proposals for solutions - provided via the *NWA Solutions Proposal RFP* mentioned above - individually and in aggregate. This assessment should include:
    - An analysis of the proposals submitted by individual solution providers to determine if the load relief proposed can be reasonably achieved given the results of the analysis in the previous step
    - An analysis of the total load relief that can be reasonably expected from the sum of the solution providers against the load relief requirements
    - An economic analysis that compares the total NWA solution costs against the projected benefits of wires project deferral, reduction in scope or elimination. Wherever practical, this analysis should leverage integration with current programs such as energy efficiency or demand response that the Company already has in place
    - Identify potential risks associated with the potential solution(s) and the impact of the risks on the load relief

To Support Phase IV

- Ensure successful deployment of NWA solution by:
    - Directly managing of the NWA solution(s) project deployment
    - Ensuring proper solution delivery and installation

- Providing National Grid with detailed and timely reports regarding the progress of the NWA deployment

To Support Phase V

- Evaluate the deployed solution measures to determine their impact in terms of kW and costs. The evaluation should include:
  - Detailed analyses of the kW impact of each solution measure during the local peak hours
  - Consideration of persistence of solution measures and their impact on the load forecast and deferral projections
  - Detailed economic analysis of each solution measure and comparison of aggregate NWA economic analysis against the wires project economics
  - Identify potential risks associated with the potential solution(s) and the impact of the risks on the load relief
  - Exercise any warranties or penalties – if necessary. Collect any rewards and/or incentives

- Coordinate with representatives from National Grid throughout all processes and phases, keeping them informed and soliciting feedback and review at regular intervals.

7 Instructions for Bidders

7.1 Proposal

Please provide a concise written proposal under 50 pages (excluding resumes, white papers, etc.) for ease of review. There will be sections to upload additional documents on our website. In your proposal please provide an introduction of your company, size, staff for this project, and any partners you may be working with. Please describe the staff and experience of the employees that will be working directly with National Grid.

7.2 Timeline

Please provide a detailed timeline outlining major milestones for the main deliverables for the tasks your firm are bidding on.

7.3 Previous Experience

Please describe within your proposal any previous experience with these services, along with possible references.

7.4 Partnering

If your firm wishes to bid on only one of the components of this RFP and are looking to partner please let us know if you wish to share your contact information with the other bidders of this RFP. We can then post your contact information for the other bidders who are also willing to share their information. This may help with collaboration and provide opportunities to firms that may not already know or have a partner that provides one or more of the services requested in this scope of work.

7.5 RFP Schedule (Estimated and subject to change)

- RFP Launch: 02/19/2016
- Bidders Conference Call: 02/26/2016
- Last date to submit questions: 03/10/2015
- Proposals Due: 03/14/2016
- Possible Interviews: 04/4-15/2016
- Estimated Award Date: 04/30/2016

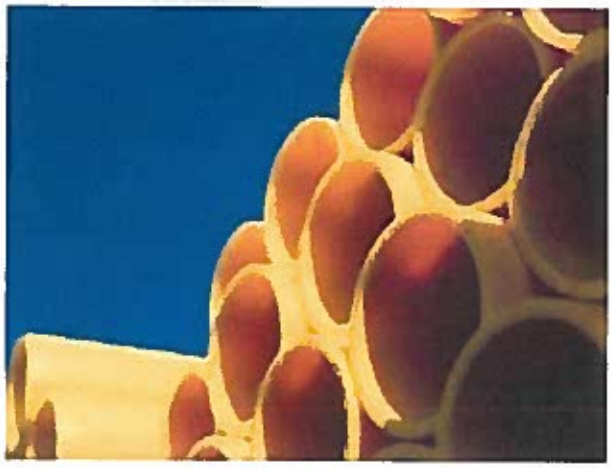
Thank you

Thank you for participating in this RFP event. We appreciate your cooperation with this process and look forward to your response.

8 Attachments: Please see the Attachments section in Ariba

nationalgrid





Request for Proposal

Non- Wires Alternative Solutions

Project Development Services

Statement of Work
(SOW)

February 2016

Table of Contents

1 Introduction 3

2 Definitions 3

3 Our Goals 3

4 NWA Phases 4

5 Project Overview: Baldwinsville, NY 5

6 Deliverables and Main Tasks 6

7 Instructions for Bidders 7

7.1 Proposal 7

7.2 Timeline 7

7.3 Previous Experience 7

7.4 Partnering 7

7.5 RFP Schedule (Estimated and subject to change) 7

8 Attachments: Please see the Attachments section in Ariba 8

1 Introduction

National Grid is a gas and electric investor-owned utility serving nearly 3.3 million electric and 3.5 million gas customers through its subsidiary companies in Massachusetts, New York and Rhode Island.

National Grid is committed to providing safe, reliable and affordable energy to all customers throughout our service territory. As a part of providing this service, National Grid is pursuing the potential implementation of Non-Wires Alternatives solutions in Upstate NY. Such implementation aligns with principles set forth by the NYS PSC Case 14-M-0101 – Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV).

National Grid has been pursuing Non-Wires Alternative Projects ("NWA's") across its service territories since 2011. Demand Response, solar, CHP, microgrid and other Distributed Energy Resources (DERs) have been studied and in some cases implemented in pilot projects intended to defer traditional electrical distribution equipment upgrades or "wires projects." National Grid has identified an area of electrical stress located in and around Baldwinsville, NY, a suburb of Syracuse, NY and has filed with the NYS Public Service Commission to pursue potential relief of this area through the implementation of Non-Wires Alternative solutions (Attachment A).

2 Definitions

"Non-Wires Solutions" (NWS), sometimes referred to as Non-Wires Alternatives (NWA), is the umbrella term for ensuring that a portfolio of alternatives to distribution and/or transmission lines is analyzed and considered in the planning and possible permitting of such facilities.

A NWS could include any action or strategy that could help defer or eliminate the need to construct or upgrade components of a transmission and/or distribution system affected by loading that is estimated to exceed equipment limits.

NWA's are defined and referred to as any demand response, distributed generation, conservation or energy efficiency measure, generation altering pricing strategies that individually or in combination delay or eliminate need for upgrades to transmission and/or distribution system.

3 Our Goals

The Request for Proposal (RFP) seeks to identify specific market based DER proposals that, if implemented, would provide Non-Wire Alternative Solutions for an area of electrical stress located in the Baldwinsville, New York area.

To assist qualified bidders, who opt to respond, this document provides an overview of the project objectives, detailed business requirements and proposal submission information.

As outlined in the Request for Proposal Schedule section of this document, bidders will have the opportunity to submit questions that assist in creating a proposal for this initiative. Please see the RFP Timeline Schedule for dates associated with submitting questions and main RFP milestones in section 7.5 below. The specific delivery terms and conditions will be worked out with the vendor in a formal contract following award notification.

4 NWA Phases

There are five main components or "phases" of developing and delivering NWA Solutions. This RFP is specifically covering and requesting detail only on phase II of the process as described in Section 6.

1. High Level Screening Study (Phase I)

    - Create a demographic analysis of the identified area
    - Evaluate the potential that NWA measures may be likely to replace or defer the need for the proposed transmission/distribution project
    - Identify technology categories that may be a best fit to address the specific capacity constraints in the defined area
    - Support the development of appropriate documentation to solicit solution measures from the market through a competitive process

2. **NWA Solutions Solicitation (Phase II)**

    - **Document/Bid NWA solutions that are responsive to the local electric system needs as defined in Attachment A**
    - **Determine the implementation requirements to utilize the NWA solution most cost effectively to address electric system needs**
    - **Determine availability and reliability of available NWA**
    - **Identify all costs and benefits**
    - **Determine availability of resources and time to implement**
    - **Identify Project/Program Management requirements to implement each proposal, including roles and responsibilities of all parties.**
    - **Leverage available State and Federal solution funding**

3. Detailed Solutions Evaluation & Procurement (Phase III)

   - Evaluate the feasibility of the proposals received by solution providers received in phase II
   - Assess the impact of DER proposals on the local area load forecast
   - Update power flow model with proposed DER solutions and evaluate impacts on power system performance
   - Develop an optimal portfolio of wires and non-wires solutions to resolve the system constraints.

4. Management/Oversight of NWA Solution Measures (Phase IV)

   - Project management of the NWA
   - Deployment of selected solution measures
   - Periodic reporting on progress.

5. NWA Performance Assessment (Phase V)

   - Evaluate the capacity and reliability impacts of the deployed solution measures
   - Evaluate the economic impact of the deployed solution measures
   - Identify risks and their impacts on the load relief
   - Discuss warranties of load relief/reward and penalties for not delivering

5 Project Overview: Baldwinsville, NY

Loading on the substations serving portions of the Towns of Lysander & Van Buren and all of the Village of Baldwinsville has increased to a level in which the load at risk for a single T&D contingency exceeds the risk threshold accepted in National Grid's Distribution Planning Criteria. The Company is looking to evaluate alternatives to reduce the area load at risk to maintain or improve reliability performance.

Please see Attachment A for detailed information about the Baldwinsville NWA area.

6 Deliverables and Main Tasks

This section describes the list of tasks and deliverables required for the bidder. Please provide detail in your proposal as to how you your firm can perform each of the tasks below. All tasks should be responded to in the context of the NWA in Baldwinsville (Attachment A)

Phase II

- Cleary define the specific NWA solutions included in the proposal (such as solar and storage, CHP, EE, expansion/enhancement of current Demand Response/Direct Load Management offering, new and/or undefined solutions, etc.) that are responsive to electric system needs as described in Attachment A.
- Provide complete operating descriptions for each type of DER included that details the minimum and maximum level of load reduction available, the possible duration of relief, the frequency at which each DER can be called upon reliably, and any constraints that would impact the availability of each resource.
- Define the implementation requirements to utilize the NWA solution most cost effectively to address electric system needs, including, but not limited to:
    - Forecasting and Event Notification process
    - Integration with utility monitoring, communications and control systems
    - Means of measurement and verification
- Describe other uses for the proposed DER and any constraints those uses may have on the availability of the resource for the use in response to electric system needs
- Clearly describe the expected benefits of utilizing the proposed DER as a Non-wires solution, propose remuneration methods, and provide an economic model that describes the expected revenue stream for each DER to compensate for those benefits.
- Describe in detail how the proposed NWA integrates, or aligns with, existing programs such as Energy Efficiency and Demand Response. See Attachments B and C for Energy Efficiency and Demand Response program information
- Provide a schedule of DER availability that defines the magnitude of NWA available (KW) by May 1st of each year compared to Cumulative need as shown in Attachment A.
- Describe Project/Program Management requirements to implement each proposal, including roles and responsibilities of all parties.
- Provide evidence of previous experience and references for similar projects
- Leverage available State and Federal solution funding

7 Instructions for Bidders

7.1 Proposal

Please provide a concise written proposal under 50 pages (excluding resumes, white papers, etc.) for ease of review. There will be sections to upload additional documents on our website. In your proposal please provide an introduction of your company, size, staff for this project, and any partners you may be working with. Please describe the staff and experience of the employees that will be working directly with National Grid.

7.2 Timeline

Please provide a detailed timeline outlining major milestones for the main deliverables for the tasks your firm are bidding on.

7.3 Previous Experience

Please describe within your proposal any previous experience with these services, along with possible references.

7.4 Partnering

If your firm wishes to bid on only one of the components of this RFP and are looking to partner please let us know if you wish to share your contact information with the other bidders of this RFP. We can then post your contact information for the other bidders who are also willing to share their information. This may help with collaboration and provide opportunities to firms that may not already know or have a partner that provides one or more of the services requested in this scope of work.

7.5 RFP Schedule (Estimated and subject to change)

- RFP Launch: 02/19/2016
- Bidders Conference Call: 02/26/2016
- Last date to submit questions: 03/10/2015
- Proposals Due: 03/14/2016
- Possible Interviews: 04/4-15/2016

Estimated Award Date: 04/30/2016

Thank you

Thank you for participating in this RFP event. We appreciate your cooperation with this process and look forward to your response.

8 Attachments: Please see the Attachments section in Ariba

ATTACHMENT A

nationalgrid

Janet M. Audunson, P.E., Esq.
Senior Counsel II

May 1, 2015

VIA ELECTRONIC DELIVERY

Honorable Kathleen H. Burgess
Secretary
New York State Public Service Commission
Three Empire State Plaza, 19th Floor
Albany, New York 12223-1350

RE: Case 14-M-0101 – Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision

Potential Non-Wires Alternative Project – Baldwinsville, New York

Dear Secretary Burgess:

In accordance with the requirements set forth in the Order Adopting Regulatory Policy Framework and Implementation Plan issued by the Commission on February 26, 2015 in Case 14-M-0101, Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid") hereby submits for filing its potential non-wires alternative project.

Please direct any questions you may have in regard to this project to:

Allen Chieco
Director Asset Management
National Grid
1125 Broadway
Albany, New York 12204
Tel.: 518-433-3809
Email: allen.chieco@nationalgrid.com

National Grid looks forward to working with Department of Public Service Staff in the development of next steps leading up to the solicitation of proposals from market participants.

Respectfully submitted,

/s/ Janet M. Audunson
Janet M. Audunson, P.E., Esq.
Senior Counsel II

300 Erie Blvd. West, A-4, Syracuse, New York 13202
T: 315/428-3411 ■ M: 315/401-7891 ■ Janet.Audunson@nationalgrid.com ■ www.nationalgrid.com

Enc.

cc: Michael Worden, DPS Staff, w/enclosure (via electronic mail)
Tammy Mitchell, DPS Staff, w/enclosure (via electronic mail)
Allen Chieco, w/enclosure (via electronic mail)
Peter Altenburger, w/enclosure (via electronic mail)
Robert Sheridan, w/enclosure (via electronic mail)
Mark Domino, w/enclosure (via electronic mail)
John Leana, w/enclosure (via electronic mail)
Cathy Hughto-Delzer, w/enclosure (via electronic mail)

300 Erie Blvd. West, A-4, Syracuse, New York 13202
T: 315/428-3411 ■ M: 315/401-7891 ■ Janet.Audunson@nationalgrid.com ■ www.nationalgrid.com

nationalgrid

Niagara Mohawk Power Corporation
d/b/a National Grid

Potential Non-Wires Alternative Project
Baldwinsville, New York Area

May 1, 2015

nationalgrid

Niagara Mohawk Power Corporation d/b/a National Grid
Potential Non-Wires Alternative Project
Baldwinsville, New York Area

Background

Loading on the Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid" or the "Company") substations serving portions of the Towns of Lysander and Van Buren and all of the Village of Baldwinsville has increased to a level at which the load at risk for a single transmission and distribution ("T&D") contingency exceeds the risk threshold established in National Grid's Distribution Planning Criteria. The Company is evaluating alternatives to reduce the area load at risk to maintain or improve reliability performance.

National Grid's planning criteria limits equipment loading to defined thermal ratings for both Normal and Emergency scenarios. Loading will be limited to Normal ratings when the system is operating under designed configurations and limited to Emergency ratings when operating in response to system contingencies. The local distribution system is of a radial configuration and designed to N-0 criteria. As such, load is interrupted for a single contingency. Following a contingency, a combination of automatic and manual switching is performed to re-energize as much load as possible from alternate paths. Per planning criteria, loading above the switching capabilities of adjacent facilities (*i.e.*, the load at risk) should not exceed 10 MW or 240 MWh for any single event.

Area Description and Need

The area being considered for a non-wires alternative ("NWA") solution is located in central New York northwest of the City of Syracuse.[1] Two substations supply 13,370 customers and 43.7 MW of load at peak. Summer 2013 is referenced throughout this document as it was the most recent summer peak in this area. The weather approximated the weather used in a 95/5 forecast.

Substations & Feeders:

Sorrell Hill Substation 269 & Feeders 26951, 26952, 26953, 26954

Lysander Substation 297 & Feeders 29753, 29754, 29755, 29756, 29757

Each of these substations is supplied by a single 115-13.2 kV transformer. The 13.2 kV system is grounded-wye.

[1] The Towns of Lysander and Van Buren and the Village of Baldwinsville are located in the northwest portion of Onondaga County.

nationalgrid

Normal Loading:

Normal loading on area facilities is currently within normal equipment ratings and is not forecasted to be overloaded until beyond 2029. Sorrell Hill is presently loaded to approximately 92% of its summer normal rating and Lysander is loaded to approximately 62% of its summer normal rating. The rating of a power transformer is determined by winding and oil temperatures as a result of the transformer physical characteristics and the load cycle.

Using an econometric model, the Company forecasts area load to grow by 6.6% over the period 2015 to 2029 as shown in the table below. Of particular note is that forecasted load at risk will grow at twice the load forecast rate due to the fact that the load on the substation and the load on the neighboring feeders each increase by the load forecast, which combine to decrease in the amount of possible load transfers.

Load Growth Forecast for Metro Syracuse Area

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Growth	1.8%	0.6%	-0.1%	-0.1%	0.0%	0.3%	0.3%	0.3%	0.4%	0.4%	0.6%	0.6%	0.7%	0.6%

Substation	Normal Capacity (MVA)	Actual Summer 2013 (MVA)	Forecasted Peak 2015 (MVA)	Forecasted Peak 2029 (MVA)
Sorrell Hill 269	29.9	26.6	26.2	27.9
Lysander 297	27.5	17.1	19.4	20.7

Contingency Load at Risk:

The Sorrell Hill Substation currently exceeds the National Grid Distribution Planning Guidelines for Load at Risk and the Lysander Substation is nearing the point at which it will exceed this guideline as well.

Typical, traditional T&D solutions to address these concerns would consist of installing a second transformer in the substation sized to allow an N-1 design thereby eliminating any load at risk, or building additional feeder ties to increase the contingency transfer capabilities to reduce load at risk to levels within acceptable criteria. As these potential solutions provide different levels of system improvement, the selection of a recommended plan considers the relative costs and the array of benefits to be provided. The Company will consider the addition of NWA to the potential solution set to (1) augment the benefits of a traditional solution, (2) reduce the scale for a traditional solution, or (3) defer the need for a traditional solution.

nationalgrid

At Sorrell Hill, during 2013, there were up to 827 hours scattered over 113 days during the course of the year when load on the substation transformer exceeded the rating of feeder ties for post contingency restoration. During the peak load period in the July timeframe there were as many as 20 continuous hours with some level of load at risk with 24 straight days having at least one hour with some load at risk.

Per National Grid Distribution Planning Criteria, load at risk should be limited to 10 MW or 240 MWh. In 2013 the load at risk criteria was exceeded by as much as 4.3 MVA during 45 hours scattered over 8 days. The maximum duration of any single exception was 9 hours. The area is summer peaking and these conditions can occur seasonally from the beginning of June to mid-September. These days can occur on any day of the week, and are more typical on weekdays. Daily peaks typically occur in the evening between 1800 and 1900 hours. The maximum load at risk exposure can occur between 1200 and 2200 during a heat wave. Also worthy of note is that in 2013, there were five (5) straight days when the peak load was such that the outage exposure guideline was exceeded and relief would be called for.

As area load grows, load at risk levels are expected to increase at twice the load growth rate. By 2029, criteria thresholds are expected to be exceeded by 6.6 MVA and 76 hours scattered over 13 days with as much as 11 hours in a single day. This may occur between Memorial Day and mid-September again with mid-late weekdays most likely to have the issue.

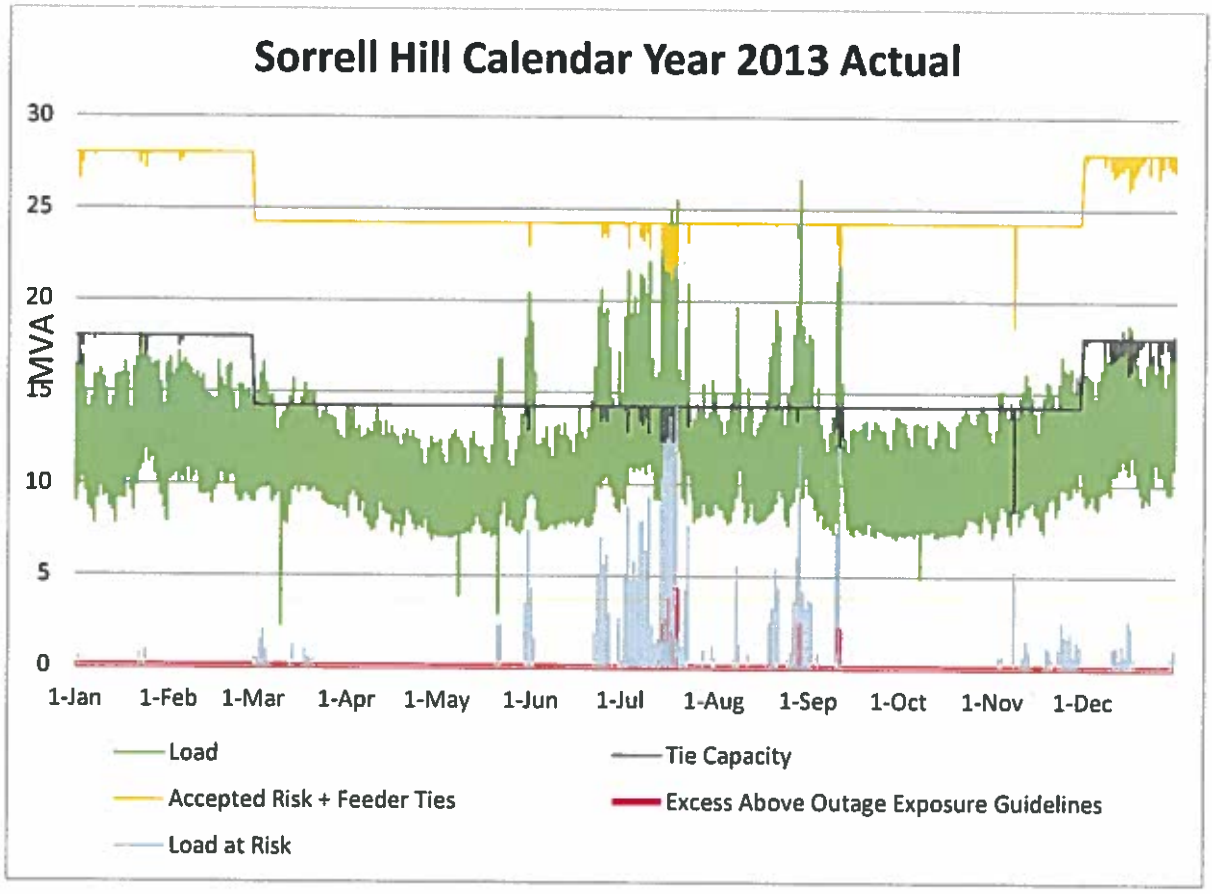
The two tables below provide the demographics for the Sorrell Hill 269 and Lysander 297 substations.

Sorrell Hill 269	Accounts	kWh	Average kWh per account per year
Residential	8,036	62,083,231	7,725
Commercial	772	21,270,906	2,7552
Industrial	9	11,390,855	1,265,650
Total	8,817	94,744,992	

Lysander 297	Accounts	kWh	Average kWh per account per year
Residential	4,136	33,487,026	8,096
Commercial	281	5,942,922	21,149
Industrial	9	21,624,470	2,402,718
Total	4,453	61,054,418	

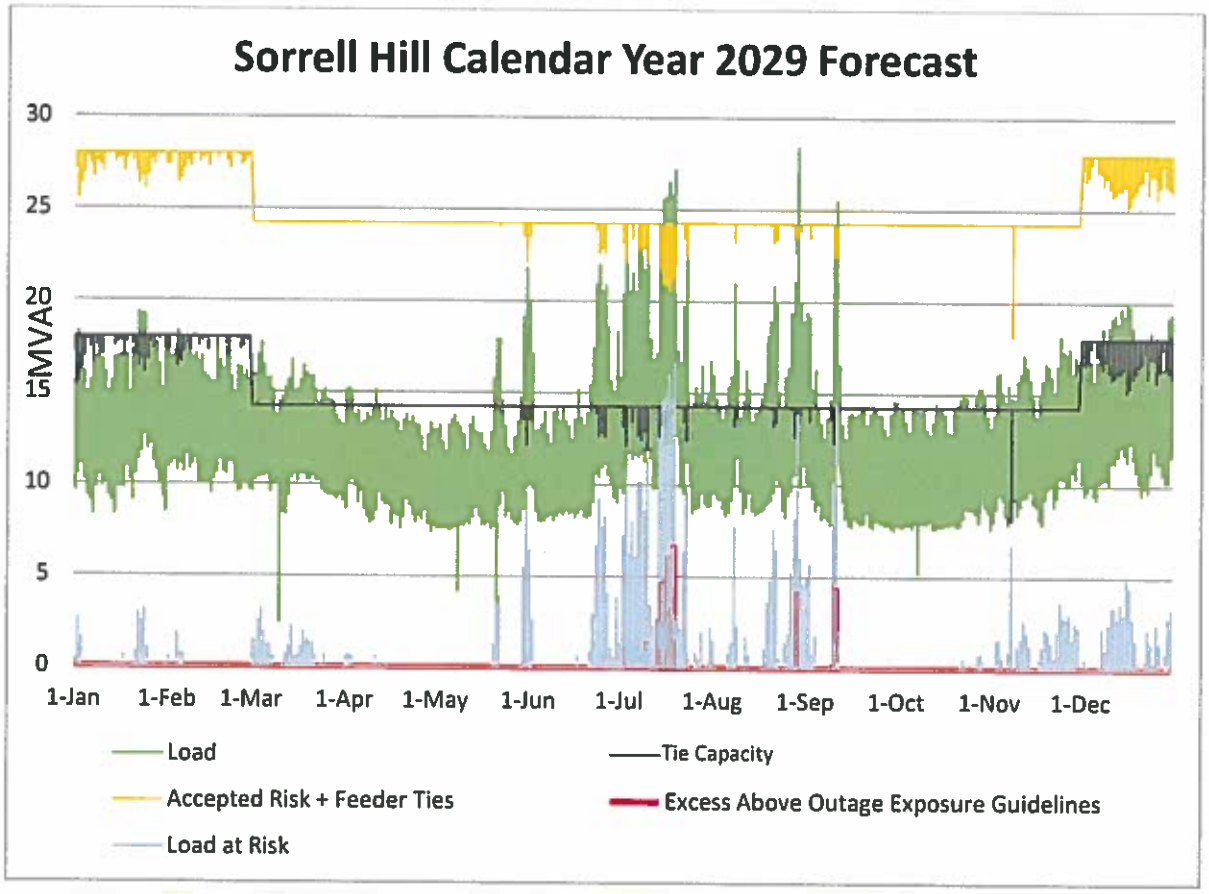
nationalgrid

The chart that follows depicts the Sorrell Hill 269 load profile for calendar year 2013 along with the available feeder tie capacity at peak, the outage exposure threshold of 10 MW (240 MWh/24hours), the loading above the sum of feeder ties and outage exposure threshold, and the load at risk. Load at risk is the load that cannot be supplied through feeder ties for an outage to a station transformer. The Company will consider NWA solutions to address the excess above outage exposure guidelines.



The chart that follows depicts the Sorrell Hill 269 load profile forecast for calendar year 2029 along with the available feeder tie capacity at peak, the outage exposure threshold of 10 MW (240 MWh/24 hours), the loading above the sum of feeder ties and outage exposure threshold, and the load at risk. Load at risk is the load that cannot be supplied through feeder ties for an outage to a station transformer.

nationalgrid



NYSERDA Program Opportunity Notice and NY Prize Status:

Both Sorrell Hill and Lysander substations and feeders were identified as strategic areas in the New York State Energy Research and Development Authority ("NYSERDA") NY-Sun Solar Competitive Photovoltaic ("PV") Program.[2] Sorrell Hill was also a target area identified in the NY Prize[3] Opportunity Zones. No inquires/applications under NY Prize have been identified at this time that could possibly address these substations and their distribution feeders.

Traditional Solution

A typical traditional distribution solution would include the addition of a new 15/20/25 MVA substation transformer, expansion of the 13.2 kV station bus with additional breaker positions, installation of new

[2] *See* NYSERDA Program Opportunity Notice ("PON") 2956, Attachment D – Strategic Locations.
[3] Under RFP 3044, NYSERDA is administering a three-stage NY Prize Community Grid Competition ("NY Prize") to support the development of community microgrids.

feeder getaway cables and a reconfiguration of the existing distribution feeders. These system enhancements would increase both normal and contingency capabilities. Substation design would transition from an N-0 design to an N-1 design. The transition to N-1 design limits the level of normal capacity enhancement to approximately 3 MVA while eliminating all load at risk. Assuming this solution would be deployed in 2022, the first year load at risk benefit is estimated to be 16.5 MW. The additional feeder positions and feeder reconfigurations will also increase local capacity for new connections, reduce system losses and improve reliability as fewer customers will be impacted by a particular fault on the distribution system.

Non-Wires Alternative Solution

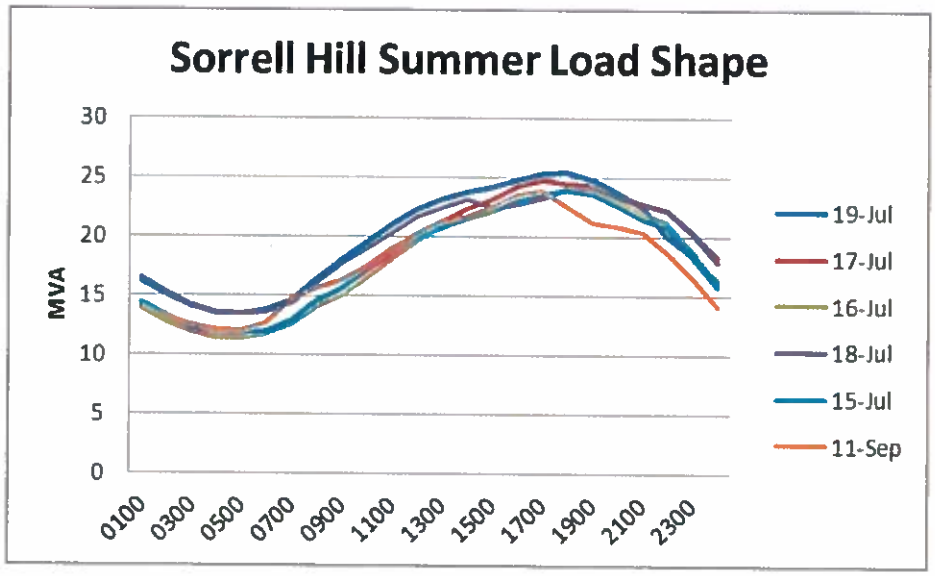
The installation of generation and/or demand response could reduce the overall demand at critical periods and thereby reduce the contingency load at risk at these two substations. To reduce load at risk to planning criteria thresholds, the integration of distributed generation, distributed energy storage and/or demand response resources of 6 MW would keep the outage exposure of Sorrel Hill within guidelines for 10 years given the present load forecast. Such an installation of distributed resources would also to reduce the peak loading on Sorrell Hill to 70% of Summer Normal ratings for the next 10 years. The distributed energy resources ("DER") would be called upon when loads were forecasted to exceed the capacity of feeder ties plus the outage exposure threshold (21 MVA in 2015). Although a traditional T&D solution would not be expected to be in-service until 2022, the Company would consider NWA options to mitigate the risk as early as 2016. By 2016, 4.5 MVA of DER could be utilized to keep loading within acceptable load at risk thresholds. The Company would consider options with greater quantities of DER to further reduce the load at risk exposure below the criteria threshold. To match the impact of a traditional substation expansion project, 21 MVA of DER would be required to eliminate the load at risk comparable to an N-1 substation design. Depending on the nature of the NWA, this level of DER penetration may not be possible without creating other system concerns, including potential significant infrastructure upgrades to accommodate the NWA solution.

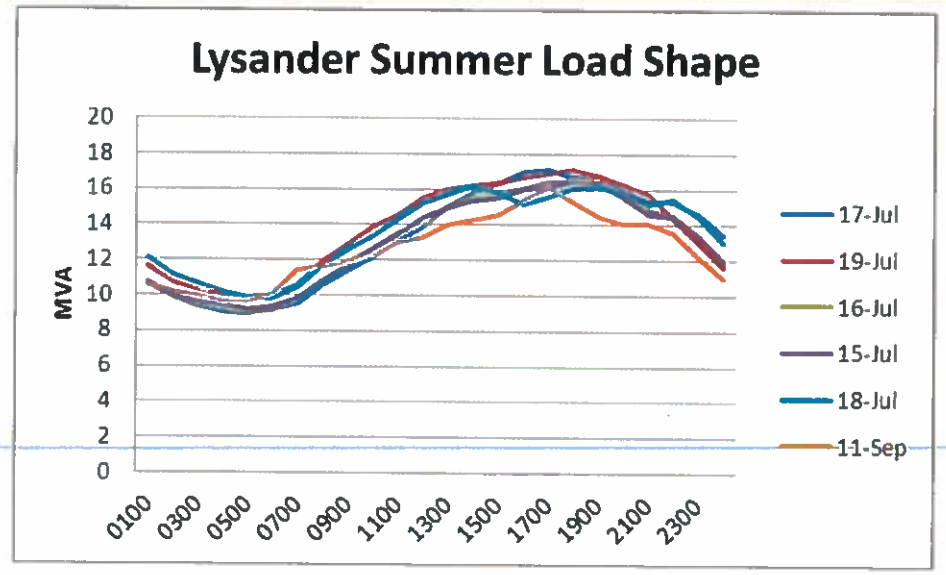
Improvements on Sorrell Hill feeders/substation would produce some benefit for Lysander depending on their location relative to the feeder ties to Lysander. Similar sized projects on Lysander feeders would have less impact on Sorrell Hill due to the limited feeder tie capacity to Sorrell Hill. The Lysander feeders that tie to Sorrell Hill are 29753, 29754 and 29755. These cases would need to be analyzed as proposals are developed.

Lysander Substation needs 2 MVA of DER to keep within the outage exposure guidelines for the next 10 years given present load forecasts. The addition of DER on Sorrell Hill should be targeted to feeders 26951 and 26954.

nationalgrid

The resources would be called upon when the day-ahead New York Independent System Operator, Inc. ("NYISO") load forecast when applied to Sorrell Hill and Lysander indicates that loading at Sorrell Hill will exceed the Accepted Risk plus Feeder Ties threshold. The DER would be required to be in-service either from 1200 to 2300 hours or 1600 to 2200 hours, depending on the amount of forecasted load. In addition to calling for DER based on day-ahead load forecasts, the Company would also consider calling on appropriate DER following a contingency event if those resources could be deployed within 60 minutes.





nationalgrid

Summary of the Targeted DER Opportunity

Baldwinsville , New York Area

Locations:

Distribution Station
Sorrell Hill 269
Lysander 297

Target Feeders		
26951	26952	26954
29753	29754	29755

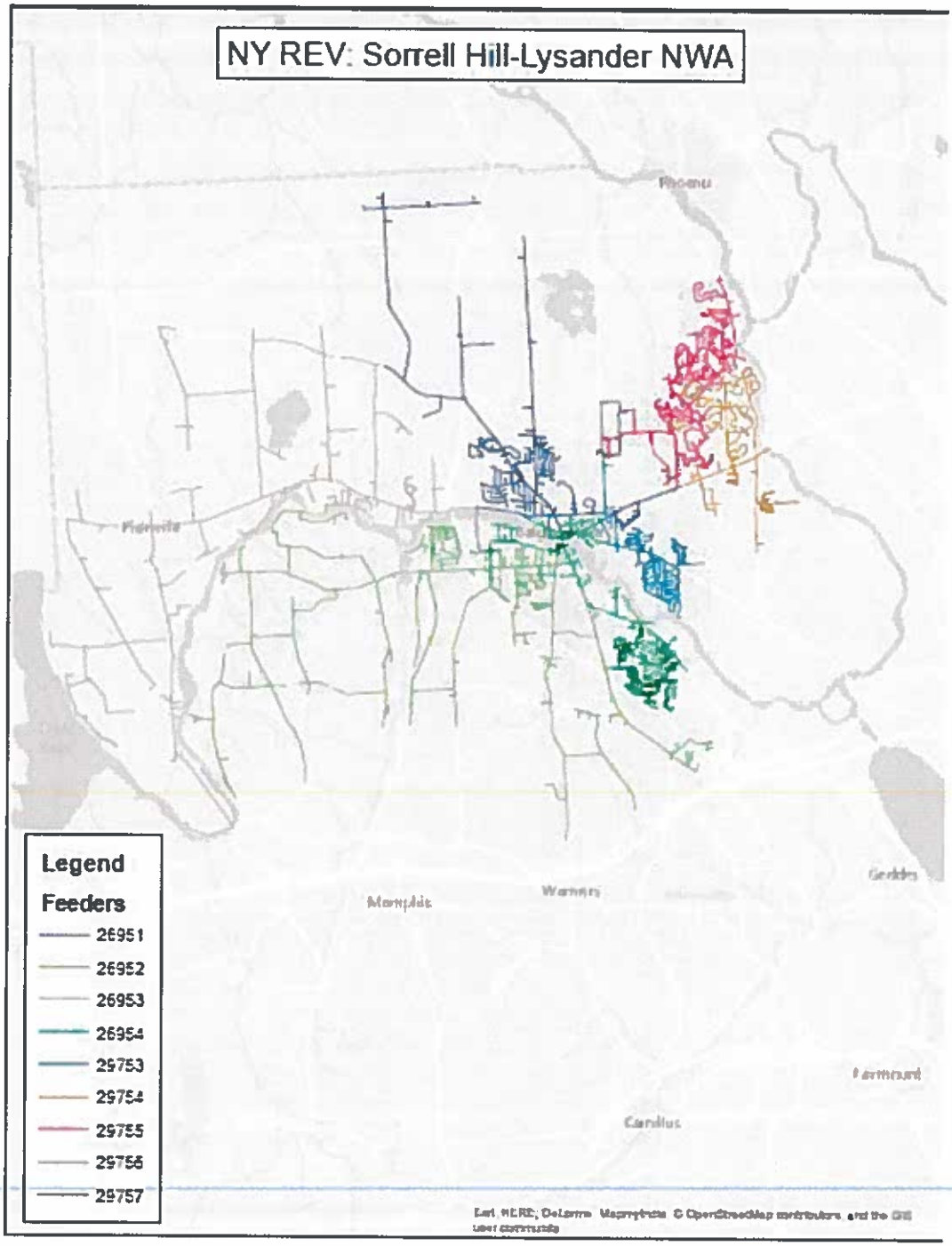
Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Cumulative Need (MVA)	4.7	4.9	4.9	4.9	4.9	5.0	5.1	5.2	5.4	5.5	5.8	6.0	6.3	6.6

In-service Year	Before 2022
Season	June 1 - September 30
Days of Week	Any, highest probability is weekdays
Time of Day	12:00-23:00 hours (12:00 noon - 11:00 pm)
Number of Times Called per Year	7 (2016) to 14 (2029)
Duration of Each Call	6 to 11 hours
Minimum Period between Calls	12 hours
Consecutive Days Called	7 days

The above tables are based on load forecasts associated with extreme weather (heat that can be expected once in 20 years). Actual performance in a given year or season will be dependent upon weather and other factors. For example the number of days called may be more or less (*i.e.*, more if the weather is hotter than expected, less if the weather is cooler than expected).

The amount of NWA / DER installed is expected to be greater than the required peak demand reduction to accommodate coincidence factors and unavailability of individual NWA resources.

The map that follows is the geographic location of the distribution feeders supplied by Sorrell Hill and Lysander substations. The grayscale feeders are not targeted for DER.


NY REV: Sorrell Hill-Lysander NWA
Legend
Feeders
26951
26952
26953
26954
29753
29754
29755
29756
29757

ATTACHMENT B

Energy Efficiency Programs for Commercial and Industrial Electric Customers

nationalgrid
HERE WITH YOU. HERE FOR YOU.

Innovative electric technologies are available to replace inefficient equipment and systems in existing buildings. With the right energy efficient upgrades, business owners can enjoy future growth by remaining competitive and profitable. Reduced operating costs, increased productivity or sales, and improved health and safety are among the many benefits to be realized from these upgrades.

Our energy efficiency programs, designed for our commercial and industrial customers, provide financial incentives and technical assistance to encourage the installation of high efficiency equipment that will bring our customers in Upstate New York a host of benefits.

Prescriptive Incentives

Lighting Systems

Achieve significant energy cost savings and enhance the visual appearance, comfort, safety and profitability of your facility by installing high efficiency lighting improvements.

Fixture Type	Incentive Per Fixture	Fixture Type	Incentive Per Fixture
Simple Lamp and Ballast Replacement	$15	Integral LED Directional Replacement Lamps	$15 - $30
Commercial Interior Fluorescent Fixture Options	$25 - $50	LED Linear Replacement Lamps	$5 - $10
Low Bay and High Bay Fluorescent Lighting	$75 - $100	LED Cooler/Freezer Case Fixtures	$30 - $50
Industrial Interior Fixtures	$30 - $50	LED Low Bay Garage and Canopy Fixtures	$100 - $200
LED Exterior Wall Mount Fixtures	$125 - $200	LED Interior Low Bay and High Bay Fixtures	$84 - $174
LED Pole Mounted Parking, Roadway and Decorative Fixtures	$75 - $300	LED Interior Panel Fixtures	$25 - $40

Lighting Controls

Incorporating lighting controls and occupancy sensors into your lighting design adds to your energy savings and improves your working environment.

Fixture Type	Incentive Per Control
Controls for Lighting Systems	$20 - $60
Controls for Parking Garages and High Bay Systems	$25 - $50
Glass Front Refrigerated Cases	$75

Connect with us on

P: 1-800-787-1706 | F: 315-460-9803 | Efficiency@nationalgrid.com | www.ngrid.com/unybiz

Compressed Air Measures

Improving compressed air efficiency is generally the best opportunity industrial companies have to make a significant and immediate impact on their electric bill.

Air Compressors

Horsepower	Incentive per HP Variable Speed	Incentive per HP Load/No Load	Incentive per HP Variable Displacement
>15 to <25	$205	$275	N/A
>25 to < 50	$180	$280	N/A

Dryers

CFM Range	Incentive per CFM Cycling and VSD
Less than 100 CFM	$4.00
100-199 CFM	$3.20
200 CFM or greater	$2.40

Engineered Air Nozzles

1/8" or 1/4"	$20

Storage

Incentive Per Gallon	$2.75

Zero-Loss Condensate Drains

Incentive Per Drain(Limit 3 per facility)	$120 Each

Energy Management Systems (EMS) and other related measures

The primary function of an EMS system is to automatically turn off equipment when it is not needed. An EMS is an indispensable tool for improving the energy efficiency of heating, ventilation and AC systems.

EMS

Total Square Footage of the Building	Incentive Amount per Point	Max Number of Points
5,000 – 40,000	$225/pt	16
40,001 – 80,000	$275/pt	48
80,001 < 200,000	$225/pt	128

Vending Misers

Description	Incentive Per Unit
Refrigerated Beverage Vending Machine	$55
Non-Refrigerated Snack Vending Machine	$30
Glass Front Refrigerated Cases	$75

Hotel Occupancy Sensors

$75 per Sensor

Custom Incentives

Tailored to a customer's specific needs, National Grid also offers incentives to help customers target unique energy efficiency opportunities not covered by our prescriptive offerings. If it saves energy, National Grid will work with you to quantify the benefits and potentially help fund the project. Custom projects requiring technical expertise may receive 50% of the cost of an engineering study up to $10,000. Custom incentives are designed to cover up to 50% of the installed cost which includes the cost of labor and materials.

Contact National Grid and learn how we can help your business save money and improve the overall quality of your business.

ATTACHMENT C

National Grid Dynamic Load Management Programs

Background

In 2015, upstate New York electric utilities, including National Grid, developed and implemented distribution-level Dynamic Load Management Programs ("DLM") for their respective service territories or portions thereof. National Grid targeted Kenmore, New York for initial implementation of the three Demand Response ("DR") programs described below.

Direct Load Control ("DLC")

National Grid targeted its direct load control ("DLC") program to residential and small-medium business customers, although most rate classes were eligible to participate. The DLC program included ThinkEco Modlet systems (*i.e.*, WiFi connected smart plugs), Emerson Sensi WiFi thermostats, and WiFi connectable window air conditioning units controlled by Think Eco's demand response platform.

Distribution Load Relief Program ("DLRP")

DLRP is a contingency demand response program. This program calls for participants/aggregators to provide at least 50kW of load relief during distribution electrical emergencies. Customers can choose to participate in a monthly reservation payment option wherein they pledge load by contract. Reservation option participants are required to shed their contracted load level during called DR events. Along with monthly reservation payments during the capability period (May 1-September 30) reservation customers are also paid for performance. A voluntary option pays customers for event performance only. DLRP events may be called when targeted equipment exceeds its limits.

Commercial System Relief Program ("CSRP")

The CSRP is a peak shaving demand response program. This program calls for participants/aggregators to provide at least 50kW of load relief during summer load peaks. Customers can choose to participate in a monthly reservation payment option wherein they pledge load by contract. Reservation option participants are required to shed the contracted load level during called DR events. Along with monthly reservation payments during the capability period (May 1-September 30) reservation customers are also paid for performance. A voluntary option pays customers for event performance only. Peak shaving events may be called when targeted area loads are forecasted to exceed 97% of National Grid's 95/5 peak load forecast.

Expansion of DR Programs

The DLC program and CSRP described above are proposed to be expanded to the entire National Grid service territory in 2016 pending New York Public Service Commission approval of tariff filings being made by National Grid on February 16, 2016.

A Bring Your Own Thermostat ("BYOT") program will enable the DLC program to expand across our entire service territory. DLRP will remain focused in Kenmore but may also be applied in newly identified areas of electrical stress. CSRP will generally remain the same but will be offered across National Grid's entire service territory.

TERMS AND CONDITIONS

nationalgrid

TERMS AND CONDITIONS FOR CONSULTING PURCHASE ORDERS

Form 00400 (Rev. 7 November 2014)

Table of Contents

1.0	DEFINITIONS	1
2.0	CONSULTANT'S RESPONSIBILITIES	1
3.0	PERSONNEL BACKGROUND CHECKS	2
4.0	INDEPENDENT CONTRACTOR	2
5.0	COMPANY'S RESPONSIBILITIES	2
6.0	PURCHASE ORDER PRICE	2
7.0	INVOICES	3
8.0	RESPONSIBILITY FOR PROFESSIONAL SERVICES	4
9.0	AUDIT AND MAINTENANCE OF RECORDS	4
10.0	INDEMNIFICATION	5
11.0	INSURANCE	5
12.0	SCHEDULE	7
13.0	FORCE MAJEURE	7
14.0	PURCHASE ORDER CHANGES	7
15.0	RIGHTS, CLAIMS AND DISPUTES	8
16.0	WAIVER AND ELECTION OF REMEDIES	8
17.0	TERMINATION	9
18.0	TITLE TO PLANS AND SPECIFICATIONS	10
19.0	PATENT INFRINGEMENT AND INDEMNIFICATION	10
20.0	INVENTIONS, PATENTS AND COPYRIGHTS	11
21.0	NON-DISCLOSURE	12
22.0	EQUAL EMPLOYMENT OPPORTUNITY	12
23.0	UTILIZATION OF SMALL BUSINESS CONCERNS	12
24.0	ASSIGNMENT	14
25.0	ALCOHOL AND DRUG ABUSE POLICY FOR CONSULTANTS	14
26.0	REGULATORY REQUIREMENTS	14
27.0	NERC/CIP	14
28.0	THIRD PARTY ITEMS	14
29.0	COMPLIANCE WITH LAWS	15
30.0	JURISDICTION AND GOVERNING LAWS	16
31.0	SEVERABILITY	16

1.0 DEFINITIONS

Defined Terms. For purposes of these Terms and Conditions and as used in the Purchase Order incorporating these Terms and Conditions, the following commonly used terms are defined as follows:

1.1 "Company" or "Owner" means the entity identified as such in the Agreement (usually National Grid USA Service Company, Inc. and/or one or more of its Affiliates, successors and assigns).

1.2 "Purchase Order" means the written and executed agreement between Company and Contractor including all documents therein designated as being a part of the Purchase Order and all amendments thereto ("Amendments"). The Purchase Order constitutes the entire agreement between the Company and Contractor regarding the subject matter of the Purchase Order.

1.3 "Contractor" means the business entity (firm or individual) identified as such in the Purchase Order and their legally appointed representatives, to the extent such representation is approved by the Company.

1.4 "Project means, in its totality, the complete scope of work and services to be performed and provided as defined by the Company over a specified period of time and cost.

1.5 "Subcontractor" means any business entity (firm or individual) regardless of tier, which the Contractor may retain during the term of the Purchase Order to provide services in support of the project. Contractor shall remain fully responsible for all such services provided by its Subcontractor(s) of any tier.

2.0 CONSULTANT'S RESPONSIBILITIES

Contractor shall, subject to the terms and conditions of the Purchase Order:

2.1 Furnish all necessary management, technical and other personnel necessary for the timely prosecution of the Project to the Company's satisfaction.

2.2 Appoint one or more individuals who shall be authorized to receive directions for and act on behalf of Contractor and with whom the Company may consult at all reasonable times, and whose instructions, requests and decisions will be binding upon Contractor as to all matters pertaining to the Purchase Order and the performance of the parties hereunder.

2.3 Provide the Company with all reports, analyses and/or other documents as directed by the Company at intervals and periods agreed upon in sufficient detail to allow the Company to evaluate the progress of the work or make assessments of any other element of the services being performed.

2.4 Provide the Company with cost and budget data in a form acceptable to Company, including projections of Purchase Order cost, estimates applicable to proposed changes in the workscope, and other cost items associated with the work. Provide the Company with prompt notification of anticipated schedule or cost impacts on the Project.

3.0 PERSONNEL BACKGROUND CHECKS

3.1 Contractor shall comply with the Company's background check requirements as defined in the Company's policies and procedures as set forth in this Agreement and as may be amended from time to time.

3.2 Contractor shall be wholly and solely responsible for all acts of its personnel while engaged in the Project. Any illegal acts, including but not limited to terrorism affecting the property and personnel of National Grid USA, by Contractor or Subcontractor shall be considered grounds for finding the Contractor in default and terminating the Purchase Order in accordance with Article 17, in addition to other rights or remedies available to National Grid USA under applicable law.

4.0 INDEPENDENT CONTRACTOR

4.1 Contractor shall be an independent contractor with respect to the Project to be performed hereunder. Neither Contractor nor its Subcontractors, nor the employees of either, shall be deemed to be the servants, employees, or agents of Company.

5.0 COMPANY'S RESPONSIBILITIES

5.1 Company will, at such times as may be necessary for the successful and expeditious completion of the Project, appoint an individual who will be authorized to act on behalf of Company with whom Contractor may consult at reasonable times. Changes in the Purchase Order scope or price shall be authorized only through the issuance of a Purchase Order Change per Section 14.0.

6.0 PURCHASE ORDER PRICE

6.1 Company shall provide and Contractor shall accept compensation for the work in accordance with the terms of the Purchase Order and any changes thereto per Section 14.0.

6.2 Any changes in the Purchase Order Price, either to adjust for changes in the estimated costs or for other cost elements applicable to the Project, shall be incorporated into the Purchase Order in accordance with Section 14.0. Company will not compensate the Contractor for amounts in excess of the Purchase Order Price.

6.3 Contractor shall be liable for and pay all taxes, contributions and penalties, including interest thereon, that are required or imposed by law in connection with the Project, including, but not limited to, federal, state or local sales, use, excise, consumer, employment (including, but not limited to, FICA, pension obligations and fees), unemployment compensation, worker's compensation, old age retirement benefits, life pensions, annuities and similar taxes or benefits, which may now or hereafter be imposed by law or collective bargaining agreements applicable to labor, services, goods or materials with respect to performance of the Project.

6.3.1 Contractor shall indemnify, defend and save harmless Company, its affiliates, officers, directors, employees, agents, successors and assigns, from and against any and all liability for taxes, contributions and penalties, including the interest thereon, resulting from the Purchase Order or the services performed thereunder.

6.3.2 If Contractor fails to pay said taxes, contributions and penalties, and interest thereon, Company shall have the right, but shall not be obligated, to pay the same. Contractor agrees to reimburse Company for all taxes, contributions and penalties, including interest thereon, assessed against Contractor and paid by Company upon demand or at the same time that final payment is due, at the Company's sole option, in accordance with the Purchase Order.

7.0 INVOICES

7.1 Contractor shall submit invoice(s) in accordance with the Purchase Order and as set forth in this Section 7.0. Invoice(s) shall include and be supported by documentation, explanation and any other information necessary to substantiate, to the Company's satisfaction, all amounts being invoiced.

7.2 Each invoice shall reference the Company's Purchase Order number.

7.3 For Professional Hourly Rate Purchase Orders, Contractor shall submit, on a monthly basis, its invoice applicable to reimbursable costs, in accordance with the Purchase Order, for services satisfactorily performed during the previous month. As applicable to the particular scope of work, each invoice shall, at a minimum, provide the following:

7.3.1 GENERAL. Contractor's invoice number, date of invoice, period covered by the invoice, and period and cumulative cost summaries.

7.3.2 DIRECT LABOR. The appropriate individual's name, payroll number, job classification and applicable rate being invoiced. Rates and job classification/titles shall be consistent with the rate schedule in the Purchase Order. The extension of all approved labor hours, by individual, times the hourly rate and the period total.

7.3.3 TRAVEL/BUSINESS EXPENSE. All invoiced costs shall be reasonable, itemized and supported with copies of all vouchers, records of advances, charge receipts, airbills, rental receipts, and any other information required to validate the charges to Company's satisfaction. Travel charges should specifically note the time and reason for the travel/expense, as well as the individual incurring such expenses.

7.3.4 OTHER DIRECTS. As provided for in the Purchase Order, reimbursable cost elements may include materials, subcontracts and other costs as may be allowed. These charges shall be supported by internal log sheets, approved vendor invoices and/or accounting summaries as required to verify all charges.

7.4 Fixed price agreements, or agreements on which fixed amounts of compensation are due based on milestone achievements or deliverables, shall be invoiced by the Contractor upon completion of such Services satisfactory to Company.

7.5 Company will pay the Contractor 2% ten (10) days / net thirty (30) days from receipt of an acceptable invoice. Unacceptable invoices may, at Company's option, be adjusted and paid as adjusted, or returned to the Contractor for correction and re-submittal.

7.6 Upon completion of the Contractor's Services to the Company's satisfaction pursuant to Section 12.0, Contractor shall submit its final invoice marked "Final Invoice" for all work performed. The final invoice, in addition to billing for any and all final period costs, shall summarize all previous invoices and payments made for the Project and indicate the total final Purchase Order amount. Company will pay Contractor for all final approved costs not in excess of the total Purchase Order Price.

8.0 RESPONSIBILITY FOR PROFESSIONAL SERVICES

8.1 The Contractor shall ensure that all services meet or exceed the level of quality specified in the Purchase Order or if not specified of the best quality appropriate for the intended purpose. As requested, the Contractor shall demonstrate to the Company that the work performed is in compliance with the requirements specified in the Purchase Order. The Contractor shall make records available for the Company's verification of this compliance.

8.2 The Contractor shall use its best efforts and ensure that all services are performed with the highest degree of skill and care required by customarily accepted good and sound professional practices and procedures in the pertinent consulting services industry. The Contractor, in supplying such services under the Purchase Order, guarantees that the Project will be as required by the Purchase Order; will be accurate, correct and fit to serve its intended function as stated in the Purchase Order, or as may be reasonably implied. The Contractor further guarantees its performance of services will comply with applicable codes, standards and governmental regulations having jurisdiction over such Project. In the event the Contractor fails to meet the foregoing requirements, the Contractor shall be liable to the Company to:

8.2.1 correctly re-perform, at its sole cost and expense, those services which failed to meet such degree of skill and care;

8.2.2 assume the cost of repairing, replacing or correcting defective or damaged equipment, materials or structures purchased or built in reliance upon designs, plans, drawings or specifications which fail to meet such degree of skill and care or perform its/their intended function.

9.0 AUDIT AND MAINTENANCE OF RECORDS

9.1 Company has the right at any time and at Company's expense to audit the Contractor's books and records at the locations where such books and records are maintained insofar as they pertain to charges invoiced to Company, as a basis for any claim, or any other costs pertinent to Services provided under the Purchase Order. Such audits may be performed by Company's employees or by professional auditing firms or both. Audits of charges invoiced may include, but shall not be limited to, verification of hours and the position job titles and pay levels of Contractor's employee charges, subcontractor and materials invoices and evidence of business expenses reimbursed. Any discrepancy which Company alleges to exist will be brought to Contractor's attention in order to enable Contractor to investigate the facts. If the parties agree that a discrepancy exists, an adjustment will be made on the next applicable invoice issued, or if no further invoice is likely, Contractor will issue a refund to Company within thirty (30) days thereafter.

10.0 INDEMNIFICATION

10.1 To the fullest extent allowed by law, the Contractor shall indemnify, defend, and save harmless the Company, its affiliates, officers, directors, employees, agents, successors and assigns (collectively, the "Indemnified Parties"), from any loss, damage, liability, cost, suit, charge, expense, or cause of action, whether unconditionally certain or otherwise, as they exist on the effective date of the Purchase Order or arise at any time thereafter, (including but not limited to fees and disbursements of counsel incurred by an Indemnified Party in any action or proceeding between Contractor and an Indemnified Party or between an Indemnified Party and any third party or otherwise) arising out of any damage or injury to property of Company, Contractor and/or third parties (including real property, personal property and environmental damages), persons (including injuries resulting in death), or economic damages, directly or indirectly caused by or arising out of or in any way connected with the Purchase Order, or the Project performed thereunder (including any services as defined in Section 8.0), or any equipment, property or facilities used by the Contractor, its agents, employees, Subcontractors, and suppliers. The Company shall not be indemnified or held harmless against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the Company.

10.2 Contractor shall take prompt action to defend and indemnify the Indemnified Parties against claims, actual or threatened, but in no event later than notice by Company to Contractor of the service of a summons, complaint, petition or other service of process against Company alleging damage, injury, liability, or expenses attributed in any way to the Purchase Order, the Project, or the acts, fault, negligence, equipment, facilities, personnel, or property of the Contractor, its agents, employees, subcontractors or suppliers. Contractor shall defend any such claim or threatened claim, including as applicable, engagement of legal counsel, to respond to, defend, settle, or compromise any claim or threatened claim. Furthermore, Contractor understands and agrees it is responsible for any and all costs and expenses incurred by Company to enforce this indemnification provision. The obligations set forth herein shall survive completion of the Project and termination of the Purchase Order for any reason.

11.0 INSURANCE

11.1 The Contractor shall maintain in force, from commencement through final acceptance of the Project or longer where specified below, insurance policies intended to be primary, issued by an insurance company with a Best's rating of B+ or better.

11.2 If any of the services are subcontracted, the Contractor shall require each Subcontractor to carry the same coverages as required herein.

11.3 The Contractor shall provide Certificates of Insurance, which are in compliance with the Purchase Order requirements.

11.4 Such certificates, and any renewals or extensions thereof, shall provide that at least thirty (30) days prior written notice shall be given to Company in the event of any cancellation on diminution of coverage and shall outline the amount of deductibles or self-insured retentions which shall be for the account of Contractor. Such deductibles or self-insured retentions shall not exceed $100,000 unless agreed to in writing by Company.

11.5 Unless otherwise specified in the Purchase Order, minimum insurance requirements are as follows:

11.5.1 Workers' Compensation and Employer's Liability insurance coverage shall be provided in accordance with the Workers' Compensation laws of the states wherein operations under the Purchase Order are to be carried on. Minimum limit for Employer's Liability coverage is $500,000 each accident. Wherever the exposure is present, coverage under the U.S. Longshoremen's and Harbor Workers' Compensation Act or Jones Act shall be required;

11.5.2 Commercial General Liability, covering all operations to be performed under this Purchase Order, with minimum limits of:

Bodily Injury

and

Property Damage combined single limit $1,000,000 per occurrence

This policy shall include Contractual Liability and shall include National Grid USA and its subsidiaries as an additional insured for all coverages therein.

11.5.3 Automobile Liability, covering all owned, non-owned and hired vehicles used in connection with the Services provided under this Purchase Order with minimum limits of:

Bodily Injury

and

Property Damage combined single limit $1,000,000

11.5.4 Watercraft Liability, if the work requires the use of watercraft, with limits of not less than the limits of liability required for Commercial General Liability.

11.5.5 Aircraft Liability, if the Contractor requires the use of aircraft, with limits of not less than $10,000,000.

11.5.6 Contractor shall provide Professional Liability coverage with a limit of liability of the greater of $500,000 or the value of the Purchase Order.

11.5.7 Other insurance as required and as mutually agreed upon by the Company and Contractor.

11.5.8 Self-Insurance: Proof of qualification as a qualified self-insurer, if approved in advance in writing by National Grid USA, will be acceptable in lieu of securing and maintaining one or more of the coverages required in this Insurance Section.

11.5.9 Contractor shall waive all rights of recovery against National Grid USA and its subsidiaries for any loss or damage covered under those policies referenced in this insurance provision, or for any required coverage that may be self-insured by Contractor.

11.6 Reservation of Rights – If any policy should be canceled before Final Payment by Company to the Contractor and the Contractor fails immediately to procure other insurance as specified, Company reserves the right to procure such insurance and to deduct the cost thereof from any sum due the Contractor under this Purchase Order.

11.7 "National Grid USA companies" shall be named as additional insured on the Commercial General Liability and Automobile Liability policies and the Contractor shall waive all rights of recovery against them for any loss or damage covered by said policy.

11.8 Contractor shall furnish Company with copies of any incident report(s), including those sent to Contractor's insurance carrier(s), covering incidents or accidents occurring in connection with or as a result of the performance of the Project performed under the Purchase Order.

11.9 Contractor represents that it has full policy limits available and shall notify Company in writing when coverages required herein have been reduced as a result of claim payments, expenses, or both.

11.10 Nothing contained in these insurance requirements is to be construed as limiting the extent of the Contractor's responsibility for payment of damages resulting from its services under the Purchase Order, or limiting, diminishing, or waiving Contractor's obligation to indemnify, defend and save harmless Company in accordance with the Purchase Order.

12.0 SCHEDULE

12.1 Contractor shall commence Project at the time stated in the Purchase Order and shall prosecute the Project continuously and with due diligence so that Project will be completed by the date specified in the Purchase Order.

12.2 When consultant deems it has completed the Project, it shall so notify Company in writing. Within a reasonable time thereafter, Company shall advise Contractor in writing of any deficiencies for which Contractor is responsible under the Purchase Order. Contractor shall correct such deficiencies to the Company's satisfaction within a reasonable time, as determined by the Company, after such notification.

13.0 FORCE MAJEURE

13.1 Any delay of either party in the performance of its required obligations hereunder shall be excused if and to the extent caused by unprecedented weather conditions, fire, explosion, riot, war, strike by the Company or its affiliates' employees, court injunction or order, federal and/or state law or regulation, or order by any federal or state regulatory agency, but only to the extent that: 1) such events are beyond the reasonable control of the party affected, 2) such events were unforeseeable by the affected party and the effects were beyond its reasonable efforts to prevent, avoid or mitigate, 3) said affected party uses every reasonable effort to prevent, avoid or mitigate the effects, 4) prompt written notice of such delay be given by such affected party to the other; and 5) the party affected uses its best efforts to remedy the resulting effects in the shortest practicable time. Upon receipt of said notice, if necessary, the time for performing the affected activities shall be extended for a period of time reasonably necessary to overcome the effect of such delays, such extension shall be the sole remedy and compensation for each force majeure event. Notwithstanding the foregoing, the Company shall have the right to terminate the Purchase Order under Section 17.2.

14.0 PURCHASE ORDER CHANGES

14.1 No additions to, deletions from, or alterations in the Project and no amendment or repeal of, and no substitution for any terms, conditions, provisions or requirements of the Purchase Order shall

be effective unless authorized in a writing executed by both Parties. The Purchase Order shall not be changed, altered, modified or discharged orally.

14.2 The Company shall have the right to initiate Purchase Order changes at any time until final completion per Section 12.0.

14.3 The Contractor may request changes to the Purchase Order. All such requests shall be in writing and directed to the attention of the Company. Upon receipt thereof, the Company shall review each such request for Project schedule and cost impact. The Company shall have the right to approve with modification(s), or disapprove the request. Requests made by the Contractor may be approved only if substantiated to the Company's satisfaction.

14.4 If approved, the Company shall prepare and issue to the Contractor a written change order which will specify the manner in which the Purchase Order has been modified. Any work which is initiated or completed without this written authorization shall be at the Contractor's sole risk, cost and expense.

14.5 If the value of the Contract is increased or decreased as a result of any changes, the written authorization of the Company will specify the amount to be added or deducted which will be based upon original Purchase Order pricing requirements or an amount agreed to by Company and Contractor.

15.0 RIGHTS, CLAIMS AND DISPUTES

15.1 Any claim which Contractor may have against Company arising out of the Purchase Order shall be presented in writing to Company not later than fifteen (15) days after the first occurrence of the circumstance which gave rise to the claim. The claim shall contain a concise statement of the question or dispute and the relevant fact and data (including the applicable Purchase Order provision) which support the claim. Contractor shall furnish any additional information which Company may require to enable it to evaluate and decide the claim.

15.2 FAILURE TO SUBMIT ANY CLAIM IN THE SAID 15-DAY PERIOD SHALL CONSTITUTE A WAIVER ON THE CONSULTANT'S PART FOR ENTITLEMENT TO EITHER ADDITIONAL REIMBURSEMENT OR AN EXTENSION OF TIME.

15.3 Any dispute between Company and the Contractor with respect to the Purchase Order or the Services to be provided thereunder, or both, which cannot be resolved in the normal course by the respective representatives of the parties, shall be referred to the responsible officers of Company and Contractor for resolution. Notwithstanding the existence of a dispute or dissatisfaction with the manner in which it was resolved or the lack of any such resolution, the Company shall be obligated to maintain payments not in dispute to the Contractor and the Contractor shall be obligated to proceed with its performance of the Purchase Order (including any such disputed work), unless otherwise directed by the Company.

16.0 WAIVER AND ELECTION OF REMEDIES

16.1 Waiver by the Company or the Contractor of any term, condition or provision of the Purchase Order shall not be considered a waiver of that term, condition or provision in the future. The failure of either party to enforce any of the terms, conditions or provisions of the Purchase Order or to require compliance with any of its terms, conditions or provisions at any time during the

pendency of the Purchase Order, shall in no way affect the validity of the Purchase Order, or any part thereof, and shall not be deemed a waiver of the right of such party thereafter to enforce any term, condition or provision of the Purchase Order.

16.2 No waiver, consent or modification of any of the provisions of the Purchase Order shall be binding unless in writing and signed by the Company and the Contractor.

16.3 Company's rights and remedies hereunder shall be cumulative and not exclusive of each other and may be pursued separately or concurrently as Company determines.

17.0 TERMINATION

The Company may, in its sole discretion, terminate, in whole or in part, the Purchase Order or the Contractor's performance of Project thereunder, or both, at any time in accordance with the provisions set forth herein. The Company may exercise its right of partial termination hereunder any number of times.

17.1 FOR CAUSE

17.1.1 If the Project to be done shall be abandoned by the Contractor, or if the Contractor assigns or subcontracts all or any part of the Purchase Order without Company's previously obtained written consent, or if the Contractor loses control of the Project from any cause, except for force majeure events per Section 13.0, or if the Contractor refuses or neglects to provide sufficient and properly skilled or other labor, or fails in any respect to prosecute the work with diligence, or if the Contractor is violating any of the conditions or covenants of the Purchase Order, or it is not executing the Project in good faith, or is not executing or performing the work on schedule, or should Contractor become insolvent, the Company may, by written notice to the Contractor, terminate, in whole or in part, the Purchase Order or the Contractor's performance of Project hereunder, or both. Such termination will be effective upon the date set forth in the written notice and, upon receipt of said notice, the Contractor immediately shall turn over and deliver to the Company all technical data and other information and material relating to the terminated Project which are within the Contractor's possession or control. The Contractor understands and agrees that, in the event the Contractor fails or refuses to comply with the turnover and delivery obligations set forth herein, the Contractor shall not be entitled to any amounts due and owing as of the date of termination for services previously rendered under the Purchase Order until such turnover has been fully complied with, as determined solely by the Company.

17.1.2 Upon termination for default, the Company may take over the terminated work and prosecute the same to completion. In such event, the Contractor and its insurers shall be liable to the Company for all direct transitional administrative costs and expenses incurred by the Company to engage another consultant and for all costs to complete the said terminated Project.

17.1.3 The Contractor's compensation in the event of termination for default shall be limited to the amounts for services rendered up to the date of termination. No amount shall be paid or payable by the Company for the Contractor's termination costs, including but not limited to demobilization costs, costs associated with the transfer or termination of personnel, or loss of anticipated profit.

17.2 FOR CONVENIENCE

17.2.1 The Company may, at any time for any reason, by written notice to the Contractor, terminate, in whole or in part, the Purchase Order or Contractor's performance hereunder, or both. Such termination shall be effective upon the date set forth in the written notice and, upon receipt of said notice, the Contractor immediately shall turn over and deliver to the Company, all technical data and other information and materials related to the terminated Project which are within the Contractor's possession or control. The Contractor understands and agrees that, in the event it fails or refuses to comply with the turnover and delivery obligations set forth herein, the Contractor shall not be entitled to any amounts due and owing as of the date of termination for services previously rendered under the Purchase Order as well as any amounts otherwise payable hereunder for termination costs until such turnover has been fully complied with by the Contractor.

17.2.2 Upon termination hereunder, the Company shall pay 1) all amounts due and owing up to the effective date of termination, and 2) a reasonable amount, mutually agreed upon between the Company and the Contractor, representing the Contractor's costs and expenses incurred as a result of the termination. Such amounts shall in no event include an item or claim for loss of anticipated profit. Further, in no event shall the aggregate payments to Contractor exceed the Purchase Order Price.

18.0 TITLE TO PLANS AND SPECIFICATIONS

18.1 Any information, analyses, conclusions, reports, drawings, and specifications prepared by Contractor pursuant to the Purchase Order shall be the sole property of Company, and Company may use information contained therein for any purpose whatsoever, including construction, maintenance, operation, modification, replacement, and repair. Contractor may retain a copy of such documents for its internal use only, but may not release any information contained therein without prior written consent of the Company.

19.0 PATENT INFRINGEMENT AND INDEMNIFICATION

19.1 All royalties and fees for patents covering materials, articles, apparatus, devices, equipment or processes used in the Project shall be included in the Purchase Order Price. Contractor shall satisfy all demands that may be made at any time for such royalties or fees.

19.2 The Contractor guarantees that all work provided by the Contractor under the Purchase Order shall be free from claims of patent, copyright, and/or trademark infringement.

19.3 The Contractor shall indemnify, hold harmless, and, at the Company's option, defend the Company and its affiliates and their officers, directors, employees, agents, servants, and assigns from and against all claims, losses, costs, damages, suits, actions, and proceedings for actual or alleged infringement of any patent, copyright, or trademark resulting from any sale, use, or manufacture of any item delivered hereunder, and pay and discharge all judgments, decrees, and awards rendered therein and bear all expenses and legal fees associated therewith.

19.4 In the event of any adjudication that the Purchase Order, or any part thereof, infringes any patent, copyright, or trademark or in the event that the use of any part of the Project is enjoined as a result of any claim that the Project infringes any patent, copyright, or trademark the Contractor shall, at its sole expense, either: a) procure for the Company the right to continued use, or b) without impairing performance capability, replace the infringed work with substantially equivalent noninfringing work, or modify such work so it can become noninfringing.

19.5 The Contractor shall obtain from its Subcontractors, for the Company's benefit, agreements similar to those contained in this Section 19.0.

19.6 Notwithstanding any other provision of the Purchase Order, this Section 19.0 shall survive the termination or expiration of the Purchase Order.

20.0 INVENTIONS, PATENTS AND COPYRIGHTS

20.1 Any and all works, expressions, inventions, ideas, discoveries, improvements or developments (whether or not patentable), as well as all copyrights, patents or trademarks thereof, that may be conceived or made by the Contractor or Contractor's partner(s), employee(s), agent(s), vendor(s), contractor(s), supplier(s) or any other party employed by Contractor, or subcontractor to Contractor of any tier, to satisfy its obligation under the Purchase Order shall be work made for hire and shall be deemed the property of Company. All such works, expressions, inventions, ideas, discoveries, improvements or developments, as well as all copyrightable expressions thereof, shall be deemed to fit into one or more of the specifically enumerated categories of works contained in 17 U.S.C. Section 101 *et seq.* and any subsequent revisions thereof. The Contractor and/or Contractor's partner(s), employee(s), agent(s), vendor(s), contractor(s), supplier(s), or any other party employed by Contractor, or subcontractor to Contractor of any tier, to satisfy its obligation under the Purchase Order shall promptly furnish Company with complete information, including, without limitation, a written description thereof giving the date of the work, invention or expression and naming the inventors or authors and others involved in the development or writing of the work, invention or expression. Company shall have the sole power to determine whether or not and in which countries and jurisdictions patent application shall be filed or copyrights registered and to determine the disposition of title to and rights in any works, expressions, inventions, ideas, discoveries, improvements or developments and in any United States and foreign patent applications, patents or copyrights that may result. Memoranda, notes and experimental works, descriptions, diagrams and other data generated in performance of the Work pertaining to any and all works, expressions, inventions, ideas, discoveries, improvements and developments covered by the Purchase Order shall be available at reasonable times to Company.

20.2 Contractor shall assist Company in the implementation of this Section 20.0 by obtaining and providing detailed written descriptions of each invention, idea, discovery or expression sufficient for filing patent or copyright applications, by providing an evaluation of the patentability or copyrightability of each disclosure, by assisting Company in the prosecution of patent and copyright applications, and by executing or having executed by appropriate persons any and all documents which may be necessary or desirable to cause title in such inventions, ideas, discoveries, or expressions to vest with Company. The cost of such assistance shall be considered separate and distinct and shall be mutually agreed upon between the Company and Contractor.

20.3 In order to further effectuate the provisions of this Section 20.0, Contractor agrees to deliver to Company either 1) agreements in the form of Appendix "A" hereto, "Non-Disclosure Agreement", executed by Contractor and each partner, agent, employee, vendor, contractor, subcontractor and any other party employed by Contractor to satisfy its obligations under the Purchase Order, and any employee of any of the foregoing parties, or 2) a written statement from Contractor representing and warranting that it has in place written, binding agreements in the form of Appendix "A" for any and all entities and persons it will utilize to satisfy its obligations under the Purchase Order.

21.0 NON-DISCLOSURE

21.1 Contractor agrees that it will not divulge to third parties, without the prior written consent of Company, any information obtained from or through Company in connection with the performance of the Purchase Order unless 1) the information was independently known to Contractor prior to obtaining same from Company, 2) the information is, at the time of disclosure by Contractor, then in the public domain, or 3) the information is obtained by Contractor from a third party who did not receive same, directly or indirectly, from Company. The Contractor further agrees that it will not, without the prior written consent of Company, disclose to any third party any information developed or obtained by Contractor in the performance of the Purchase Order, except to the extent that such information developed or obtained by Contractor in the performance of the Purchase Order falls within one of the categories described in 1), 2), or 3) above.

21.2 The Contractor may disclose proprietary information to its partner(s), employee(s), agent(s), vendor(s), contractor(s), subcontractor(s), or any other party employed by Contractor if and only if 1) such disclosure is necessary in order to perform the Work; and 2) the party to whom proprietary information will be disclosed has executed and delivered to Company a Non-Disclosure Purchase Order in the form of Appendix "A" hereto or Contractor has provided a written binding representation and warranty as stated in Section 20.3. If Contractor has any question about whether information is proprietary, it shall contact Company prior to disclosing such information for a determination as to its proprietary status.

21.3 The obligations of Contractor with respect to Sections 20.0 and 21.0 shall survive the completion or termination of the Purchase Order.

22.0 EQUAL EMPLOYMENT OPPORTUNITY

22.1 Contractor shall comply with all applicable federal, state and local anti-discrimination laws, the standards and regulations issued thereunder and the amendments thereto, including Executive Order 11141 relating to age discrimination, Executive Order 11246 relating to equal employment opportunity, Executive Order 11625 relating to minority business enterprise, Executive Order 11701 relating to employment of veterans and Executive Order 11758 relating to handicapped employment. The aforementioned are incorporated herein as if set forth herein verbatim. The Human Rights Law of the State of New York (Article 15 of the Executive law), if applicable.

22.2 The Contractor agrees to fully comply with such provisions, and any amendments thereof. In addition, all subcontracts and agreements that the Contractor enters into to accomplish the Project under the terms of the Purchase Order shall obligate such subcontractors to comply with such provisions.

23.0 UTILIZATION OF SMALL BUSINESS CONCERNS

23.1 It is the policy of the United States that small business concerns, veteran-owned small business concerns, service disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns,

service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

23.2 The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

23.3 *Definitions*. As used in this contract—

23.3.1 "HUBZone small business concern" means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

23.3.2 "Service-disabled veteran-owned small business concern means a small business concern, where (a) not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and (b) the management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

23.3.3 "Service-disabled veteran" means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service connected, as defined in 38 U.S.C. 101(16).

23.3.4 "Small business concern" means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

23.3.5 "Small disadvantaged business concern" means a small business concern that represents, as part of its offer that: (a) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, Subpart B; (b) No material change in disadvantaged ownership and control has occurred since its certification; (c) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed $750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and (d) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

23.3.6 "Veteran-owned small business concern" means a small business concern where (a) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and (b) The management and daily business operations of which are controlled by one or more veterans.

23.3.7 "Women-owned small business concern" means a small business concern (a) that is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and (b) the management of which and daily business operations are controlled by one or more women.

23.4 Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

24.0 ASSIGNMENT

24.1 Contractor shall not assign the Purchase Order, nor subcontract any portion of the Project, nor assign any moneys payable under the Purchase Order, without first obtaining the written consent of the Company. Any assignment or subcontracting by Contractor or its Subcontractors without written consent of Company shall be considered null and void from inception. Any Company authorized assignments or subcontracting shall not relieve Contractor of the responsibility for full compliance with the requirements of the Purchase Order.

25.0 ALCOHOL AND DRUG ABUSE POLICY FOR CONSULTANTS

25.1 Contractor's employees and employees working under Contractor's direction or Subcontractors of any tier shall not bring, use, distribute, sell or possess illegal drugs or alcoholic beverages at Company's facilities.

25.2 Contractor's employees shall be fit for duty at all times during their assignment and shall not be under the influence of alcohol or other drugs. Additionally, Contractor shall not assign any individual in violation of this policy to work assignments for the Company and if Contractor discovers any of its employees are in violation of these requirements, it shall remove any such employee immediately.

25.3 Violation of these requirements by Contractor's employees shall result in denial of access to Company's facilities and equipment; and in the case of possession, use or sale of illegal drugs, shall be reported to the Company's Security Department immediately.

26.0 REGULATORY REQUIREMENTS

26.1 The Purchase Order will provide any instructions pursuant to any regulatory requirements incumbent on the Contractor during the course of the Project.

27.0 NERC/CIP

27.1 In the event of non-compliance or breach on the part of Contractor, its employees, agents or subcontractors with or of any or all of the NERC Cyber Security Standards, the Contractor shall be solely liable for any and all resulting costs, losses, penalties, damages and liabilities, including any costs, losses, penalties, damages or liabilities incurred by the Company, and the Company may terminate this Agreement for cause, pursuant to the termination provisions contained herein.

28.0 THIRD PARTY ITEMS

28.1 In the event that Contractor employs Subcontractor(s) (with Company's prior written approval) for any services associated with the Purchase Order or directly purchases equipment or materials to be used in the Project, the consultant shall: 1) ensure that the appropriate provisions of the

Purchase Order are applied in such subcontract(s) in the best interests and protection of Company and, 2) ensure that the Company, via Contractor's billings, receives full benefit of commercial discounts, favorable rates and all guarantees made available by its vendors and/or Subcontractors of any tier.

28.2 It is understood that the Company shall have full rights of ownership of all equipment and materials purchased by the Contractor for the prosecution of the Project. At the request of the Company, Contractor shall provide, or cause to be provided, appropriate bills of sale, assignments or other documents to ensure the vesting of rights of title and ownership in the Company.

28.3 Following completion of Project under the Purchase Order, the Company may direct the Contractor to deliver all equipment, appliances and materials not previously incorporated in the Project or otherwise disposed of (with Company's approval) to the Company's facility.

29.0 COMPLIANCE WITH LAWS

29.1 Contractor shall comply with all applicable federal, state and local laws, ordinances, rules, regulations, permits, licenses, or requirements thereunder in connection with the performance of the Project.

29.2 In connection with any performance under or in connection with the Purchase Order, Contractor, its Subcontractors, agents, and representatives shall, at all times: 1) strictly comply with Company's safety and environmental standards, rules, regulations, directives, and procedures, including, without limitation, National Grid USA's Contractor Safety Requirements and Contractor Environmental Requirements, (if incorporated as Purchase Order Documents by the Company) and with any and all applicable federal, state, municipal, and local laws, rules, regulations, codes, and ordinances related to employee and public health, safety, and/or the environment (as in force upon the date of the Purchase Order and as in the future passed, enacted, directed, or amended), collectively, "Standards", and 2) conduct all operations in a manner to ensure the safety of all personnel, the general public, and the protection of the environment and so as to avoid the risk of injury, death, loss, theft, or damage by accident, vandalism, sabotage, or any other means. In cases where one or more conflicting Standards may be applicable, Contractor shall comply with the most stringent applicable Standard. Contractor acknowledges receipt of the Requirements.

29.3 In the event of any emergency endangering life, health, property, or the environment, Contractor shall take such prompt action as may be reasonable and necessary to prevent, avoid, or mitigate injury, damage, or loss and shall, as soon as possible, report any such incidents, including Contractor's response thereto, to Company. In the event that Contractor becomes aware of any non-compliance with such Standards, Contractor shall, in each case, immediately notify Company and shall take prompt corrective action; provided, however, that such notice and action shall in no event relieve Contractor of any liability for, or in connection with, such non-compliance.

29.4 Contractor shall continually inspect all Project sites, facilities, materials, and equipment to discover and determine any conditions that might involve safety or environmental risks, shall continuously inspect all work and supervise its personnel to determine and enforce compliance with all Standards, and shall be solely responsible for discovery, determination, and correction of any non-compliance. Contractor shall be solely responsible and assume all liability for the safety and supervision of its personnel engaged in any performance in connection with the Purchase Order. Contractor shall designate a representative to insure compliance with all Standards and direct its personnel to take all precautions necessary to protect against and prevent injury or damage to persons, property, and/or the environment. Contractor shall instruct all such personnel

on safety and environmental practices and the requirements of the Standards and shall inform such personnel of all modifications or additions thereto. Contractor shall furnish all appropriate safety equipment and enforce the use of such equipment.

29.5 In addition to any other warranties contained in the Purchase Order, Contractor warrants that its performance in connection with the Purchase Order shall comply with all applicable Standards.

29.6 Contractor shall save Company harmless from and against all liability resulting from violations by Contractor of said laws, ordinances, rules regulations, permits and licenses. Any and all costs related to Company's enforcement of this hold-harmless provision shall be borne by Contractor.

29.7 If Contractor observes that any requirement specified in the Contract is at variance with any governing laws, ordinances, rules, regulations, permits and licenses, Contractor shall promptly notify Company in writing before incurring any further liability, expense, or obligation for Contractor or Company.

30.0 JURISDICTION AND GOVERNING LAWS

30.1 Unless other governing laws and/or other jurisdictions are specifically established in the Purchase Order, the Purchase Order shall be deemed to be executed in the Commonwealth of Massachusetts and the Purchase Order shall be interpreted and enforced according to the Laws of the Commonwealth of Massachusetts; provided, however, that in the event that the Project is to be performed solely in the State of New York then this Purchase Order shall be deemed to be executed in the State of New York and shall be interpreted and enforced according to the Laws of the State of New York.

30.2 Only the courts in the State as determined in Section 30.1 shall have jurisdiction over the Purchase Order and any controversies arising out of the Purchase Order. Any controversies arising out of the Purchase Order shall be submitted only to the courts of such State.

30.3 Contractor hereby submits to the jurisdiction of the courts in the State as determined in Section 30.1 for the purposes of interpretation and enforcement of the Purchase Order. Contractor hereby waives personal service by manual delivery and agrees that service of process on Contractor in any action arising out of the Purchase Order may be made by registered or certified mail, return receipt requested, directed to Contractor at its address set forth on the Purchase Order.

31.0 SEVERABILITY

31.1 In the event any portion or part of the Purchase Order is deemed invalid, against public policy, void or otherwise unenforceable by a court of law, the parties shall negotiate in good faith an equitable adjustment in the affected provision of the Purchase Order; however, the validity and enforceability of the remaining parts thereof shall be otherwise fully enforceable.