NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

SCHEDULE JDW – 1

Default Service RFP

May 1, 2014 through October 31, 2014

REDACTED

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

THIS PAGE LEFT INTENTIONALLY BLANK

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities

Request for Power Supply Proposals to Provide Default Service

For the Period:

May 1, 2014 to October 31, 2014

February 10, 2014



REQUEST FOR POWER SUPPLY PROPOSALS

1. Overview

1.1 Background

Legislation and restructuring settlement agreements in New Hampshire¹ provide for competition in the electric utility industry by extending competition in the wholesale power supply markets to retail customers through the provision of retail access to all customers.

In New Hampshire, the Restructuring Settlement provides access to the competitive retail electricity market for all retail electric customers of Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities ("Liberty Utilities")² as of July 1, 1998 pursuant to the provisions of the New Hampshire Act. The Restructuring Settlement and the New Hampshire Act require Liberty Utilities to provide default service ("Default Service") to those customers that are not receiving generation service from a competitive supplier³.

1.2 Default Service

The Default Service Settlement Agreement in New Hampshire and the New Hampshire Act require Liberty Utilities to provide Default Service to those customers that are not receiving generation service from a competitive energy supplier. In compliance with the Default Service Settlement Agreement, Liberty Utilities will procure Default Service by customer group (small customer group and large customer group). For the Small Customer Group, Liberty Utilities will procure 100% of their Default Service supply for a six-month period. For the Large Customer Group, Liberty Utilities will procure 100% of their Default Service supply for two consecutive three-month periods.

Liberty Utilities is hereby seeking proposals from qualified power suppliers to supply firm, load-following power to meet its Default Service requirements.

On July 3, 2012, the ownership of Liberty Utilities changed from National Grid USA to

¹ Granite State Electric Company's Second Amended Restructuring Settlement Agreement ("Restructuring Settlement") and RSA 374-F ("New Hampshire Act").

² Granite State Electric Company recently changed its name to Liberty Utilities (Granite State Electric) Corp..

³ The New Hampshire Act specifies that Transition Service ends at midnight on April 30, 2006. All Transition Service customers who did not choose a competitive supplier by April 30, 2006 began receiving Default Service on May 1, 2006. A settlement agreement approved by the New Hampshire Public Utilities Commission on January 13, 2006 in Order No. 24,577 provides for the procurement of Default Service commencing May 1, 2006 ("Default Service Settlement Agreement").

Liberty Energy Utilities (New Hampshire) Corp.. Liberty Utilities (Granite State Electric) Corp. remains a distinct legal entity, has the same tax identification number and continues to operate its regulated electric utility business in the State of New Hampshire. National Grid USA, pursuant to the terms of a transition service agreement, will provide services to Liberty Utilities during this RFP process, including matters covered by the Master Power Agreement.

Liberty Utilities intends to use existing Master Power Agreements (and any Amendments) that are currently in place with suppliers.

Liberty Utilities, at its sole discretion, reserves the right to issue additional instructions or requests for additional information, to extend the due date, to modify any provision in this Request for Power Supply Proposals ("RFP") or any appendix thereto and to withdraw this RFP.

1.3 Customer Group

For the purposes of this solicitation, the customer groups are defined as:

Customer Group	Rate Class
Small Customer Group	D, D-10, G-3, M, T and V
Large Customer Group	G-1 and G-2

2. Description of Services

2.1 Description

Appendix A contains an overview of the services covered by this RFP. The Appendix provides:

- A brief description of Default Service;
- The eligibility requirements for a customer to obtain or leave Default Service.

2.2 Expected Loads

Liberty Utilities is unable to predict the potential load requirements of any customer group. Liberty Utilities' customers are free to leave Default Service at any time to take service from competitive suppliers. The ability of customers to enroll or return to Default Service is described in Appendix A.

To assist Respondents in determining the potential load requirements, Liberty Utilities is able to provide the following information on the Liberty Utilities' Power Procurement Website:

For Default Service:

- Aggregated historical hourly load information for Default Service (since May 1, 2006)
- Class average load shapes at the retail meter point;
- Historical customer counts: the number of active accounts in each rate class as of the last billing day in each month.
- Historical customer counts for customers taking service from a competitive supplier, as of the last billing day in each month, by rate class;
- ICAP tags as of the last day of the month for each load asset.

Please use the following link to access the site:

http://www.libertyutilities.com/nh/electricsupply/index.html

Click on "Data" at the upper right of the screen to access Load data, Customer Count Data, Class Average Load Shapes and ICAP Tags. This site is open to anyone with the above link. No user id or password is required to access the data on the site.

2.3 Load Blocks

Liberty Utilities' total Default Service requirements covered by this RFP are broken down into the following 3 load blocks:

Load Block	Customer Group	SMD Load Zone	Load Share	Type of Service	Period
A	Large	NH	100%	Default Service	5/01/2014 - 7/31/2014
В	Large	NH	100%	Default Service	8/01/2014 - 10/31/2014
C	Small	NH	100%	Default Service	5/01/2014 - 10/31/2014

Respondents may not limit the amount of service that may be purchased for a given load block. Proposals that contain limits on the amount of service provided will be rejected⁴.

The amount of load to be supplied by the winning Supplier will be determined in accordance with the procedure contained in Article 6 of the Master Power Agreement, a copy of which is provided in Appendix B.

⁴ For example, a Respondent offering to supply Block A load must agree to supply 100% of the needs of that load block during every month of the Period (for example, 100% of the total load of the Industrial customer group in the Large NH Load Zone). The Respondent may not offer to serve Block A subject to a maximum or minimum level of demand in any hour.

2.4 Retail Customer Rates

During the term of service covered by this RFP, Liberty Utilities intends, in accordance with the Default Service Settlement Agreement, to establish retail rates for generation service for Default Service customers ("Energy Service Rates"). The Energy Service Rates will reflect Liberty Utilities' purchase costs for such service due to commitments made as a result of this RFP. The Default Service Settlement Agreement also requires Liberty Utilities to include in its Energy Service Rates a surcharge to account for the administrative costs associated with Default Service. The Energy Service Rates must be approved by the New Hampshire Public Utilities Commission ("NHPUC").

2.5 Effectiveness of Contracts

Any agreement(s) entered into for the delivery of Default Service pursuant to this solicitation will be subject to the approval by the NHPUC of the retail rates prior to the agreement(s) becoming effective. Section 1 of the New Hampshire Master Power Agreement Form of Confirmation addresses the possibility that the NHPUC may not approve the retail rates.

3. General Provisions

3.1 Terms and Conditions

The winning Supplier will be selected to provide Default Service to the customer groups/load block during the term covered by this RFP. Default Service will be provided by such Supplier to Liberty Utilities in accordance with the terms and conditions of the Master Power Agreement. A copy of the Master Power Agreement for New Hampshire is provided in Appendix B.

All Respondents must have an updated executed Master Power Agreement prior to the indicative bid date.

The winning Supplier will be required to execute a confirmation within two (2) business days of being notified that it has been selected as the winning Supplier.

Under Article 7 of the Master Power Agreement, failure of the winning supplier to deliver Requirements would constitute an event of default under the Master Power Agreement, allowing Liberty Utilities to terminate and recover liquidated damages from the Supplier.

3.2 Proposal Process and Submission Dates

The following table outlines the key dates associated with this procurement process.

Process Step	Date
Issue Request for Proposal	February 10, 2014
Submit Respondent Proposal Information	February 24, 2014–5pm EPT
Submit Indicative Pricing	March 11, 2014– 10am EPT
Submit Final Pricing	March 18, 2014– 10am EPT
Execute Agreements and Submit solicitation process summary, Agreements and retail rates to NHPUC	No later than three business days after receipt of all executed agreements.
NHPUC Reviews and Approves Default Service Rates	No later than five business days after filing of Default Service Rates
Service Begins	May 1, 2014

One (1) copy of a Respondent's Proposal Information must be submitted by e-mail or mailed to the following address:

Liberty Utilities (Granite State Electric) Corp. c/o Liberty Energy Utilities (New Hampshire) Corp. 11 Northeastern Blvd Salem, NH 03079-1953 603-328-2768 (phone) 603-896-6175 (fax) Attn: John Warshaw john.warshaw@libertyutilities.com

Liberty Utilities is conducting the procurement process in three steps. The first step is for Respondents to provide Liberty Utilities with their background and financial information by 5:00 p.m. EPT on Monday, February 24, 2014. Upon receipt, Liberty Utilities will evaluate each Respondent's qualifications and will notify any Respondent that does not qualify by at least one business day before indicative pricing is due.

Liberty Utilities will not evaluate any indicative or final pricing if the Respondent does not have an executed Master Power Agreement. The Master Power Agreement must be executed prior to submitting indicative pricing.

The second step in this process is for Respondents to provide indicative pricing information by 10:00 a.m. EPT on Tuesday, March 11, 2014 at the above address. Liberty Utilities will evaluate the indicative pricing as described above, and if required, Liberty Utilities may seek clarifications from Respondents.

The third step is for Respondents to provide final pricing information by 10:00 a.m. EPT on Tuesday, March 18, 2014 at the above address. Liberty Utilities requests final pricing be valid until 2:00 p.m. Liberty Utilities intends to evaluate the final pricing and select a

Supplier that day by that time. Final pricing shall be binding until execution of a confirmation. Respondents should specify the manner in which they will accept a binding acceptance of their offer by Liberty Utilities prior to receipt of an executed agreement (letter of intent or e-mail) or they will be deemed to be bound by Liberty Utilities' acceptance communicated in any of the preceding manners.

Within three business days of receipt of all executed agreements, Liberty Utilities will file with the NHPUC a confidential summary of the solicitation process, the executed agreement(s) and proposed Energy Service Rates.

Consistent with the Default Service Settlement Agreement, the NHPUC will have five business days to either approve the proposed Energy Service Rates or reject them. If the NHPUC denies Liberty Utilities' request for approval of the retail rates, the agreement(s) will be void and the parties will have no further obligation under the agreements(s).

At any time, Liberty Utilities, at its sole discretion, reserves the right to issue additional instructions or requests for additional information, to extend the due date, to modify any provision in this RFP or any appendix thereto and to withdraw this RFP.

3.3 Contact Person/Questions

All questions regarding this Request for Proposal should be directed to John Warshaw at the address provided in Section 3.2 above.

3.4 Right to Select Supplier

Liberty Utilities shall have the exclusive right to select or reject any and/or all of the proposals submitted at any time, for any reason.

4. Service Features

4.1 Commencement Date of Supply

Service from the winning Supplier to Liberty Utilities shall begin as of HE 0100 EPT on the date specified in the table found in Section 2.3 – Load Blocks.

Service from Liberty Utilities to individual customers, who are taking Default Service in each customer group as of the Commencement Date, if any, will continue with the winning Supplier providing such service to Liberty Utilities as of the Commencement Date.

Service from Liberty Utilities to individual customers taking Default Service as of the Commencement Date shall begin on the customer's meter reading date following notification/determination that a customer will be commencing Default Service or such other date designated by Liberty Utilities consistent with Liberty Utilities' Tariff for the

Off Cycle Meter Read for Switch of Supplier Provision, Original Page 92, of Liberty Utilities' *Tariff for Retail Delivery Service, N.H.P.U.C. No. 18*.

Liberty Utilities' procedures provide for customers to be switched from one service option to another (e.g., from Default Service to a competitive supplier, from one competitive supplier to another competitive supplier, from a competitive supplier to Default Service) on their normal cycle meter reading dates. However, there may be circumstances (e.g., default of a competitive supplier) that might require a customer to be switched to Default Service "off-cycle". In such case, the customer will be switched to Default Service on a date designated by Liberty Utilities consistent with Liberty Utilities' Off Cycle Meter Read for Switch of Supplier Provision, Original Page 92, of Liberty Utilities' Tariff for Retail Delivery Service, N.H.P.U.C. No. 18.

4.2 Termination Date of Supply

Service from the winning Supplier to Liberty Utilities shall terminate at HE 2400 EPT on the dates specified in the table found in Section 2.3 – Load Blocks.

Individual customers taking Default Service from Liberty Utilities may terminate the service at any time. Terminations may include, but not be limited to, (i) a customer's taking competitive service from a competitive supplier, (ii) disconnection of service by Liberty Utilities in accordance with regulations and procedures approved by the NHPUC, or (iii) closing of a customer's account. Liberty Utilities' procedures provide for customers electing to terminate such service to be switched to their successor service on their normal cycle meter reading date following the date that Liberty Utilities receives notification of such switch. However, there may be circumstances which might require a customer to be terminated "off-cycle". In such a case, the customer will be terminated from Default Service on a date to be determined by Liberty Utilities.

4.3 Delivery Points

The Supplier of Default Service will be responsible for delivering power to the nodes/zones representing the actual locations of the Default Service loads. The Supplier of each of the services will be responsible for any PTF losses allocated by the ISO related to the services. The locations of the Default Service load assets are as follows:

SMD Load Zone	Load Asset	Load Asset Name	Load Block
NH	11437	GRANITE LARGE CG DS SVC LOAD	A
NH	11437	GRANITE LARGE CG DS SVC LOAD	В
NH	11436	GRANITE SMALL CG DS SVC LOAD	C

4.4 Form of Service

The Supplier of the Load Block shall be responsible for meeting the specified service requirements for all of Liberty Utilities' customers in a specific Load Block. These service requirements include the generation and/or market procurement and delivery to the delivery point(s) of the portion of the electric capacity, energy and ancillary services required to meet the needs of Liberty Utilities' ultimate customers taking such service. Liberty Utilities will implement the transfer of these responsibilities to the Supplier by updating the asset registration for each of the above Load Assets. Liberty Utilities will assign to the Supplier the applicable Ownership Share for each Load Asset. Once a Supplier's obligation terminates, Liberty Utilities will terminate the Supplier's Ownership Share of a Load Asset.

The Supplier shall be responsible for all obligations, requirements, and costs associated with the Supplier having the Load Asset Ownership Share which shall include but not be limited to the day-ahead load obligations and real-time load obligations at the nodes/zones of each Load Asset. A more complete description of a Supplier's responsibilities can be found in the Master Power Agreement in Appendix B of this RFP.

The Supplier shall be responsible for all decisions and data submissions associated with any bids into the market system to manage these obligations. The Supplier shall be responsible for all components of any Locational Marginal Prices the Supplier must pay in delivery of the services. These components include, but are not limited to, the day-ahead and real-time energy, marginal losses, and congestion charges. As the supplier of such services, the Supplier will be responsible for all present or future requirements and associated costs (to the extent such charges are not imposed on Liberty Utilities as a transmission charge by NEPOOL or the ISO) associated with the services and any other requirements, market products, expenses or charges imposed by NEPOOL or the ISO, as they may be in effect from time to time.

The Supplier will also be responsible for all transmission and distribution losses associated with delivery of the electricity from the delivery point to the Default Service customer's meter. A description of the estimation process for determining supplier hourly load can be found in Appendix A of the Master Power Agreement, found in Appendix B of this RFP.

Liberty Utilities will make arrangements with the ISO for transmission service over the PTF and non-PTF, from and after the Delivery Point to the Customers' meters. Liberty Utilities will be billed by the ISO and the applicable Participating Transmission Owner(s) for these services. Liberty Utilities will pay these bills and collect the costs, along with Liberty Utilities' distribution costs, from its retail customers through its retail delivery service tariffs. Any other transmission or distribution costs will be the Supplier's responsibility.

4.5 Implementation of the New Hampshire Renewable Portfolio Standards ("NH-RPS")

In 2007 the State of New Hampshire enacted an Electric Renewable Portfolio Standards law ("NH-RPS Law") (RSA 362-F) to foster the development of renewable energy sources to meet New Hampshire's energy needs. The NH-RPS Law requires all retail electricity suppliers to source a minimum portion of their energy needs from a portfolio of renewable energy resources. The NHPUC rules (Chapter PUC 2500) implementing the NH-RPS Law can be found at:

http://www.puc.state.nh.us/Regulatory/Rules/Puc2500.pdf

These rules require Liberty Utilities to demonstrate that a portion of its electricity sales are supplied from a mix of renewable energy generation sources. They are:

Class I consists of certain new renewable generators that began operation after January 1, 2006).

Class I Thermal consists of certain new renewable technologies producing useful thermal energy that began operation after January 1, 2013

Class II consists of certain new generators utilizing solar technologies.

Class III consists of existing generators utilizing: 1) biomass technologies with a gross nameplate capacity of 25 MW or less; and 2) methane gas.

Class IV consists of existing qualifying small hydroelectric generators with a gross nameplate capacity of 5 MW or less.

The renewable requirements as a percent of sales are divided into four separate classes and summarized below:

		Class I				
Year	Class I	Thermal	Class II	Class III	Class IV	Total
2014	5.0	0.4	0.30	3.0	1.4	10.1

Liberty Utilities requests Respondents to separately bid the cost of NH-RPS compliance equivalent to 10.1% of sales in 2014. Liberty Utilities will have the option to select bids that include or exclude the NH-RPS component.

If Liberty Utilities accepts bids with the NH-RPS components, Liberty Utilities will require the winning Supplier to utilize the NEPOOL Generation Information System ("NEPOOL GIS") to provide NEPOOL GIS Certificates that comply with the requirements of the NH-RPS rules. Respondents may propose alternate methods for demonstrating compliance. In each monthly invoice for a service that includes the NH-RPS component, Liberty Utilities will take a credit equal to the product of the NH-RPS obligation and the applicable Alternative Compliance Payment. Once a Supplier delivers the required number of NEPOOL GIS Certificates, the credit will be returned to the Supplier.

5. Proposal Requirements

5.1 Format of Proposal

The information required by Liberty Utilities to evaluate each proposal is identified in Appendix C. Respondents may simply complete the forms provided in Appendix C in any legible fashion and return them to John Warshaw as provided in Section 3.2. In addition, proposals should contain explanatory, descriptive and/or supporting materials as necessary.

5.2 Proposed Pricing

Respondents must specify the price at which they will provide Default Service for each Load Block on which they are bidding to serve. Purchases will be made on an "asdelivered" energy basis with prices stated on a fixed \$ per MWh basis. Such prices may vary by calendar month and by customer group, but must be uniform for the entire calendar month and cover the entire term of this Request for Proposals.

Prices which contain demand components, minimum purchase requirements or which vary by time-of-use within a calendar month will be rejected. Prices which exclude one or more market costs (e.g. Capacity, uplift costs, etc.) will be rejected.

Liberty Utilities intends to pay a Supplier based on the billing determinants as defined in the Master Power Agreement. These billing determinants are the loads as reported to and settled by the ISO, which include transmission and distribution losses, and exclude any PTF losses allocated to the Supplier by the ISO during the settlement. Liberty Utilities is seeking the following pricing:

- All-Inclusive Bids: For Load Blocks A, B and C, a price which includes all costs. Should Liberty Utilities select this option, (1) suppliers would be responsible for all costs including capacity market charges and (2) Suppliers would not be responsible for supplying the RPS component.
- NH-RPS Compliance: Price, on a separate \$ per MWh basis in 2013, for Supplier to provide the required NH-RPS component for the load block they are proposing to serve. Should Liberty Utilities select this option, the NH-RPS Compliance Bid prices would be added to the All-Inclusive Bid price and the Supplier would provide the applicable quantity of NEPOOL GIS Certificates (see Section 4.7).

5.3 Terms and Conditions

Service will be provided pursuant to the terms of the Master Power Agreement provided in Appendix B of this RFP.

5.4 New England Market Participation

Each Respondent must indicate whether it has an executed and accepted Market Participant Service Agreement with ISO New England or if it plans to execute an agreement and, if so, at what point it is in the application process and the time frame for completing the process. Respondents must also provide evidence of agreements with a Market Participant if Respondent will have another Market Participant be responsible for its market settlement obligations.

5.5 Competitive Supplier Registration

The service provided by the Supplier of Default Service to Liberty Utilities is a wholesale transaction between the Supplier and Liberty Utilities; therefore, the Supplier does not have to be licensed or registered suppliers with any state regulatory commission.

5.6 Regulatory Approvals

The Supplier of the services covered by this Request for Proposal must obtain and maintain all necessary regulatory approvals required to enable it to provide the applicable service; such approvals must be obtained prior to May 1, 2014.

6. Retail Customer Relationships

6.1 Customer Billing

All customers taking Default Service covered by this RFP will be retail customers of Liberty Utilities. As the retail provider of such service, Liberty Utilities will bill customers for the Default Service provided.

6.2 Notification of Enrollments and Terminations

Liberty Utilities may provide electronic notification to the Supplier of Default Service customer enrollments and terminations within a customer group. Enrollment information will include account number, rate class and commencement date of service. Termination information will include account number, rate class and termination date of service. Such notifications shall only be provided when a Supplier establishes a Windows or Unix file server with capability of sending and receiving File Transfer Protocol ("FTP"), files with Pretty Good Privacy ("PGP"), Encryption/Decryption, and (ii) verifies its ability to transfer files to and receive files from Liberty Utilities at least fourteen (14) days prior to the day on which a Supplier desires to commence electronic receipt.

6.3 Customer Service

Liberty Utilities, as the retail provider of Default Service, will provide customer service to all customers receiving Default Service.

7. Selection Process

The principal criteria to be used in evaluating proposals will include:

- Lowest evaluated bid price by Load Block;
- Respondent's ability to meet the credit requirements established in the Master Power Agreement provided in Appendix B;
- Firmness of delivery;
- The supplier's past experience in providing similar services to Liberty Utilities;
- The supplier's past experience in providing similar services to other companies in New England;
- The supplier's past experience in providing similar services to other companies in other regions;
- The supplier's demonstrated understanding of its obligations under the Master Power Agreement; and
- Whether there have been any past or are any present events that are known that may adversely affect the supplier's ability to provide the requirements to Liberty Utilities' Default Service customers.

Liberty Utilities will evaluate the RPS Compliance bids only for the Load Block winning Respondents. Liberty Utilities will accept the RPS Compliance bid if it is at or less than the available market prices.

8. Credit Requirements

In order to protect Liberty Utilities' Default Service customers from the risk of Supplier default, a winning Supplier must be able to demonstrate it has the financial resources to perform during the term of the agreement. As reflected in the attached Master Power Agreement (Appendix B to this RFP), Liberty Utilities will require Supplier(s) to provide some form of security when entering into a Confirmation. The security arrangement will be based on the expected volume of load for the bid block and a mark-to-market margining clause. As forward market prices change, the Supplier will be required to post security for those incremental changes. Additionally, Suppliers that are rated at or below BBB-/Baa3 will be required to post an Independent Amount equal to 10% of the notional value of each Load Block awarded. The Supplier shall provide security in one of the following forms:

- Unsecured line of credit for a rated counterparty
- Parental Guaranty
- Letter of Credit
- Cash deposit with Liberty Utilities

Respondents that are rated by a major credit rating agency must provide the ratings assigned by such agencies. Respondents that are not rated by a major credit rating agency must provide the following information to enable Liberty Utilities to evaluate a Respondent's financial strength:

- Respondent's organizational history
- Date of establishment
- Initial (if founded within the last ten years) and current capitalization
- Certified financial statements, including balance sheets and statements of income and cash flow with respect to the two previous fiscal years and the most recent interim period
- Forms 10-K and 10-Q, submitted to the United States Securities and Exchange Commission for the two previous fiscal years, if applicable;
- Short-term and long-term debt ratings from Moody's Investor Service or Standard & Poor's Corporation
- Corporate affiliates or joint venture partners including any details regarding financial limitations between partners or affiliates.

If a Respondent has provided this information to Liberty Utilities or an affiliate in a response to a previous RFP, then the Respondent needs only to identify the date and to whom the information was submitted and update the previously provided information.

9. General Requirements

Liberty Utilities may withdraw and terminate this RFP at any time without any liability. Liberty Utilities reserves the right to accept or reject, in whole or in part, any and all proposals. Liberty Utilities will not be responsible to any Respondent or any other party for failure to execute a Master Power Agreement or Confirmation.

Liberty Utilities shall reject proposals submitted in response to this RFP that are incomplete, or do not conform to the requirements of the RFP, or are submitted beyond the deadline for submission. All proposals submitted by Respondents in response to the RFP will become the exclusive property of Liberty Utilities.

If any information provided by the Respondent changes or fails to remain valid, it is the sole responsibility of the Respondent to notify Liberty Utilities of such change. Failing to do so may result in disqualification of the Respondent and its proposal for the solicitation.

Respondents shall, at their own cost and expense, defend, indemnify and hold harmless Liberty Utilities, its parent, subsidiaries and affiliates and their officers, directors, trustees, employees, shareholders, executors, administrators, successors and assigns against any and all manner of past, present, or future claims, demands, disputes, controversies, complaints, suits, actions proceeding or allegations of any kind which in any manner relate to arise out of, or result from any false statements or

misrepresentations, intentional or unintentional, in its proposal, or breach of any covenant by the Respondent set forth herein.

Liberty Utilities agrees that it will treat the information it receives from Respondents in a confidential manner and will not, except as required by law or regulatory authority, disclose such information to any third party or use such information for any purpose other than in connection with this RFP.

APPENDIX A <u>DESCRIPTION OF SERVICES</u>

Liberty Utilities (Granite State Electric) Corp.		
	Default (Energy) Service	
Description	Service provided to retail customers who are not taking service from a competitive energy supplier.	
Eligibility Requirements	Service to customers is initiated by: a) A customer notifying Liberty Utilities that it wishes to terminate service from its competitive energy supplier and commence Default Service. b) A competitive energy supplier notifying Liberty Utilities that it is terminating service to a customer. c) A competitive energy supplier ceasing to provide service to a customer without notifying Liberty Utilities. d) A customer moves into Liberty Utilities' service territory and does not affirmatively choose a competitive energy supplier.	
Aggregate Number of Customers Taking Service and Historical Load Profiles	Note: Historic customer count data and historical hourly load profiles are available at Liberty Utilities' procurement website under: http://www.libertyutilities.com/nh/electricsupply/index.html	

APPENDIX B

NEW HAMPSHIRE MASTER POWER AGREEMENT

APPENDIX C

REQUIRED PROPOSAL INFORMATION

RESPONDENT:		
	DECDANDENT.	
	KRSPUNIJENI:	

-	\sim	T 0	4 •
	(Lenera	l Inform	ation

Name of Respondent	
Principal contact person < Name < Title < Company < Mailing address < Telephone number (office) < Telephone number (cell) < Fax number < E-mail address	
Secondary contact person (if any) < Name < Title < Company < Mailing address < Telephone number (office) < Telephone number (cell) < Fax number < E-mail address	
Legal form of business organization of Respondent (e.g., sole proprietorship, partnership, limited partnership, joint venture, or corporation)	
State(s) of incorporation, residency and organization Indicate whether Respondent is in good standing in all states in which Respondent is authorized to do business and, if not, which states and the reason it is not.	
If Respondent is a partnership, the names of all general and limited partners.	
If Respondent is a limited liability company, the names of all direct owners.	
Description of Respondent and all affiliated entities and joint ventures transacting business in the energy sector	

2. Financial Information	
Current debt rating for Respondent (include ratings and names of rating agencies).	
Date Respondent's last fiscal year ended.	
Total revenue for Respondent for the most recent fiscal year.	
Total net income for Respondent for the most recent fiscal year.	
Total assets for Respondent as of the close of the previous fiscal year.	
Copy of the Respondent's most recent balance sheet, income statement and cash flow statement.	
Copy of the Respondent's most recent audited balance sheet, income statement and cash flow statement.	
3. Defaults and Adverse Situations	
Describe, in detail, any situation in which Respondent (either individually or as part of a consortium, joint venture or other group), or an affiliate of Respondent, defaulted or was deemed to be in noncompliance of its contractual obligations to transact business in the energy sector within the past five years including, without limitation, to purchase or deliver energy, capacity or other market products at retail or wholesale, or for the purchase or sale of electricity or natural gas, and including any financing agreements or financing provisions of any agreement.	
Explain the situation, its outcome and all other relevant facts associated with the event.	
If there was litigation, provide the case caption, index number and court.	
Identify the name, title and telephone number of the principal manager of the customer/client who asserted the event of default or noncompliance.	

RESPONDENT:

RESPONDENT:		-
Has Respondent, or any affiliate of Respondent, in the last five years, (a) consented to the appointment of, or was taken in possession by, a receiver, trustee, custodian or liquidator of a substantial part of its assets, (b) filed a bankruptcy petition in any bankruptcy court proceeding, (c) answered, consented or sought relief under any bankruptcy or similar law or failed to obtain a dismissal of an involuntary petition, (d) admitted in writing of its inability to pay its debts when due, (e) made a general assignment for the benefit of creditors, (f) was the subject of an involuntary proceeding seeking to adjudicate that Party bankrupt or insolvent, (g) sought reorganization, arrangement, adjustment, or composition of it or its debt under any law relating to bankruptcy, insolvency or reorganization or relief of debtors.		
Describe any facts presently known to Respondent that might adversely affect its ability to provide the service(s) bid herein as provided for in the RFP		
4. NEPOOL AND POWER SUPPLY I	EXPERIENCE	
Is Respondent a member of NEPOOL?		
Does Respondent have an executed and accepted Market Participant Service Agreement with ISO New England?		
Name of Market Participant if Respondent will have another Market Participant be responsible for its market settlement obligations.		
Describe Respondent's experience and record of performance in the areas of power marketing, brokering, sales, and/or contracting, for the last five years within NEPOOL and/or the New England region.		
Provide three references (name, title and contact information) who have contracted		

with the Respondent for similar load following services within the last 2 years.

RESPONDENT:	
5. CONFLICTS OF INTEREST	
Briefly describe any known conflicts of interest between Respondent or an affiliate of Respondent and Liberty Utilities, Liberty Utilities or any affiliates of the foregoing.	
Enumerate any litigation, claims or complaints asserted by Respondent or an affiliate of Respondent, against Liberty Utilities, Liberty Utilities or an affiliate of any of the foregoing.	
Enumerate any litigation, claims or complaints asserted against Respondent or an affiliate of Respondent by Liberty Utilities, Liberty Utilities or an affiliate of any of the foregoing.	
6. SCOPE OF BID AND TERMS OF S	SALE
Will Respondent execute a contract substantially similar to the Master Power Agreement contained in Appendix B? Explain any proposed modifications.	
List all regulatory approvals required before	

RESPONDENT:		
_		

7. Proposed Pricing

(Respondent required to use bidding spreadsheet included on procurement website)

REDACTED

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

SCHEDULE JDW – 2

Default Service Procurement Summary

REDACTED

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

THIS PAGE LEFT INTENTIONALLY BLANK

DEFAULT SERVICE PROCUREMENT SUMMARY FOR

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

FOR THE PERIOD MAY 2014 – OCTOBER 2014

1. RFP Issued

Liberty Utilities (Granite State Electric) Corp. ("Liberty Utilities") issued its Request for Power Supply Proposals ("RFP") on February 10, 2014 directly to approximately 25 suppliers for the service period May 2014 through October 2014.

The RFP was also distributed to all members of the NEPOOL Markets Committee and posted on Liberty Utilities' energy supply website. As a result, the RFP had wide distribution throughout the New England energy supply marketplace.

The procurement was conducted in accordance with applicable New Hampshire rules and regulations including Liberty Utilities' Second Amended Restructuring Settlement Agreement ("Restructuring Settlement"), RSA 374-F ("New Hampshire Act") and Granite State Electric Company Post-Transition Service Default Service Proposal Settlement Agreement ("New Hampshire Settlement Agreement") approved by the New Hampshire Public Utilities Commission on January 13, 2006 in Order No. 24,577.

Liberty Utilities' RFP requested all-inclusive pricing for:

- 100% of the Large Customer Group Default Service requirements for the period May 1, 2014 through October 31, 2014.
- 100% of the Small Customer Group Default Service requirements for the period May 1, 2014 through October 31, 2014.

A description of these load blocks are provided in Exhibit 1.

2. Key RFP Dates

- The RFP was issued on February 10, 2014.
- Supplier information was received on November 22, 2013.
- Indicative bids were received on March 11, 2014.
- Final bids were received on March 18, 2014.

¹ Effective January 14, 2014, Granite State Electric Company changed its name to Liberty Utilities (Granite State Electric) Corp.

Docket DE 14-031
Testimony and Schedules of John. D. Warshaw
Schedule JDW-2
Page 2 of 17
REDACTED

3. Contract Submissions

All bidders had previously executed Master Power Agreements with Liberty Utilities.

4. Indicative Bids

Indicative bids were received on March 11, 2014 from bidders. The indicative bids were evaluated and ranked (see Exhibits 2 and 3). Indicative pricing was used only to determine current market prices, to prepare an initial ranking of bids and to identify any bidding anomalies. The retail prices in Exhibit 3 were calculated by adjusting the wholesale prices in Exhibit 2 by the ratio of wholesale purchases to retail deliveries.

The lowest indicative bids for each load block were compared to Liberty Utilities' estimate of expected indicative bids. We calculated the expected bid prices by comparing the historical relationship of bid prices to the market components that comprise those bid prices (see Exhibit 4). This method utilizes a detailed on-peak and off-peak calculation and incorporates all bid components: energy, capacity, and ancillary services.

In evaluating the bid prices, Liberty Utilities compared the expected bid price for each block, as derived above, to the lowest average indicative bid price for the block.

In addition to evaluating the bid price and ability to meet credit requirements, Liberty Utilities also performed a qualitative review of each bidder's ability to provide Default Service during the service period based on the following:

- The bidder's past experience in providing similar services to Liberty Utilities or its affiliates:
- The bidder's past experience in providing similar services to other companies in New England;
- The bidder's past experience in providing similar services to other companies in other regions;
- The bidder's demonstrated understanding of the market rules related to the provision of Default Service;
- The bidder's demonstrated understanding of its obligations under the proposed Master Power Agreement; and
- Whether there have been any past or are any present events that are known that may adversely affect the bidder's ability to provide Default Service.

Liberty Utilities concluded that all bidders were qualified to provide Default Service and would be capable of providing any required contract security.

5. Regulatory Communication

As a result of indicative bidding, Liberty Utilities contacted the NHPUC Staff to inform them of level of bids received. Staff asked to be kept informed of final bidding.

6. Final Bids

Final bids were received on March 18, 2014 from bidders. The final bids were evaluated and ranked (see Exhibits 5 and 6). The retail prices in Exhibit 6 were calculated by adjusting the wholesale prices in Exhibit 5 by the ratio of wholesale purchases to retail deliveries.

A summary of the number of conforming bids per block is provided in the following table:

Block -	- #	Bids
A		
В		
C		

7. Analysis and Award

The lowest final bid was compared to Liberty Utilities' expected bid. The calculations of these expected prices can been found in Exhibit 7.



Exhibit 8 provides a summary of the winning supplier and the basis for the award. Exhibit 9 provides a bidder key to help identify bidders.

8. New Hampshire Electric Renewable Energy Portfolio Standard

The load covered by this RFP is subject to the following Renewable Portfolio Standard ("RPS") requirement:

RPS Obligations as	
% of Retail Load	2014
RPS Class I	5.0%
RPS Class I Thermal	0.4%
RPS Class II	0.3%
RPS Class III	3.0%
RPS Class IV	1.4%
Total	10.1%

Liberty Utilities had also issued a Request for Proposals to Provide NEPOOL-GIS
Certificates in Compliance With the New Hampshire Electric Renewable Portfolio Standards
("RECs") on February 10, 2014. Bids were received from bidders on March 17, 2014
Exhibit 10 provides an initial analysis of the REC bids received. While the responses are still under review by Liberty Utilities, the prices in the bids were used in developing the current market price of RECS for this RFP by utilizing the either the REC bid price or applicable ACP as specified in the RPS regulations. Exhibit 11 provides a calculation of the cost adder to include these costs..

Docket DE 14-031
Testimony and Schedules of John. D. Warshaw
Schedule JDW-2
Page 4 of 17
REDACTED

Only one of the default service bidders provided a RPS cost adder in their bid, a summary of submitted adders is found in Exhibit 12. The cost adder was higher than the market price calculated in Exhibit 11 and thus was not accepted.

9. Retail Rate

The expected retail rates, excluding administrative cost adders, were based on the winning wholesale costs. The retail prices in Exhibit 6 were calculated by adjusting the wholesale prices in Exhibit 5 by the ratio of wholesale purchases to retail deliveries.

A summary of the estimated retail rates is provided in Exhibit 13. The Default Service retail rates were adjusted to include the average cost of RPS certificates that could be purchased in the open market.

Docket DE 14-031
Testimony and Schedules of John. D. Warshaw
Schedule JDW-2
Page 5 of 17
REDACTED

EXHIBIT 1 LOAD BLOCK DESCRIPTIONS

Load Block	Customer Group	SMD Load Zone	Load Share	Type of Service	Period
A	Large	NH	100%	Default Service	5/01/2014 - 7/31/14
В	Large	NH	100%	Default Service	8/01/2014 - 10/31/14
C	Small	NH	100%	Default Service	5/01/2014 - 10/31/14

EXHIBIT 2 INDICATIVE BID RANKING AT WHOLESALE

			Ma 100 % of N			Bid Prices	(\$ / MWh)	at Wholes	ale Delive	ry Point, E	xcluding co	ost of RPS	S Complia	nce		
	Month	nly Weighting	100 % OI N	n Load Obli	jalions											
	Mortu	iy weighting	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Average Price	Weighted Average Price	Weighted Avg Price vs. Min	Expected Bid based on Electric Forecast		2014 RPS Adder	Weighted Average Price with RPS	Weighted Average Price with RPS vs Min
Block A	NH Large Default	Bidder A Bidder B Bidder C Bidder D Bidder E Bidder F Bidder G Bidder H Bidder J Bidder J Bidder L Bidder L Bidder M														
		nly Weighting														
Block B	Small Default	Bidder A Bidder B Bidder C Bidder D Bidder E Bidder E Bidder F Bidder G Bidder G Bidder G Bidder H Bidder J Bidder J Bidder K Bidder K Bidder K Bidder K Bidder N														
		Bidder O														
Block C	Small Default	Ny Weighting Bidder A Bidder B Bidder C Bidder C Bidder D Bidder F Bidder F Bidder G Bidder G Bidder H Bidder I Bidder J Bidder J Bidder K Bidder K Bidder N Bidder N Bidder O														

EXHIBIT 3 INDICATIVE BID RANKING AT RETAIL WITHOUT RPS (¢/kWh)

		March	11, 2014 Ini	itial Bid Prices bad Obligations	s (¢ / kWh) a	t Retail Custo	omer Meter, E	excluding RP	S Complia	ance	
	Mon	thly Weighting	100 70 01 141 12	odd Obligationo							
			May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Average Price	Weighted Average Price	Weighted Avg Price vs. Min
Block A	NH Large Default	Bidder A Bidder B Bidder C Bidder D Bidder E Bidder F Bidder G Bidder H Bidder I Bidder J Bidder J Bidder K Bidder K Bidder K Bidder L Bidder M Bidder N Bidder O									
	Mon	thly Weighting									
Block A	NH Large Default	Bidder A Bidder B Bidder C Bidder D Bidder E Bidder F Bidder G Bidder H Bidder I Bidder J Bidder K Bidder K Bidder L Bidder M Bidder N Bidder O									
	Mon	thly Weighting									
Block B	NH Small Default	Bidder A Bidder B Bidder C Bidder D Bidder F Bidder F Bidder G Bidder H Bidder I Bidder L Bidder J Bidder K Bidder L Bidder M Bidder N Bidder O									
Note	<u></u>										
Notes	<u>.</u>					per Load Data	Services data w	as:			

EXHIBIT 4 ESTIMATED INDICATIVE PRICES FORECAST BASED ON NYMEX ELECTRICITY FUTURES MAY 2014 – OCTOBER 2014 PERIOD

		May-2014	Jun-2014	Jul-2014	Aug-2014	Sep-2014	Oct-2014	Average
Electric Futures	On-Peak	52.38	71.81	69.90	69.90	49.70	50.00	60.62
Price (\$/MWh)	Off-Peak	38.97	50.57	45.00	45.00	37.00	37.33	42.31
Premium Bid	NH Large							
Factor	NH Large							
1 dottor	NH Small							
FCM Price (\$/kw)	Capacity							
Ancillary Price (\$/MWh)	All Zones							
On-Peak Days #								
	NH Large							
ICAP Load Factor	NH Large							
	NH Small							
Monthly	NH Large							
On-Peak Factor	NH Large							
On-i eak i actor	NH Small							
Expected Bid Price	NH Large							
(\$/MWh)	NH Large							
(φ/1010011)	NH Small							
Expected Retail	NH ES Large							
Price (¢/kWh)	NH ES Large							
FIICE (¢/KVVII)	NH ES Small							

EXHIBIT 5 FINAL BID RANKING AT WHOLESALE

						inal Bid Pi	rices (\$ / N	(Wh) at W	holesale D	elivery Po	int, Exclud	ing cost of	RPS Con	npliance			
_			100 % of N	H Load Oblig	gations												
	Month	nly Weighting	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Average	Weighted Average	Weighted Avg Price	From	Electric		2014 RPS	Weighted Average Price with	Weighted Average Price with RPS vs
Block A	NH Large De	Bidder A Bidder B Bidder C Bidder C Bidder E Bidder E Bidder E Bidder F Bidder G Bidder H Bidder H Bidder J Bidder L Bidder M Bidder L Bidder M Bidder N Bidder N							Price	Price	vs. Min	Indicative	Forecast		Adder	RPS	Min
	Mont	nly Weighting															
Block B	Large	Bidder A Bidder B Bidder C Bidder C Bidder C Bidder E Bidder F Bidder F Bidder G Bidder H Bidder I Bidder J Bidder J Bidder L Bidder M Bidder N Bidder N Bidder O															
	Mont	nly Weighting															
Block C	Small Default	Bidder A Bidder B Bidder C Bidder D Bidder E Bidder E Bidder E Bidder G Bidder G Bidder G Bidder G Bidder H Bidder I Bidder J Bidder L Bidder K Bidder M Bidder M Bidder M															

EXHIBIT 6 FINAL BID RANKING AT RETAIL WITHOUT RPS (¢/kWh)

		March	18, 2014 Fi	nal Bid Prices	s (¢ / kWh) at	Retail Custo	omer Meter, E	xcluding RP	S Complia	ance	
	Mon	thly Weighting	100 70 OI 1411 E	oaa obligationo							
			May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Average Price	Weighted Average Price	Weighted Avg Price vs. Min
Block A	NH Large Default	Bidder A Bidder B Bidder C Bidder D Bidder E Bidder F Bidder G Bidder H Bidder I Bidder I Bidder J Bidder K Bidder L Bidder M Bidder N Bidder O									
Block B	NH Large Default	Bidder A Bidder B Bidder C Bidder D Bidder E Bidder F Bidder G Bidder H Bidder I Bidder J Bidder K Bidder L Bidder M Bidder N Bidder O									
	Mon	thly Weighting									
Block C	NH Small Default	Bidder A Bidder B Bidder C Bidder D Bidder F Bidder F Bidder G Bidder H Bidder I Bidder L Bidder M Bidder K Bidder K Bidder N Bidder N Bidder O									
Neti											
Notes	S:					ner Load Data	Services data w	as.			
						por Load Data	COI VIOCO GAIA W				

EXHIBIT 7 ESTIMATED FINAL PRICES FORECAST BASED ON NYMEX ELECTRICITY FUTURES MAY 2014 – OCTOBER 2014 PERIOD

		May-2014	Jun-2014	Jul-2014	Aug-2014	Sep-2014	Oct-2014	Average
Electric Futures	On-Peak	50.90	70.69	68.50	68.50	49.88	49.75	59.70
Price (\$/MWh)	Off-Peak	38.87	50.32	44.50	44.50	37.92	37.38	42.25
Premium Bid	NH Large							
Factor	NH Large							
racioi	NH Small							
FCM Price (\$/kw)	Capacity							
Ancillary Price (\$/MWh)	All Zones							
On-Peak Days #								
	NH Large							
ICAP Load Factor	NH Large							
	NH Small							
Monthly	NH Large							
On-Peak Factor	NH Large							
OII-Feak Factor	NH Small							
Expected Bid Price	NH Large							
(\$/MWh)	NH Large							
(4) IAIAA 11)	NH Small							
	<u>-</u>							
Expected Retail	NH ES Large							
•	NH ES Large							
Price (¢/kWh)	NH ES Small							

Docket DE 14-031
Testimony and Schedules of John. D. Warshaw
Schedule JDW-2
Page 12 of 17
REDACTED

EXHIBIT 8 SUMMARY OF LOAD BLOCK AWARDS

Load Block	Customer Group	SM Load Zone	Supplier	Basis for Award	
A	Large	NH	Dominion Energy Marketing, Inc.	Lowest bidder for block	
В	Large	NH	Dominion Energy Marketing, Inc.	Lowest bidder for block	
C	Small	NH	TransCanada Power Marketing, Ltd	Lowest bidder for block	

EXHIBIT 9 BIDDER KEY

Bidder	Name
Bidder A	
Bidder B	
Bidder C	
Bidder D	
Bidder E	
Bidder F	
Bidder G	
Bidder H	
Bidder I	
Bidder J	
Bidder K	
Bidder L	
Bidder M	
Bidder N	
Bidder O	
Bidder P	

Docket DE 14-031
Testimony and Schedules of John. D. Warshaw
Schedule JDW-2
Page 14 of 17
REDACTED

EXHIBIT 10 ANAYLSIS OF RPS BIDS

			Class I					
	Year	Class I			Class III	Class IV		
RECS Required:				1,000	8,000	7,000		
RECS Required:			2,000	1,000	13,000	6,000		
ACP	2013	55.00	n/a	55.00	31.50	26.50		
ACP			25.17	55.37	31.93	26.86		
Market								
Market	t 2014	1						
Did December to the	Barrier dans	VII. 1	01	Dulas		Delivery	0	T-1-1 01
Bid Recommentation	Respondent	Vintage	Class	Price	Quantity	Туре	Comments	Total Cost

EXHIBIT 11 RPS COST ADDER CALCULATION

		YE	AR
		2014	2014
	Section 1A: Calculation of Class I Renewable Energy Resource Charg	ACP	Market
	Section 1A. Calculation of Class I Renewable Energy Resource Charg	<u>46</u>	
(1) C	Class I Alternative Compliance Payment or Market Price	\$55.37	
(2) C	Class I Renewable Energy Resource Obligation	5.00%	5.00%
(3) Ir	ncremental Cost - \$/MWh	\$2.77	
<u>s</u>	Section 1B: Calculation of Class I Thermal Energy Resource Charge		
(1) C	Class I Alternative Compliance Payment or Market Price	\$25.17	
(2) C	Class I Renewable Energy Resource Obligation	0.40%	0.40%
(3) Ir	ncremental Cost - \$/MWh	\$0.10	
S	Section 2: Calculation of Class II Renewable Energy Resource Charg	e	
(1) C	Class II Alternative Compliance Payment or Market Price	\$55.37	
(2) C	Class II Renewable Energy Resource Obligation	0.30%	0.30%
(3) Ir	ncremental Cost - \$/MWh	\$0.17	
<u>s</u>	Section 3: Calculation of Class III Renewable Energy Resource Charg	<u>1e</u>	
(1) C	Class III Alternative Compliance Payment or Market Price	\$31.93	
(2) C	Class III Renewable Energy Resource Obliga ion	3.00%	3.00%
(3) Ir	ncremental Cost - \$/MWh	\$0.96	
<u>s</u>	Section 4: Calculation of Class IV Renewable Energy Resource Charg	<u>ge</u>	
(1) C	Class IV Alterna ive Compliance Payment or Market Price	\$26.86	
(2) C	Class IV Renewable Energy Resource Obligation	1.40%	1.40%
(3) Ir	ncremental Cost - \$/MWh	\$0.38	
S	Section 5: Calculation of Renewable Portfolio Standard Adder		
(4) S	Sum of Class I, II, III and Class IV Incremental Costs - \$/MWh	\$4.38	
(5) R	Renewable Portfolio Standard Adder to be included in Retail Rates - \$/kWh	\$ 0.00438	\$ 0.00434
(6) To	Total RPS Obligation %	10.10%	10.10%
(7) O	Obligation Weighted cost	\$43.37	
Notes	E 2014 & 2015 ACP & Market Prices		
` '	From 362-F:3 of NH RPS legisla ion		
(3) Li	ine (1) times Line (2)		
` '	Sum of all Line (3)s		
` '	Line (4) divided by 1,000 to convert from \$/MWh to \$/kWh.		
	ine (4) divided by Line (6)		

EXHIBIT 12 SUMMARY OF RPS ADDERS

INDICATIVE		
	NH RPS	NH RPS
	Adder	REC
	\$/MWh	COST
	NH-RPS-	0001
	2014	2014
Avg Market Cost	2011	2014
ACP Value	\$ 4.38	\$ 64.41
Bidder A	Ψ 4.00	Ψ 04.41
Bidder B		
Bidder C		
Bidder D		
Bidder E		
Bidder F		
Bidder G		
Bidder H		
Bidder I		
Bidder J		
Bidder K		
Bidder L		
Bidder M		
Bidder N		
Bidder O		
min		
max		
FINAL		
	NH RPS	NH RPS
	Adder	REC
	NH-RPS-	
	2014	2014
Avg Market Cost		
ACP Value	\$ 4.38	\$ 64.41
Bidder A		
Bidder B		
Bidder C		
Bidder D		
Bidder E		
Bidder F		
Bidder G		
Bidder H		
Bidder I		
Blader J		
Bidder J Bidder K		
Bidder K		
Bidder K Bidder L		
Bidder K Bidder L Bidder M		
Bidder K Bidder L Bidder M Bidder N		
Bidder K Bidder L Bidder M Bidder N Bidder O		
Bidder K Bidder L Bidder M Bidder N		

EXHIBIT 13 RETAIL RATES BASED ON FINAL BID PRICES

March 18, 2014 Final Bid Prices (\$ / MWh) at Wholesale Delivery Point, Excluding cost of RPS Compliance													
00 % of NH Load Obligations													
	May-14 Jun-14 Jul-14 Aug-14 Sep-14 Oct-14												
H Large DS													
NH Large DS													
NH Small DS													
	March 18	3, 2014 Fin	al Bid Price	s (¢ / kWh	at Retail (Customer							
		Mete	r, Including	RPS Comp	liance								
			-				Weighted						
100 % of NH Load Ob	ligations						Average						
	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Price						
NH Large DS	6.715	8.962	8.875				8.261						
NH Large DS			•	8.031	6.690	6.631	7.162						
NH Small DS 6.886 8.852 8.276 8.428 6.875 6.788													

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

SCHEDULE JDW - 3

Comparison of Change in Futures Prices to

Change in Procurement Costs

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

Comparison of Change in Futures Prices to Change in Procurement Costs

Summer Period (May - October)

Winter Period (November - April)

				Summer i e	eriod (iviay -	October)						WILLIEL L CI	ioa (ivovem	pei - Abili)					
		May	Jun	Jul	Aug	Sep	Oct	Average	Hourly Weighted Average	Nov	Dec	Jan	Feb	Mar	Apr	Average	Hourly Weighted Average	Change (Winter to Summer)	Change (Summer to Summer)
Electric Futures	On-Peak	43.94	54.30	58 35	53.41	44.11	43.10	49 54	44.40										
Price March 12, 2013 (\$/MWh)	Off-Peak	33.18	37.98	38 36	36 34	33 58	34 50	35 66	41.49										
Floatria Fraturas																			
Electric Futures Price September 10,	On-Peak									47.48	74.95	96.00	96.00	55.50	42.13	68 68	59.90		
2013 (\$/MWh)	Off-Peak									36.98	59.33	75.00	75.00	41.60	33.35	53 54	00.00		
Electric Futures	On-Peak	52.38	71.81	69 90	69 90	49.70	50 00	60 62	50.00									-16.5%	20 5%
Price March 18, 2014 (\$/MWh)	Off-Peak	38.97	50.57	45 00	45 00	37 00	37 33	42 31	50.00									-10.5%	20 5%
NYMEX Natural Gas March 12, 2013 (\$/mi		3.689	3.734	3.787	3.808	3.810	3.837	3.778											
NYMEX Natural Gas										3 681	3.838	3.921	3.922	3.885	3.816	3.844			
September 10, 2013	(\$/mmBtu)																		
NYMEX Natural Gas March 18, 2014 (\$/mi		4.225	4.203	4.125	4.131	4.151	4.178	4.169										8.5%	10.4%
Watch 10, 2014 (\$/111	iibtu)																		
Final Small Custome		5.614	6.444	6.602	6.338	5.682	5.575	6.043											
Final Small Custome Purchase Price 9/10/										5 942	8.728	11.123	10 981	6.741	5.591	8.184			
Final Small Custome Purchase Price 3/18/		6.707	8.673	8.098	8.250	6.697	6.610	7.506										-8.3%	24 2%

Notes:

¹⁾ Hourly weighted average = 42% On Peak + 58% Off-Peak prices
2) Final Price does not include Default Service Reconcilliation Adjustment Factor or Default Service Cost Reclassification Adjustment Factor.

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

SCHEDULE JDW – 4

Default Service Contract for the Large Customer Group

May 1, 2014 through October 31, 2014

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

MASTER POWER AGREEMENT TRANSACTION CONFIRMATION

This Confirmation shall confirm the Transaction agreed to on, and effective as of March 19, 2014, between LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. ("Liberty Utilities" or "Buyer")¹, a New Hampshire corporation and DOMINION ENERGY MARKETING, INC. a Delaware corporation ("Seller"), regarding the sale/purchase of Default Service specified herein under the terms and conditions under the Master Power Agreement, dated March 7, 2008, as amended (the "Master Power Agreement") between Buyer and Seller, as specified and modified herein. Terms used but not defined herein shall have the meanings ascribed to them in the Master Power Agreement.

1. Confirmation Effective Date; Condition Precedent; Filing Obligation; Term

This Confirmation shall be binding on the Parties upon execution by both Parties (such date the "Confirmation Effective Date"). Promptly after execution by both Parties, Buyer shall submit the Default Service retail rates to the NHPUC for its approval. The Parties performance of Sections 3.2 through 6.4 of the Master Power Agreement are subject to the occurrence, on or before the fifth Business Day after (but not including) the Buyer's submission of the Default Service retail rates to the NHPUC (the "Fifth Day"), for the approval by the NHPUC. If the NHPUC does not issue a decision approving Buyer's request to approve the Default Service retail rates as filed on or before the Fifth Day (a "NHPUC Denial"), then this Confirmation shall be null and void and of no further force and effect, and neither Party shall have any obligation whatsoever to the other Party, and such a voiding of the Confirmation and the NHPUC Denial shall not be a default or constitute an Event of Default by either Party; provided, however, that neither Party shall undertake any action with the NHPUC or otherwise in opposition of approval by the NHPUC of the Master Power Agreement or the Confirmation as executed.

2. Default Service Requirements Matrix

Award Block	Customer Group	Load Zone Responsibility		Commencement Date	Conclusion Date
Α	Large	NH	100%	05/01/14	07/31/14
В	Large	NH	100%	08/01/14	10/31/14

3. Contract Rate - \$/MWh

Award Block	Customer Group	Load Zone	May 2014	June 2014	July 2014	August 2014	September 2014	October 2014
Α	Large	NH				-	-	-
В	Large	NH	_	-	-			

¹ Effective January 14, 2014, Granite State Electric Company changed its name to Liberty Utilities (Granite State Electric) Corp.

Liberty Utilities (Granite State Electric) Corp.

Dominion Energy Marketing, Inc.

Master Power Agreement Confirmation

March 19, 2014

Page 2 of 4

4. Load Asset Designation within the ISO Settlement Market System

Award	Customer	Load	Load Asset	
Block	Group	Zone	Number	Load Asset Name
A & B	Large	NH	11437	GSECO-DEF SVC LARGE CG LOAD

5. Renewable Portfolio Requirement

Renewal Portfolio Requirement shall mean, for each calendar month during the term of this transaction, zero.

6. Amount Payable

The amount payable by the Buyer to Seller in a month shall be:

The product of (a) the Delivered Energy for Default Service to the Large Customer Group and (b) Large Customer Group Contract Rate in the month.

7. Modifications to the Master Power Agreement

Replace all references to "Granite State Electric Company" with "Liberty Utilities (Granite State Electric) Corp.".

8. Security

8.1 Calculation of Exposure

Exposure shall be calculated in accordance with Paragraph 3 of the CSA, subject to the conditions and definitions below.

<u>Seller's Independent Amount</u> means the amount set forth below, and is required through the date listed in the table:

Award	Customer	Load	Amount of	Posting Required
Block	Group	Zone	Guaranty (USD)	Through
A	Large	NH	Guaranty (CSD)	October 31, 2014

Expected Daily Load means the average daily load based upon two years of available actual loads for a given month, as specified in the following table:

Award Block	Customer Group	Load Zone	May 2014	June 2014	July 2014	August 2014	September 2014	October 2014
Α	Large	NH	570	650	730	-	-	-
В	Large	NH	-	-	-	730	720	580

Liberty Utilities (Granite State Electric) Corp.

Dominion Energy Marketing, Inc.

Master Power Agreement Confirmation

March 19, 2014

Page 3 of 4

Adjustment Factor is 0.85.

<u>Reference New England Internal Hub Price</u> means the prices as specified in the following table:

ISO New England Internal Hub Price	May 2014	June 2014	July 2014	August 2014	September 2014	October 2014
Off-Peak	38.87	50.32	44.50	44.50	37.92	37.38
Peak	50.90	70.69	68.50	68.50	49.88	49.75
Reference New England Internal Hub Price**	44.30	59.83	55.85	55.34	43.50	43.50

^{**}The Reference New England Internal Hub price shall be calculated as ((Peak Price x number of Peak Hours in the Month) + (Off-Peak Price x number of Off-Peak Hours in the Month))/(Total Hours in the Month)), as applicable.

8.2 Delivery of Collateral

Within five (5) Business Days after the execution of this Confirmation, Seller shall provide Collateral in accordance with Paragraph 3(a) of the Credit Support Annex of the Master Power Agreement, and in any of the forms specified in Paragraph 6 of the Credit Support Annex of the Master Power Agreement.

9. Confidentiality

Article 3 of this Confirmation is Confidential Terms within the meaning of Article 23 of the Master Power Agreement and shall be subject to confidential treatment until such time such information is published by the Federal Energy Regulatory Commission. Notwithstanding the foregoing, it is understood and agreed that National Grid USA, pursuant to the terms of a transition service agreement, will provide services to Buyer including matters covered by the Master Power Agreement. Seller agrees that Confidential Terms may be disclosed to National Grid USA solely for purposes of providing these transition services to Buyer.

10. Ratification of the Terms and Conditions of the Agreement

- (a) Except as expressly amended or waived by this Confirmation, the terms, conditions, covenants, agreements, warranties and representations contained in the Master Power Agreement are in all respects ratified, confirmed and remade as of the date hereof and, except as amended or waived hereby, shall continue in full force and effect.
- (b) Nothing in this Confirmation shall, or shall be construed to, alter or amend any other Confirmation.

Liberty Utilities (Granite State Electric) Corp.

Dominion Energy Marketing, Inc.

Master Power Agreement Confirmation

March 19, 2014

Page 4 of 4

11. Counterparts

This Confirmation may be executed in counterparts, all of which together shall constitute one and the same instrument.

This Confirmation constitutes part of and is subject to the terms and provisions of such Master Power Agreement.

IN WITNESS WHEREOF, the Parties have caused their duly authorized representatives to execute this Confirmation on their behalf as of the date first above written.

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

Name: Ian Robertson

Title: Chief Executive Officer

DOMINION ENERGY MARKETING, INC.

Name: Robert J. LaRochelle
Title: Senior Market Originator

Liberty Utilities (Granite State Electric) Corp.

Dominion Energy Marketing, Inc.

Master Power Agreement Confirmation

March 19, 2014

Page 4 of 4

11. Counterparts

This Confirmation may be executed in counterparts, all of which together shall constitute one and the same instrument.

This Confirmation constitutes part of and is subject to the terms and provisions of such Master Power Agreement.

IN WITNESS WHEREOF, the Parties have caused their duly authorized representatives to execute this Confirmation on their behalf as of the date first above written.

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

Name: Ian Robertson

Title: Chief Executive Officer

DOMINION ENERGY MARKETING, INC.

Name: Robert J. LaRochelle

Title: Senior Market Originator

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

SCHEDULE JDW - 5

Default Service Contract for the Small Customer Group

May 1, 2014 through October 31, 2014

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

MASTER POWER AGREEMENT CONFIRMATION

This Confirmation shall confirm the Transaction agreed to on, and effective as of March 18, 2014, between **LIBERTY UTILITIES** (**GRANITE STATE ELECTRIC**) **CORP.** ("Liberty Utilities" or "Buyer")¹, a New Hampshire corporation and **TRANSCANADA POWER MARKETING LTD.,** a Delaware corporation ("Seller"), a Delaware corporation, regarding the sale/purchase of Default Service specified herein under the terms and conditions under the Master Power Agreement, dated March 15, 2007, as amended by the First Amendment to New Hampshire Master Power Agreement dated as of September 3, 2010 (as so amended, the "Master Power Agreement") between Buyer and Seller, as specified and modified herein. Terms used but not defined herein shall have the meanings ascribed to them in the Master Power Agreement.

1. Confirmation Effective Date; Condition Precedent; Filing Obligation; Term

This Confirmation shall be binding on the Parties upon execution by both Parties (such date the "Confirmation Effective Date"). Promptly after execution by both Parties, Buyer shall submit the Default Service retail rates to the NHPUC for its approval. The Parties performance of Sections 3.2 through 6.4 of the Master Power Agreement are subject to the occurrence, on or before the fifth Business Day after (but not including) the Buyer's submission of the Default Service retail rates to the NHPUC (the "Fifth Day"), for the approval by the NHPUC. If the NHPUC does not issue a decision approving Buyer's request to approve the Default Service retail rates as filed on or before the Fifth Day (a "NHPUC Denial"), then this Confirmation shall be null and void and of no further force and effect, and neither Party shall have any obligation whatsoever to the other Party, and such a voiding of the Confirmation and the NHPUC Denial shall not be a default or constitute an Event of Default by either Party; provided, however, that neither Party shall undertake any action with the NHPUC or otherwise in opposition of approval by the NHPUC of the Master Power Agreement or the Confirmation as executed.

2. Default Service Requirements Matrix

A	ward	Customer		Load	Commencement	
I	Block	Group	Load Zone	Responsibility	Date	Conclusion Date
	С	Small	NH	100%	05/01/14	10/31/14

3. Contract Rate - \$/MWh

Award Customer Load Mav June July August September October **Block** Group Zone 2014 2014 2014 2014 2014 2014 С Small NH

¹ Effective January 14, 2014, Granite State Electric Company changed its name to Liberty Utilities (Granite State Electric) Corp.

4. Load Asset Designation within the ISO Settlement Market System

Award Block	Customer Group	Load Zone	Load Asset Number	Load Asset Name
C	Small	NH	11436	GRANITE SMALL CG DS SVC LOAD

5. Renewable Portfolio Requirement

Renewal Portfolio Requirement shall mean, for each calendar month during the term of this Transaction, zero.

6. Amount Payable

The amount payable by the Buyer to Seller in a month shall be:

(i) The product of (a) the Delivered Energy for Default Service to the Small Customer Group and (b) Small Customer Group Contract Rate in the month.

7. Modifications to the Master Power Agreement

Replace all references to Granite State Electric Company with Liberty Utilities (Granite State Electric) Corp.

For purposes of clarity, all notice address information for Buyer shall remain the same with the exception of noting the name change of Buyer.

8. Security

8.1. Calculation of Exposure

Exposure shall be calculated in accordance with Paragraph 3 of the CSA, subject to the conditions and definitions below.

Expected Daily Load means the average daily load based upon two years of available actual loads for a given month, as specified in the following table:

Award Block	Customer Group	Load Zone	May 2014	June 2014	July 2014	August 2014	September 2014	October 2014
С	Small	NH	920	1050	1180	1220	1170	930

Adjustment Factor is 0.85.

Liberty Utilities (Granite State Electric) Corp.
TransCanada Power Marketing Ltd.
Master Power Agreement Confirmation
March 18, 2014
Page 3 of 4

<u>Reference New England Internal Hub Price</u> means the prices as specified in the following table:

ISO New England Internal Hub Price	May 2014	June 2014	July 2014	August 2014	September 2014	October 2014
Off-Peak	38.87	50.32	44.50	44.50	37.92	37.38
Peak	50.90	70.69	68.50	68.50	49.88	49.75
Reference New England Internal Hub Price**	44.30	59.83	55.85	55.34	43.50	43.50

^{**}The Reference New England Internal Hub price shall be calculated as ((Peak Price x number of Peak Hours in the Month) + (Off-Peak Price x number of Off-Peak Hours in the Month))/(Total Hours in the Month)), as applicable.

8.2. Delivery of Collateral

Within five (5) Business Days after the execution of this Confirmation, Seller shall provide Collateral in accordance with Paragraph 3(a) of the Credit Support Annex of the Master Power Agreement, and in any of the forms specified in Paragraph 6 of the Credit Support Annex of the Master Power Agreement.

8.3. Buyer's Credit Requirement

For the purposes of Paragraph 3(c)(1) of the CSA, Buyer's Credit Requirement shall be a Net Worth of at least

9. Confidentiality

Article 3 of this Confirmation are Confidential Terms within the meaning of Article 23 of the Master Power Agreement.

10. Ratification of the Terms and Conditions of the Agreement

- (a) Except as expressly amended or waived by this Confirmation, the terms, conditions, covenants, agreements, warranties and representations contained in the Master Power Agreement are in all respects ratified, confirmed and remade as of the date hereof and, except as amended or waived hereby, shall continue in full force and effect.
- (b) Nothing in this Confirmation shall, or shall be construed to, alter or amend any other Confirmation.

Liberty Utilities (Granite State Electric) Corp. TransCanada Power Marketing Ltd. Master Power Agreement Confirmation March 18, 2014

Page 4 of 4

11. **Counterparts**

This Confirmation may be executed in counterparts, all of which together shall constitute one and the same instrument.

This Confirmation constitutes part of and is subject to the terms and provisions of such Master Power Agreement.

IN WITNESS WHEREOF, the Parties have caused their duly authorized representatives to execute this Confirmation on their behalf as of the date first above written.

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

Name: <u>Ian Robertson</u>

Title: Chief Executive Officer

TRANSCANADA POWER MARKETING LTD.

Name: Jasmin Bertovic Title: Vice President

Name: Michael E. Hachey

Title: Vice President

REDACTED
Liberty Utilities (Granite State Electric) Corp.
TransCanada Power Marketing Ltd.
Master Power Agreement Confirmation
March 18, 2014
Page 4 of 4

Business

Legal

11. Counterparts

This Confirmation may be executed in counterparts, all of which together shall constitute one and the same instrument.

This Confirmation constitutes part of and is subject to the terms and provisions of such Master Power Agreement.

IN WITNESS WHEREOF, the Parties have caused their duly authorized representatives to execute this Confirmation on their behalf as of the date first above written.

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

Name: David Pasieka

Title: President, Liberty Utilities

TRANSCANADA POWER MARKETING LTD.

Name / Jasmin Bertovic

Title: Vice President

Name: Michael E. Hachey

Title: Vice President

085

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

SCHEDULE JDW - 6

Summary of November 2013 RPS Solicitation

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

Analysis of Bids Received

			Class I			
	Year	Class I	Thermal	Class II	Class III	Class IV
RECS Required:	2013	21,000		1,000	8,000	7,000
RECS Required:	2014	9,000	700	500	13,000	2,000
ACP	2013	55.00	n/a	55.00	31.50	26.50
ACP	2014	55.54	25.24	55.54	32.11	27.02
Market	2013					
Market	2014					

Summary of RPS Solicitation	Respondent	Vintage	Class	Price	Quantity	Delivery Type	Comments	Total Cost

NHPUC Docket DE 14-031 Testimony and Schedules of John. D. Warshaw

SCHEDULE JDW - 7

ISO New England March 18, 2014 Press Release

press release



FOR IMMEDIATE RELEASE

Contact:

Ellen Foley, ISO New England (413) 535-4139 Marcia Blomberg, ISO New England (413) 540-4555 Lacey Girard, ISO New England (413) 540-4483

2013 Wholesale Electricity Prices in New England Rose on Higher Natural Gas Prices

Pipeline constraints and higher demand pushed up prices for both natural gas and power

Holyoke, MA—March 18, 2014—Rising natural gas prices pushed wholesale electricity prices in New England up by 55% in 2013, according to preliminary figures from ISO New England Inc., the operator of the region's bulk power system and wholesale electricity markets.

Preliminary data show that the average price of wholesale electric energy rose to \$56.06 per megawatt-hour (MWh) in 2013, up from 2012's historic low price of \$36.09/MWh. Compared to average annual wholesale electricity prices since 2003, the year that competitive markets in their current form were introduced in New England, the 2013 annual average was the fifth highest, and 30% lower than the all-time high of \$80.56/MWh during 2008.

Natural gas is the predominant fuel used to generate the region's electricity, at about 46% of total generation in 2013, so wholesale power prices tend to track the price of natural gas. In 2013, preliminary figures show that the price of natural gas averaged \$6.97 per million British thermal units (MMBtu), up 76% from the 2012 record low price of \$3.95/MMBtu. The highest annual average price for natural gas in New England occurred in 2008 at \$10.07/MMBtu.

The higher energy price pushed the total value of the region's wholesale energy market to about \$8.0 billion in 2013, based on preliminary data, up 54% from the \$5.2 billion value in 2012. In 2008, the value of New England's wholesale electric energy market rose to a high of \$12.1 billion, reflecting

Created in 1997, ISO New England is the independent, not-for-profit corporation responsible for the reliable operation of New England's electric power generation and transmission system, overseeing and ensuring the fair administration of the region's wholesale electricity markets, and managing comprehensive regional electric power planning.

record high annual natural gas and wholesale electric energy prices.

"The wholesale price of power in New England's competitive markets is based on input costs," said Gordon van Welie, president and chief executive officer of ISO New England. "Higher fuel prices result in higher power prices. New England sits on the doorstep of the Marcellus shale, which has increased supply and lowered natural gas prices significantly, at least in areas of the country that can access that gas. However, the limited pipeline capacity coming into New England means that sometimes natural-gas-fired generators have difficulty getting fuel, and that not only pushes up prices, it also creates a risk to reliable operation of the power system."

The <u>New England governors</u> have proposed an innovative approach to spur investment in much-needed natural gas pipeline expansion in the region. The proposal would seek a tariff addition to allow the ISO to collect gas pipeline costs from electric market participants. The ISO has agreed to work with industry stakeholders and policymakers to discuss this initiative, which could foster the pipeline expansion needed to meet the region's electric energy needs.

Wholesale prices also are affected by consumer demand for power, which in turn is influenced by the economy, weather, and energy-efficiency efforts. Overall, demand for electricity rose slightly in New England in 2013, by about 1.0%, to 129,350 gigawatt-hours (GWh). When annual variations in weather are factored out, which allows demand to be evaluated on a comparable basis from year to year, electricity consumption would have dropped 0.4 percent to 127,754 GWh in 2013 compared with the weather-normalized 128,249 GWh of electricity consumed in 2012.

While wholesale electricity prices rise and fall in real time based primarily on fuel prices, retail default service rates are generally set for longer intervals. State regulators oversee the retail market, and the lag between wholesale prices and retail rates varies depending on each state's approach to procurement. The wholesale market clearing price is used to help establish retail default service rates.

Total value of wholesale electric energy market and average wholesale electric energy and natural gas prices in New England: 2003, 2008, 2012 and 2013

	2003 ¹	2008	2012	2013 ²
Wholesale electric energy market value ³ (in billions)	\$5.6	\$12.1	\$5.2	\$8.0
Average wholesale electric energy price (\$/MWh ⁴)	\$48.59	\$80.56	\$36.09	\$56.06
Average price of natural gas (\$/MMBtu ⁵)	\$5.96	\$10.07	\$3.95	\$6.97

³ This includes the value of the electric energy market only. It does not include the capacity or ancillary services markets.

¹ Partial year; current wholesale electricity markets commenced in March 2003.

² 2013 figures are preliminary.

⁴ One megawatt-hour of electricity can serve about 1,000 average homes in New England for one hour.

⁵ A British thermal unit (Btu) is used to describe the heat value of fuels, providing a uniform standard for comparing different fuels. One Btu is the amount of heat required to raise the temperature of a pint of water by one degree Fahrenheit. One million British thermal units are shown as MMBtu.

O94

Average annual natural gas and wholesale electricity prices in New England (2003 to 2013¹)

	Avg. natural gas price (per MMBtu)	Avg. wholesale electricity price (per MWh)
2003 ²	\$5.96	\$48.59
2004	\$6.86	\$52.13
2005	\$9.75	\$76.64
2006	\$7.40	\$59.68
2007	\$8.17	\$66.72
2008	\$10.07	\$80.56
2009	\$4.79	\$42.02
2010	\$5.29	\$49.56
2011	\$4.99	\$46.68
2012	\$3.95	\$36.09
2013	\$6.97	\$56.06
% Change 2012-2013	+76%	+55%
% Change 2003-2013	+17%	+15%

 $[\]overline{}^{1}$ 2013 figures are preliminary. 2 Partial year; current wholesale electricity markets commenced in March 2003.