

# **Exhibit 1**

## ELECTRIC SUPPLIER SERVICES MASTER AGREEMENT

This Electric Supplier Services Master Agreement ("Master Agreement") made this 3rd day of November, 2008, between Public Service Company of New Hampshire, a New Hampshire corporation with a principal place of business at 780 N Commercial Street, Manchester, NH ("Company") and S.J. Energy Co, a corporation with a principal place of business at 1 South Jersey Plaza, Folsom, NJ 08037 ("Supplier").

### I. Basic Understandings

Under the Terms and Conditions for Suppliers which is an integral part of the Company's rate tariff approved by the New Hampshire Public Utilities Commission ("NHPUC") as in effect and revised from time to time (referred to herein as the "Terms and Conditions"), and recommendations made by the Electronic Data Interchange Working Group report (referred to herein as the "EDI Standards"), made effective by NHPUC Order No. 22,919 and other applicable regulations of the NHPUC, the Company has the authority and obligation to offer services to competitive suppliers of electricity. The Terms and Conditions, Section 1.g, require the Supplier to enter into a separate trading partner contract with the Company prior to the initiation of Supplier Service to any customer in the Company's Service Area. In addition, Supplier desires to utilize some or all of the Company provided services outlined in this Master Agreement. Accordingly, the Company agrees to provide such services to Supplier as specifically selected by the Supplier in accordance with the Terms and Conditions, EDI Standards, both incorporated herein by reference, and the terms of this Master Agreement.

Exhibit A, attached hereto and incorporated herein by reference, specifies additional information necessary for the provision of services under this Master Agreement.

Exhibit B, attached hereto and incorporated herein by reference, contains pricing parameters for Services under this Master Agreement some of which are determined by Terms and Conditions of the Company's delivery service tariff and some of which are not specified in those Terms and Conditions. Each time the Terms and Conditions are changed by order of the Public Utilities Commission and each time the Supplier and the Company agree to new pricing parameters for Services which are not specified in the Terms and Conditions, a new Exhibit B will be issued and incorporated herein.

Exhibit C, attached hereto and incorporated herein by reference, contains the specific Services selected by the Supplier that the Company agrees to provide under this Master Agreement. It is agreed from time to time that Supplier may chose to add or cancel certain

Services. Each time a change is made, a new Exhibit C will be executed by the Company and the Supplier and will supersede the previous Exhibit C.

II. Definitions

Any capitalized terms used in this Master Agreement and not defined herein shall be as defined in the Terms and Conditions or EDI Standards.

III. Term

This Master Agreement shall become effective on the date last signed below ("Effective Date") and shall continue in full force and effect for one (1) year. After the expiration of the one (1) year period, this Master Agreement shall continue in full force and effect from month to month thereafter unless terminated by either party by written notice given no less than thirty (30) days prior to the desired termination date, except as provided in Sections VI and XI of this Master Agreement. Notwithstanding the foregoing, the parties agree to abide by all terms of this Master Agreement until the completion of processing any transactions that are outstanding at termination. Notwithstanding the Effective Date, Supplier acknowledges that Company will provide Company Services as set forth in Section VII only upon satisfaction of, or express, written waiver of the requirements of Section IV of this Master Agreement.

IV. Conditions Precedent

The following requirements shall be conditions precedent to Company's obligations hereunder:

- A. Supplier shall provide all information requested in Exhibit A attached hereto.
- B. Supplier shall register and obtain the necessary licensing from the NHPUC.
- C. Prior to initiation of supplier service covered under this Master Agreement, the Supplier shall have completed a Trading Partner Agreement with the Company and have fulfilled all of the Trading Partner Agreement requirements including, but not limited to, testing of the EDI process between Company and Supplier.

V. Representations

Each party represents that it is and shall remain in compliance with all applicable laws, tariffs, and NHPUC regulations during the term of this Master Agreement.

Each person executing this Master Agreement for the respective parties represents and warrants that he or she has authority to bind that party.

Each party represents that: (a) it has the full power and authority to execute, deliver, and perform this Master Agreement; (b) the execution, delivery, and performance of this Master Agreement have been duly authorized by all necessary corporate or other action by such party; and (c) this Master Agreement constitutes that party's legal, valid and binding obligation, enforceable against such party in accordance with its terms.

Each party shall exercise all reasonable care, diligence and good faith in the performance of its duties pursuant to this Master Agreement, and carry out its duties in accordance with applicable recognized professional standards.

VI. Supplier's Responsibilities

The Supplier agrees that it desires to receive the services enumerated in Section VII of this Master Agreement at the rates contained in the Terms and Conditions as they may be revised from time to time or in Exhibit B. Supplier agrees to pay Company's invoices for services rendered in a timely manner. Supplier agrees to provide all information necessary to the Company to fulfill the Company's obligations under this Master Agreement.

VII. Company Services and Responsibilities

All services covered by this Master Agreement shall take effect not less than 30 days from the effective date of this Master Agreement, provided the conditions in Section IV have been satisfied by the Supplier. At the Company's option, services may begin in less than 30 days.

A. Consolidated Billing Service

Company agrees to provide consolidated billing service to Supplier specified in Section VII.A.1 and VII.A.2 if applicable, at the rate specified in the Terms and Conditions. Once an agreement for provision of consolidated billing service is effective, the Supplier can specify on a customer by customer basis which customers it wants to receive consolidated billing service from the Company.

1. Basic Consolidated Billing Service

Basic consolidated billing service includes reading the customer's electric meter on a billing cycle basis, calculating billing determinants, applying such billing determinants against the Supplier rate and price option specified for each customer in the EDI enrollment or subsequent change transaction, incorporating the resulting Supplier charges with the Company's delivery service charges into a single consolidated bill, mailing such consolidated bill to the customer, processing payments received from the customer, allocating such payments

between the Company and Supplier accounts receivable, transmitting payments allocated to Suppliers on a daily basis and transmitting all required EDI transactions resulting from such billing and payments in accordance with the EDI Standards. All measured billing determinants will be based on Company-owned metering, except as agreed to in a separate agreement.

Supplier related information required by NHPUC guidelines or other applicable rules to be sent to customers shall be included with the consolidated billing. Company reserves the right to specify the presentation methodology and other characteristics such as size or weight which will be included as part of the basic billing service without additional fees. Items not meeting those specifications shall be included at fees mutually agreeable to both parties. Any separate bill inserts for the required Supplier information shall be provided at the Supplier's expense.

Supplier rates and pricing options must be supported by meters in place and the Company's billing systems. No more than one supplier rate and pricing option can be effective during a customer's monthly billing cycle.

Payments received shall be applied first to Company accounts receivable until the Company accounts receivable are fully satisfied. Any remaining payment shall be applied to the Supplier accounts receivable until the Supplier accounts receivable are fully satisfied.

2. Expanded Billing Service

The Company agrees to provide an expanded billing service to the Supplier. Such expanded service shall include but not be limited to: all Supplier billing information presented on a separate page of the PSNH bill, incorporation of the Supplier logo on the separate Supplier billing page and incorporation of additional Supplier provided messages. Supplier agrees to provide either a camera ready sample of the logo or an electronic representation of such logo. Initial set-up and ongoing changes to supplier messages shall be considered rates maintenance and subject to the associated charges for the time spent on such set-up and changes. Company reserves the right to restrict the size of supplier messages.

3. Non-standard Billing Service

The Company may provide, at its option, additional billing or payment services which require significant changes to the Company's billing systems. Supplier requesting such additional services will be assessed a one time set-up charge calculated at the rate specified in Exhibit B to this Master Agreement. Company reserves the right to also negotiate a separate on-going fee for such non-standard services.

4. Rates Maintenance and Error Correction Service

The Company shall provide rate maintenance and error correction service at the rate specified in the Terms and Conditions. Such service shall include but not be limited to initial entry of Supplier rates and pricing options into Company's electric billing systems, maintaining changes to Supplier rates and pricing options and calculating and processing Customer billing adjustments due to Supplier's errors in pricing.

#### 5. Billing Errors

If either party finds a billing error or other miscalculation on a bill or in the usage determinants used as the basis for either the Company or the Supplier's bill calculation, that party shall within five (5) days from the date of such discovery, notify the other party in writing or electronically and explain the nature of the error. Notwithstanding the foregoing, the parties acknowledge that the Company may estimate Customer usage when conditions require in accordance with NHPUC regulations, and such estimated usage shall not be considered billing errors. In the event of an error by the Company, the Company shall either: (1) rebill the affected Customer reflecting an appropriate adjustment in the Customer's account; or (2) make an appropriate timely adjustment on a subsequent bill sent to Customer. When either party reasonably believes that an error related to billing activity may have occurred, either party may request the production of documents required to verify the accuracy of such billing, which the other party will provide within ten (10) business days.

#### B. Collection Services

The Company conducts various collection activities to encourage Customers to pay amounts due to the Company for delivery service. To the extent allowed by PUC rules or other regulations, Company agrees to employ consistent collection activities to encourage payment of Supplier amounts due for energy service. Supplier acceptance of collection services shall be mandatory where the Supplier has elected to receive consolidated billing service. The Company shall provide collection services at the rate specified in the Terms and Conditions.

Collection activity by the Company on behalf of the Supplier will terminate 60 days after Supplier's relationship with the Customer terminates through the Customer switching to another Supplier or the Supplier transmitting an EDI drop transaction to the Company. An EDI transaction informing the Supplier of such collection activity termination and the Supplier accounts receivable balance will be sent to the Supplier. At that point, Company's responsibility for all collection activities related to the Supplier accounts receivable shall terminate and Supplier shall have sole responsibility for all subsequent collection activity.

C. Supplier Customer Service

Company agrees to provide customer service to Suppliers who have elected to receive consolidated billing services. Supplier customer service shall include responding to customer inquiries about Supplier balances, Supplier rates and price options used to calculate the Supplier portion of the bill, allocation of payments to Supplier accounts receivable and the processing of EDI enrollment, change or drop transactions.

Such supplier customer service shall be provided only to Supplier's customers within the Company's service area, shall be limited to inbound calls only and expressly excludes all outbound telemarketing calls to existing or potential Supplier customers or inbound responses to Supplier marketing campaigns.

Suppliers electing to receive supplier customer service shall be responsible for establishing a separate toll-free number routing into the Company's automatic call distribution switch. Supplier shall be responsible for all costs associated with initiation and ongoing charges of such toll-free number. Calls received shall be merged with Company calls and answered along with Company calls on a first come, first served basis with no priority given to calls on the Supplier number. If the Company is experiencing significant outages, completion of customer calls may be deferred until the outages are fixed.

While the charges for this Supplier customer service are defined in the Terms and Conditions for Suppliers Section 2.(e) of the Company's delivery service tariff and reflected in Exhibit B to this Master Agreement, such Section also allows the Company and Supplier to negotiate an annual per customer fee for Supplier customer service.

D. Interval Data and Metering Services

The Company agrees to provide the following services which are limited to Customers who are receiving service under the Company's Primary General Delivery Service Rate GV, Large General Delivery Service Rate LG and Backup Delivery Service Rate B. All time interval data will be provided in either 30 minute or 60 minute intervals.

The Supplier is responsible for obtaining the customer's authorization to release their meter data to the Supplier, and Supplier shall maintain the confidentiality of the customer's information. The Supplier may not sell or provide this information, in whole or in part, to any other party.

1. Interval Data Access Service

The Company shall provide kilowatt-hour (KWH) and kilovar-hour (KVARH) interval data that has been collected by the Company and validated for accuracy on a monthly basis in an

electronic format to the Supplier. Requests for historical interval data will also be completed in an electronic format to the Supplier. Rates to be charged to the Supplier for such interval data access service are specified in the Terms and Conditions.

2. Load Pulse Outputs Service

The Company will acquire and install equipment to allow the Supplier to have access to load pulse output from the Company's metering equipment at the rate specified in the Terms and Conditions. The Supplier shall be responsible for providing and connecting their own devices to the load pulse output and for retrieving such information from the devices.

3. Extended Metering Services

The Company shall provide "read only" telephone access to the Company's metering equipment allowing the Supplier to retrieve interval data directly from the meter through the Supplier's own software at the rate specified in the Terms and Conditions. The Supplier shall arrange for the installation and ongoing charges associated with the phone service necessary to access the Company's metering equipment.

4. Special Request Services

By mutual agreement, the Company may install metering or communications equipment requested by the Supplier providing it does not interfere with the operation of the Company's equipment. Such equipment must meet the Company's standards and requirements and will be owned, controlled and maintained by the Company. The Supplier shall bear all costs associated with the new equipment review and approval process as well as the installation, ownership and maintenance of such equipment.

E. Customer Load Analysis

The Company shall provide Customer load analysis at the rate specified in the Terms and Conditions to the Supplier if requested, but only as provided further in this Section. The Customer load analysis shall include, but not be limited to, aggregation of interval demands for multiple metering points and determination of demand and energy usage for varying on-peak and off-peak periods which may differ from the Company's standard for such periods. The results of the analysis will be provided to the Supplier in an electronic format.

The Supplier is responsible for obtaining the Customer's authorization to release this information, and Supplier is required to maintain the confidentiality of the Customer information. The Supplier may not sell or provide this information, in whole or in part, to any other party.

F. Special Reporting Service



Company agrees to provide special reporting service to Suppliers. Special reporting shall include any custom reports requested by the Supplier not part of the Company's billing system. Supplier shall pay a one time charge for development of the special report as well as the costs of producing the report including data analysis. Company reserves the right to refuse to produce a particular report so long as the same decision not to supply the particular report is applied to all Suppliers in the Company's service area.

G. Additional Services

Additional services not covered by this Master Agreement shall be included in an amendment to this Master Agreement.

VIII. Fees

Company may charge fees to Supplier as set forth in the Terms and Conditions for Suppliers section of the Company's rate tariffs as they may be amended from time to time and approved by the NHPUC. For services which are not delineated in the Company's rate tariff, fees shall be negotiated and specified in Exhibit B to this Master Agreement. Company shall have the right to subtract fees that Supplier owes to Company, and that are sixty (60) days or more past due, from amounts Company collects on behalf of Supplier before transmitting such amounts to Supplier. Amounts subject to a good faith dispute will not be subject to deduction.

IX. Billing and Payment for Services

Bills for services provided by Company under the terms of this Master Agreement shall be rendered to Supplier on a monthly basis and shall be due upon receipt of said bill. Failure of Supplier to pay within twenty-five (25) days of the postmark date on the bill shall result in the addition of interest on any unpaid balance calculated at the rate of 1.5% per month on the total outstanding balance due commencing from the date said bill was postmarked. The bill may also be transmitted electronically if agreed to by the parties. The electronic transmission date shall be considered the postmark date of the bill.

X. Nondisclosure

Neither party may disclose any Confidential Information obtained pursuant to this Master Agreement to any third party, including affiliates of the Company and the Supplier, without the express prior written consent of the other party. Supplier acknowledges that Company may disclose Confidential Information as it deems necessary to employees and agents of Northeast

Utilities Service Company, the Company's service company affiliate, or its successor Service Company, to assist Company in meeting its obligations under this Master Agreement. As used herein, the term "Confidential Information" shall include, but not be limited to, all business, financial, and commercial information pertaining to the parties, Customers of either or both parties, Suppliers for either party, personnel of either party; any trade secrets; and other information of a similar nature; whether written or in intangible form that is marked proprietary or confidential with the appropriate owner's name. Confidential Information shall not include information known to either party prior to obtaining the same from the other party, information in the public domain, or information obtained by a party from a third party who did not, directly or indirectly, receive the same from the other party to this Master Agreement or from a party who was under an obligation of confidentiality to the other party to this Master Agreement, or information developed by either party independent of any Confidential Information. The receiving party shall use the higher of the standard of care that the receiving party uses to preserve its own Confidential Information or a reasonable standard of care to prevent unauthorized use or disclosure of such Confidential Information. Each receiving party shall, upon termination of this Master Agreement or at any time upon the request of the disclosing party, promptly return or destroy all Confidential Information of the disclosing party then in its possession.

Notwithstanding the preceding, Confidential Information may be disclosed to any governmental, judicial or regulatory authority requiring such Confidential Information pursuant to any applicable law, regulation, ruling, or order, provided that: (a) such Confidential Information is submitted under any applicable provision, if any, for confidential treatment by such governmental, judicial or regulatory authority; and (b) prior to such disclosure, the other party is given prompt notice of the disclosure requirement so that it may take whatever action it deems appropriate, including intervention in any proceeding and the seeking of any order or injunction to prohibit such disclosure.

#### XI. Termination

Notwithstanding anything to the contrary elsewhere in this Master Agreement, any party, by written notice to the other party ("Breaching Party"), may terminate this Master Agreement in whole or in part with respect to such Breaching Party or suspend further performance without terminating this Master Agreement upon the occurrence of any of the following: (a) the Breaching Party terminates or suspends doing business; (b) the Breaching Party becomes subject to any bankruptcy or insolvency proceeding under federal or state law (unless removed

or dismissed within sixty (60) days from the filing thereof), or becomes insolvent, becomes subject to direct control of a transferee, receiver or similar authority, or makes an assignment for the benefit of creditors; or (c) the Breaching Party commits a material breach of any of its obligations under this Master Agreement or the Terms and Conditions and has not cured such breach within fifteen (15) days after receipt of a written notice from the other party specifying the nature of such breach.

No delay by either party in enforcing any of its rights hereunder shall be deemed a waiver of such rights, nor shall a waiver of one default be deemed a waiver of any other or subsequent default.

The enumeration of the foregoing remedies shall not be deemed a waiver of any other remedies to which either party is legally entitled.

#### XII. Force Majeure

Neither party shall be considered in default under this Master Agreement or responsible in tort, strict liability, contract or other legal theory to the other party for damages of any description for any interruption or failure of service or deficiency in the quality or quantity of service, or any other failure to perform if such failure is not caused by the affected party's fault or negligence, is caused by factors beyond the party's reasonable control and that by exercise of reasonable diligence the party is unable to prevent or overcome, including without limitation, storm, flood, lightning, earthquake, explosion, civil disturbance, labor dispute, sabotage, war, insurrection, act of God or the public enemy, action of a court, public authority or Independent System Operator. In the event of a force majeure, both parties shall take all reasonable steps to comply with this Master Agreement.

#### XIII. Liability and Indemnification

Company and Supplier shall indemnify, defend, and hold the other and their respective affiliates, and the directors, officers, employees and agents of each of them, harmless from and against all damages, costs (including attorney's fees), penalties and liabilities, in tort, contract or otherwise, resulting from claims of third parties arising from, or claimed to have arisen from, any action of the other party conducted pursuant to this Master Agreement. For purposes of such liability and indemnification, however, the parties acknowledge and agree that nothing in such Terms and Conditions prohibits one party from impleading the other party as a third-party defendant, whether or not one or both parties are named as defendants in the initial claim of a third-party. The third-party claim shall be stayed pending resolution of any dispute regarding

liability and indemnification under this Master Agreement. Such resolution shall be final and binding upon the parties only after agreement between the parties or after entry of a final judgment, after any further appeals of a court of competent jurisdiction to which any appeal may have been taken from the determination of the arbitrator(s).

The parties acknowledge and agree that for purposes of the Terms and Conditions, a party seeking recovery from the other party in connection with the performance of its obligations of the Terms and Conditions shall not be entitled to recovery if its conduct is deemed to be more negligent than the conduct of the other party.

The parties expressly acknowledge and agree that the dispute resolution provision in Paragraph XV of this Master Agreement shall apply to any and all disputes arising under this paragraph, including without limitation, those disputes that arise as a result of either of the parties being named as a defendant in the primary action or being named as a third-party defendant by a defendant in the primary action.

Notwithstanding anything in this Master Agreement or the Terms and Conditions to the contrary, in no event shall any party hereto be liable to any other party hereto for indirect, consequential, punitive, special, or exemplary damages under any theory of law that is now or may in the future be in effect, including without limitation: contract, tort, strict liability, or negligence.

Notwithstanding the availability of other remedies at law or in equity, either party hereto shall be entitled to specific performance to remedy a breach of this Master Agreement by the other party.

The provisions of this Section shall survive the termination of this Master Agreement.

#### XIV. Terms and Conditions

The parties agree to act in compliance with the Terms and Conditions and the EDI Standards at all times. In the event the terms of this Master Agreement conflict with the Terms and Conditions, the Terms and Conditions shall control.

#### XV. Dispute Resolution

Disputes hereunder shall be reduced to writing and sent to the parties' representatives for resolution. The parties' representatives shall meet and make all reasonable efforts to resolve the dispute. Pending resolution, the parties shall continue to fulfill their obligations under this Master Agreement in good faith, unless this Master Agreement has been suspended or terminated as provided in Section VII. If the parties fail to resolve the dispute within thirty (30)

days, they may mutually agree to pursue mediation or arbitration to resolve such issues. The parties agree that the place of mediation or arbitration shall be Manchester, New Hampshire.

XVI. Notice

All notices and other communications shall be to the Company Supplier Services contacts listed on the Company's website. Notices and other communications to Supplier shall be addressed as shown on Exhibit A. The parties agree that such written notice, upon confirmation of receipt, shall constitute an acceptable writing.

XVII. Governing Law

This Master Agreement is governed by the laws of the State of New Hampshire without regard to the conflict of laws in effect therein.

XVIII. Enforceability

In the event that any portion or part of this Master Agreement is deemed invalid, against public policy, void or otherwise unenforceable by a court of law, the validity and enforceability of the remaining portions thereof shall otherwise be fully enforceable.

XIX. Assignment and Delegation

Either party to this Master Agreement may assign any of its rights or obligations under this Master Agreement; provided however, that no assignment by Supplier shall take effect until the assignee has met the requirements of Section IV hereunder. No assignment of this Master Agreement shall relieve the assigning party of any of its obligations under this Master Agreement until such obligations have been assumed by the assignee.

In addition, either party may subcontract its duties under this Master Agreement to a subcontractor provided that the party subcontracting shall remain fully responsible as a principal and not as a guarantor for performance of any subcontracted duties, and shall serve as the point of contact between its subcontractor and the other party, and the subcontractor shall meet the requirements of any applicable laws, rules, regulations, and Terms and Conditions. The assigning or subcontracting party shall provide the other party with thirty (30) calendar days' prior written notice of any such subcontracting or assignment, which notice shall include such information about the subcontractor as the other party shall reasonably require.

XX. Miscellaneous

This Master Agreement is the entire agreement between the parties and supersedes all other agreements, communications, and representations.

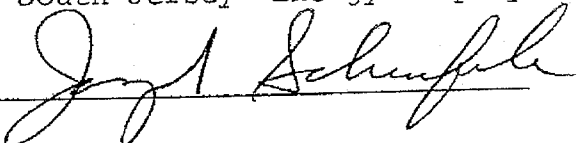
This Master Agreement may be amended by written agreement of the parties.

Paragraph headings are for convenience only and are not to be construed as part of this Agreement.

This Agreement may be executed simultaneously in two or more counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same document.

IN WITNESS WHEREOF, the Parties have caused this Electric Supplier Services Master Agreement to be executed by their duly authorized representatives as of the date above.

SUPPLIER South Jersey Energy Company

By 

Title Assistant Vice President

Date 11/3/08

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

**EXHIBIT A**

Information to be supplied by Supplier for provision of Supplier Services

1. Name of receiving bank for payment receipts

Wachovia Bank

2. Bank routing and transit number (ABA number)

031201467

3. Supplier bank account number

2000003202340

4. Is the account a checking or savings account?

Checking

5. Address where billings for services should be sent

1 South Jersey Plaza, Folsom, NJ 08037

6. Name, address, telephone number, fax number and e-mail address of primary contact for resolution of billing payment questions and notices.

Donna Schempp, 609-568-9028, 609-625-2994, dschempp@sjindustries.com



## EXHIBIT B

### Services Specified in Terms and Conditions for Suppliers

Billing and Payment Service	Required
Expanded Billing Service	Optional
Non-Standard Billing Service	Optional
Rates Maintenance and Error Correction Service	Required
Collection Services	Required
Supplier Customer Service	Optional
Load Pulse Outputs Service	Optional
Extended Metering Service	Optional
Special Request Services	Optional
Customer Load Analysis	Optional
Special Reporting Service	Optional

### Rates for services not specified in Terms and Conditions for Suppliers

To be decided upon by the Supplier and the Company.

**EXHIBIT C**

Optional services selected by Supplier

**Peterson, Edward (SJES)**

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**From:** Beckwith, Kristen [kbeckwith@iso-ne.com]  
**Sent:** Friday, October 03, 2008 10:44 AM  
**To:** HENDERSON, CAT; O'CONNOR, WAYNE; Hesketh, David  
**Cc:** Load Notif  
**Subject:** #15691 Load Emera >>>NEW<<< effective 10.8.2008 Ticket 147211  
**Importance:** High

Please be advised that in the SMS Power System, the following LOAD asset is:

NEW

Effective -  
October 8, 2008

Load ID # and Name - 15691 -  
EMERA\_BENEMA

Attached to Metering Domain # - 6 - BECO - NEMA NODE

Assigned Meter Reader # - 3 - NSTAR  
Electric Company

Lead Load Asset Owner ID# and Name - 50981 - Emera Energy  
Services

Owner ID # and Name 50981 - Emera Energy  
Services

The above-referenced Ticket will now be closed.

If you have any questions, please contact me.

Kristen Beckwith  
Assoc. Market Support Specialist  
ISO New England  
Phone: (413) 535-4143  
Fax: (413) 535-4156  
Email: kbeckwith@iso-ne.com

**Peterson, Edward (SJES)**

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**From:** Beckwith, Kristen [kbeckwith@iso-ne.com]  
**Sent:** Friday, October 03, 2008 10:43 AM  
**To:** HENDERSON, CAT; O'CONNOR, WAYNE; Hesketh, David  
**Cc:** Load Notif  
**Subject:** #15690 Load Emera >>>NEW<<< effective 10.8.2008 Ticket 147214  
**Importance:** High

Please be advised that in the SMS Power System, the following LOAD asset is:

NEW

Effective -  
October 8, 2008

Load ID # and Name - 15690 -  
EMERA\_BESEMA

Attached to Metering Domain #- 8001 - BECO - SEMA  
NODE

Assigned Meter Reader # - 3 - NSTAR  
Electric Company

Lead Load Asset Owner ID# and Name - 50981 - Emera Energy  
Services

Owner ID # and Name 50981 - Emera Energy  
Services

The above-referenced Ticket will now be closed.

If you have any questions, please contact me.

Kristen Beckwith  
Assoc. Market Support Specialist  
ISO New England  
Phone: (413) 535-4143  
Fax: (413) 535-4156  
Email: kbeckwith@iso-ne.com

**Peterson, Edward (SJES)**

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**From:** Beckwith, Kristen [kbeckwith@iso-ne.com]  
**Sent:** Friday, October 03, 2008 10:40 AM  
**To:** HENDERSON, CAT; O'CONNOR, WAYNE; Hesketh, David  
**Cc:** Load Notif  
**Subject:** #15688 Load Emera >>>NEW<<< effective 10.8.2008 Ticket 147213  
**Importance:** High

Please be advised that in the SMS Power System, the following LOAD asset is:

NEW

Effective -  
October 8, 2008

Load ID # and Name - 15688 -  
EMERA\_COMSEMA

Attached to Metering Domain # - 10 - COMELEC - SEMA  
NODE

Assigned Meter Reader # - 3 - NSTAR  
Electric Company

Lead Load Asset Owner ID# and Name - 50981 - Emera Energy  
Services

Owner ID # and Name 50981 - Emera Energy  
Services

The above-referenced Ticket will now be closed.

If you have any questions, please contact me.

Kristen Beckwith  
Assoc. Market Support Specialist  
ISO New England  
Phone: (413) 535-4143  
Fax: (413) 535-4156  
Email: kbeckwith@iso-ne.com

**Peterson, Edward (SJES)**

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**From:** Beckwith, Kristen [kbeckwith@iso-ne.com]  
**Sent:** Friday, October 03, 2008 10:41 AM  
**To:** HENDERSON, CAT; O'CONNOR, WAYNE; Hesketh, David  
**Cc:** Load Notif  
**Subject:** #15689 Load Emera >>>NEW<<< effective 10.8.2008 Ticket 147212

Please be advised that in the SMS Power System, the following LOAD asset is:

NEW

Effective -  
October 8, 2008

Load ID # and Name - 15689 -  
EMERA\_COMNEMA

Attached to Metering Domain # - 8002 - COMELEC - NEMA  
NODE

Assigned Meter Reader # - 3 - NSTAR  
Electric Company

Lead Load Asset Owner ID# and Name - 50981 - Emera Energy  
Services

Owner ID # and Name 50981 - Emera Energy  
Services

The above-referenced Ticket will now be closed.

If you have any questions, please contact me.

Kristen Beckwith  
Assoc. Market Support Specialist  
ISO New England  
Phone: (413) 535-4143  
Fax: (413) 535-4156  
Email: kbeckwith@iso-ne.com

## ELECTRIC SUPPLIER TRADING PARTNER AGREEMENT

This Agreement made this 3rd day of Nov, 2008, between Public Service of New Hampshire, a New Hampshire corporation with a principal place of business at 1000 Elm Street, Manchester, NH ("Company") and SJE, a NJ corporation with a principal place of business at 1 South Jersey Plaza, Folsom, NJ 08037 ("Supplier").

### I. Basic Understandings

Under the Terms and Conditions for Suppliers which is an integral part of the Company's rate tariff approved by the New Hampshire Public Utilities Commission ("NHPUC") as in effect and revised from time to time (referred to herein as the "Terms and Conditions"), and recommendations made by the Electronic Data Interchange Working Group report (referred to herein as the "EDI Standards"), made effective by NHPUC order 22,919 and other applicable regulations of the NHPUC, the Company has the authority and obligation to perform services for competitive suppliers of electricity. The Terms and Conditions, in Section 1.f., require the Supplier to enter into a service contract with the Company prior to the initiation of Supplier Service to any customer in the Company's Service Area. Accordingly, the Company agrees to provide services to Supplier in accordance with the Terms and Conditions, incorporated herein by reference, and the terms of this Agreement.

This form of Agreement has been developed for use between the Company and Competitive Suppliers, and may not be waived, altered, amended, or modified, except as provided herein. Exhibits A and B, attached hereto and incorporated herein by reference, include additional terms which are a part of this Agreement.

### II. Definitions

Any capitalized terms used in this Agreement and not defined herein shall be as defined in the Terms and Conditions or EDI Standards. Any reference made with respect to time either in this agreement or the EDI Standards is understood to be Eastern Standard or Daylight Savings Time, whichever is effective on the date of transaction receipt.

The Company observes the following holidays and will not send, receive or process electronic transactions on the following days:

New Years' Day	Fourth of July	Veteran's Day	Christmas Day
President's Day	Labor Day	Thanksgiving Day	
Memorial Day	Columbus Day	Day After Thanksgiving	

III. Term

This Agreement shall become effective on the date last signed below ("Effective Date") and shall continue in full force and effect from month to month unless terminated by either party by written notice given no less than thirty (30) days prior to the desired termination date, except as provided in Sections VI and XI of this Agreement. Notwithstanding the foregoing, the parties agree to abide by all terms of this Agreement until the completion of processing any transactions that are outstanding at termination. Notwithstanding the Effective Date, Supplier acknowledges that Company will provide Company Services as set forth in Section VII only upon satisfaction of, or express, written waiver of, the requirements of Section IV of this Agreement.

IV. Conditions Precedent

The following requirements shall be conditions precedent to Company's obligations hereunder:

- A. Supplier shall provide all information requested in Exhibit A attached hereto.
- B. Supplier shall register and obtain the necessary licensing from the NHPUC.
- C. If Supplier elects to utilize the Consolidated Billing Services or other optional service provided by the Company, Supplier shall execute a separate Service Agreement with the Company for such services and provide all relevant information requested by such contract.
- D. Prior to Customer enrollment, Supplier shall successfully complete testing with the Company of the Electronic Data Interchange Transactions ("EDI") as specified in the EDI Working Group Report and any other, applicable EDI Working Group standards published under the direction of the EDI Working Group (i.e. on the EDI Working Group Website or its successor) (all of which together with the EDI transactions are referred to as "EDI Standards" herein).

V. Representations

Each party represents that it is and shall remain in compliance with all applicable laws, tariffs, and NHPUC regulations during the term of this Agreement.

Each person executing this Agreement for the respective parties represents and warrants that he or she has authority to bind that party.

Each party represents that: (a) it has the full power and authority to execute, deliver, and perform this Agreement; (b) the execution, delivery, and performance of this Agreement



have been duly authorized by all necessary corporate or other action by such party; and (c) this Agreement constitutes that party's legal, valid and binding obligation, enforceable against such party in accordance with its terms.

Each party shall exercise all reasonable care, diligence and good faith in the performance of its duties pursuant to this Agreement, and carry out its duties in accordance with applicable recognized professional standards.

VI. Supplier's Responsibilities

To the extent reasonably practicable, Supplier shall notify Company within 24 hours in writing if its license to act as a Competitive Supplier is acted upon by the NHPUC in such a way that it materially affects Supplier's performance under this Agreement, including but not limited to, suspension, revocation, modification, or non-renewal. Revocation or non-renewal of Supplier's license shall be grounds for immediate termination of this Agreement by Company.

To the extent reasonably practicable, Supplier shall notify Company no less than forty-eight (48) hours prior, to an event reasonably within Supplier's knowledge, and of which Supplier has reason to believe Company has no knowledge, and that will render Supplier or its agent unable to maintain Supplier's status with NEPOOL required to serve load. Upon such notice or upon the occurrence of such an event, Company shall have the immediate right to switch Supplier's Customers so affected to the applicable Default or Transition Service Rate under the Company's tariffs with an effective date of the Customer's last meter reading date.

To the extent reasonably practicable, Supplier shall update information requested in Exhibit A five (5) business days prior to any change in information contained in Exhibit A.

Supplier acknowledges that Company will select and may from time to time change the value added network ("VAN") or other electronic data transmission vehicle. Company acknowledges the benefit to both Company and Supplier in minimizing the transaction costs in selecting the VAN. Notwithstanding the above, Company will not change the VAN or other electronic data transmission vehicle without first providing Supplier via Internet electronic mail at least seven (7) days notice of any such change. Supplier shall be responsible for the initial testing costs of the VAN or other electronic data transmission vehicle and all costs of subsequent EDI transaction transmissions as described in the Terms and Conditions and the EDI Standards.

Supplier acknowledges that Company is authorized to deny Supplier Service to Customers if Company has terminated such Customer's Delivery Service in accordance with the rules and regulations of the NHPUC, until such time as the Customer is reinstated by the

Company. In order for Supplier to serve such a Customer after reinstatement, Supplier must re-enroll the Customer.

During the term of this Agreement, as to any EDI Standards implemented subsequent to the initial testing period referenced in Section IV D above, Supplier shall be required to successfully complete testing of said standards in accordance with the EDI Standards.

## VII. Company Services and Responsibilities

### A. Billing Options

Under the Standard Billing Option, Supplier agrees to separately bill Customers for the cost of Supplier Service provided by the Supplier and for the collection of amounts due to the Supplier from the Customer. Company agrees to provide Supplier with Customer usage information, in accordance with the EDI Standards. All measured billing determinants provided by Company will be based on Company-owned metering, except as agreed to in a subsequent agreement.

Company also agrees to offer a Consolidated Billing Option by Supplier through a separate Service Agreement where Company agrees to issue a single bill for electric service which contains both the Company's and Supplier's billing information.

### B. Transaction Processing

Customer transactions will be processed in accordance with the EDI Standards. These transactions include, but are not limited to, account administration, reporting of Customer usage, and reporting of billing, payments and adjustments if the Consolidated Billing Option is selected through a separate Service Agreement. Any changes in these standard transactions will be in accordance with the EDI Standards.

### C. Customer Inquiries under the Standard Billing Option

Customers that contact Company concerning the billed amount for Supplier Service or any other Supplier issue will be referred to Supplier's customer service number identified in Exhibit A. Company will not undertake bill investigations, inquiries concerning Supplier charges, collection activities, or the settlement of billing disputes on behalf of Supplier unless the Consolidated Billing Option is selected in a Service Agreement executed between the Company and Supplier. For both Standard Billing and Consolidated Billing Options, Supplier shall be responsible for the reporting and payment of any taxes assessed upon Supplier Service.

### D. Errors

If either party finds an error or other miscalculation on a bill or in the usage determinants used as the basis for either the Company or the Supplier's bill calculation, that party shall within five (5) days from the date of such discovery, notify the other party in writing or electronically and explain the nature of the error. Notwithstanding the foregoing, the parties acknowledge that the Company may estimate Customer usage when conditions require in accordance with NHPUC regulations, and such estimated usage shall not be considered an error. In the event of an error by the Company, the Company shall either: (1) rebill the affected Customer reflecting an appropriate adjustment in the Customer's account; or (2) make an appropriate timely adjustment on a subsequent bill sent to Customer. When either party reasonably believes that an error related to billing activity may have occurred, either party may request the production of documents required to verify the accuracy of such billing, which the other party will provide within ten (10) business days.

E. Load Estimating and Reporting

Company shall determine Supplier's hourly loads and report such to the ISO-NE in accordance with the Terms and Conditions. In addition, upon Supplier's written request as indicated in Exhibit A, Company shall provide Supplier with the following reports: (1) daily report of Supplier's aggregated hourly loads; and (2) monthly reconciliation of Supplier's aggregated loads (completed once Company has read Customers' meters). Company will provide these reports to Supplier in a format designated by the Company and reasonably acceptable to Supplier. Upon Supplier's request, the Company shall provide the methodology used to calculate transmission and distribution line losses and unaccounted for energy.

F. Additional Services

Additional Services provided by Company shall be specified in a Service Agreement to be executed between the Company and the Supplier.

VIII. Fees

Company may charge fees to Supplier as set forth in the Terms and Conditions for Suppliers section of the Company's rate tariffs as they may be amended from time to time and approved by the NHPUC. For services which are not delineated in the Company's rate tariff, fees shall be negotiated and specified in the Service Agreement governing the provision of those services. Company shall have the right to subtract fees that Supplier owes to Company, and that are sixty (60) days or more past due, from amounts Company collects on behalf of Supplier for reimbursement to Supplier, if applicable. Amounts subject to a good faith dispute will not be subject to deduction.

IX. Billing and Payment for Services

Bills for services provided by Company under the terms of this Agreement shall be rendered to Supplier on a monthly basis and shall be due upon receipt of said bill. Failure of Supplier to pay within twenty-five (25) days of the posting date on the bill shall result in the addition of interest on any unpaid balance calculated at the rate of 1.5% per month on the total outstanding balance due commencing from the date said bill was posted. The posting date is the date the bill is transmitted to the Supplier. The bill may also be transmitted electronically if agreed to by the parties.

X. Nondisclosure

Neither party may disclose any Confidential Information obtained pursuant to this Agreement to any third party, including affiliates of such party, without the express prior written consent of the other party. Supplier acknowledges that Company may disclose Confidential Information as it deems necessary to employees and agents of Northeast Utilities Service Company or its successor, (the Company's Service Company Affiliate) to assist Company in meeting its obligations under this Agreement. As used herein, the term "Confidential Information" shall include, but not be limited to, all business, financial, and commercial information pertaining to the parties, Customers of either or both parties, Suppliers for either party, personnel of either party; any trade secrets; and other information of a similar nature; whether written or in intangible form that is marked proprietary or confidential with the appropriate owner's name. Confidential Information shall not include information known to either party prior to obtaining the same from the other party, information in the public domain, or information obtained by a party from a third party who did not, directly or indirectly, receive the same from the other party to this Agreement or from a party who was under an obligation of confidentiality to the other party to this Agreement, or information developed by either party independent of any Confidential Information. The receiving party shall use the higher of the standard of care that the receiving party uses to preserve its own Confidential Information or a reasonable standard of care to prevent unauthorized use or disclosure of such Confidential Information. Each receiving party shall, upon termination of this Agreement or at any time upon the request of the disclosing party, promptly return or destroy all Confidential Information of the disclosing party then in its possession.

Notwithstanding the preceding, Confidential Information may be disclosed to any governmental, judicial or regulatory authority requiring such Confidential Information pursuant

to any applicable law, regulation, ruling, or order, provided that: (a) such Confidential Information is submitted under any applicable provision, if any, for confidential treatment by such governmental, judicial or regulatory authority; and (b) prior to such disclosure, the other party is given prompt notice of the disclosure requirement so that it may take whatever action it deems appropriate, including intervention in any proceeding and the seeking of any order or injunction to prohibit such disclosure.

#### XI. Termination

Notwithstanding anything to the contrary elsewhere in this Agreement, any party, by written notice to the other party ("Breaching Party"), may terminate this Agreement in whole or in part with respect to such Breaching Party or suspend further performance without terminating this Agreement upon the occurrence of any of the following: (a) the Breaching Party terminates or suspends doing business; (b) the Breaching Party becomes subject to any bankruptcy or insolvency proceeding under federal or state law (unless removed or dismissed within sixty (60) days from the filing thereof), or becomes insolvent, becomes subject to direct control of a transferee, receiver or similar authority, or makes an assignment for the benefit of creditors; or (c) the Breaching Party commits a material breach of any of its obligations under this Agreement or the Terms and Conditions and has not cured such breach within fifteen (15) days after receipt of a written notice from the other party specifying the nature of such.

No delay by either party in enforcing any of its rights hereunder shall be deemed a waiver of such rights, nor shall a waiver of one default be deemed a waiver of any other or subsequent default.

The enumeration of the foregoing remedies shall not be deemed a waiver of any other remedies to which either party is legally entitled.

#### XII. Force Majeure

Neither party shall be considered in default under this Agreement or responsible in tort, strict liability, contract or other legal theory to the other party for damages of any description for any interruption or failure of service or deficiency in the quality or quantity of service, or any other failure to perform if such failure is not caused by the affected party's fault or negligence, is caused by factors beyond the party's reasonable control and that by exercise of reasonable diligence the party is unable to prevent or overcome, including without limitation, storm, flood, lightning, earthquake, explosion, civil disturbance, labor dispute, sabotage, war, insurrection, act of God or the public enemy, action of a court, public authority or Independent System

Operator. In the event of a force majeure, both parties shall take all reasonable steps to comply with this Agreement.

XIII. Liability and Indemnification

Company and Supplier shall indemnify, defend, and hold the other and their respective affiliates, and the directors, officers, employees and agents of each of them, harmless from and against all damages, costs (including attorney's fees), penalties and liabilities, in tort, contract or otherwise, resulting from claims of third parties arising from, or claimed to have arisen from, any action of the other party. For purposes of such liability and indemnification, however, the parties acknowledge and agree that nothing in such Terms and Conditions prohibits one party from impleading the other party as a third-party defendant, whether or not one or both parties are named as defendants in the initial claim of a third-party. The third-party claim shall be stayed pending resolution of any dispute regarding liability and indemnification under this Agreement. Such resolution shall be final and binding upon the parties only after agreement between the parties or after entry of a final judgment, after any further appeals of a court of competent jurisdiction to which any appeal may have been taken from the determination of the arbitrator(s).

The parties acknowledge and agree that for purposes of the Terms and Conditions, a party seeking recovery from the other party in connection with the performance of its obligations of the Terms and Conditions shall not be entitled to recovery if its conduct is deemed to be more negligent than the conduct of the other party.

The parties expressly acknowledge and agree that the dispute resolution provision in Paragraph XV of this Agreement shall apply to any and all disputes arising under this paragraph, including without limitation, those disputes that arise as a result of either of the parties being named as a defendant in the primary action or being named as a third-party defendant by a defendant in the primary action.

Notwithstanding anything in this Agreement or the Terms and Conditions to the contrary, in no event shall any party hereto be liable to any other party hereto for indirect, consequential, punitive, special, or exemplary damages under any theory of law that is now or may in the future be in effect, including without limitation: contract, tort, strict liability, or negligence.

Notwithstanding the availability of other remedies at law or in equity, either party hereto shall be entitled to specific performance to remedy a breach of this Agreement by the other party.

The provisions of this Section shall survive the termination of this Agreement.

XIV. Terms and Conditions

The parties agree to act in compliance with the Terms and Conditions at all times. In the event the terms of this Agreement conflict with the Terms and Conditions, the Terms and Conditions shall control.

XV. Dispute Resolution

Disputes hereunder shall be reduced to writing and referred to the parties' representatives for resolution. The parties' representatives shall meet and make all reasonable efforts to resolve the dispute. Pending resolution, the parties shall continue to fulfill their obligations under this Agreement in good faith, unless this Agreement has been suspended or terminated as provided in Section VII. If the parties fail to resolve the dispute within thirty (30) days, they may mutually agree to pursue mediation or arbitration to resolve such issues. The parties agree that the place of mediation or arbitration shall be Manchester, New Hampshire.

XVI. Notice

All notices and other communications shall be to the Company contacts listed on the Company's website except as provided in Exhibit A. Notices and other communications to Supplier shall be addressed as shown on Exhibit A. The parties agree that such written notice, upon confirmation of receipt, shall constitute an acceptable writing.

XVII. Governing Law

This Agreement is governed by the laws of the State of New Hampshire without regard to the conflict of laws in effect therein.

XVIII. Enforceability

In the event that any portion or part of this Agreement is deemed invalid, against public policy, void or otherwise unenforceable by a court of law, the validity and enforceability of the remaining portions thereof shall otherwise be fully enforceable.

XIX. Assignment and Delegation

Either party to this Agreement may assign any of its rights or obligations under this Agreement; provided however, that no assignment by Supplier shall take effect until the assignee has met the requirements of Section IV hereunder. No assignment of this Agreement

shall relieve the assigning party of any of its obligations under this Agreement until such obligations have been assumed by the assignee.

In addition, either party may subcontract its duties under this Agreement to a subcontractor provided that the subcontracting party shall remain fully responsible as a principal and not as a guarantor for performance of any subcontracted duties, and shall serve as the point of contact between its subcontractor and the other party, and the subcontractor shall meet the requirements of any applicable laws, rules, regulations, and Terms and Conditions. The assigning or subcontracting party shall provide the other party with thirty (30) calendar days' prior written notice of any such subcontracting or assignment, which notice shall include such information about the subcontractor as the other party shall reasonably require.

XX. Miscellaneous

This Agreement is the entire agreement between the parties and supersedes all other agreements, communications, and representations.

This Agreement may be amended by written agreement of the parties.

Paragraph headings are for convenience only and are not to be construed as part of this Agreement.

This Agreement may be executed simultaneously in two or more counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same document.



IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the date above.

SUPPLIER South Jersey Energy Company

By *Joel Schupfle*

Title Assistant Vice President

Date 11/3/08

PUBLIC SERVICE OF NEW HAMPSHIRE

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

**EXHIBIT A**  
**SUPPLIER INFORMATION**

**Supplier must provide the Company all of the information requested below prior to entering into a contract for services with Company or providing Supplier Services to any of the Company's customers. Failure to provide all information will render Company unable to provide services for Supplier. SEE ATTACHED ANSWERS**

1. Legal name of the supplier
2. Type of Business Entity
3. Supplier Dun & Bradstreet number
4. Supplier Tax Identification number
5. Supplier Contact for Legal Notices - Name, telephone number, fax number and e-mail address
6. Supplier General Contact - Name, telephone number, fax number and e-mail address
7. Supplier EDI technical Contact - Name, telephone number, fax number and e-mail address
8. Supplier ISO Load Contact - Name, telephone number, fax number and e-mail address
9. Date Supplier attended a New Hampshire supplier training session
10. Supplier's NHPUC supplier license number if available
11. Format and size of Supplier's account numbers
12. Name of Supplier's Value Added Network (VAN) provider
13. Supplier VAN ISA Qualifier
14. Supplier VAN ISA ID
15. Name of the NEPOOL Participant in whose ISO-NE Load Asset the Supplier's load will be served
16. Load Asset ID Number
17. Estimated Load Transfer (kW Demand)
18. Estimated Transfer Date
19. Does the Supplier want to receive hourly load profile results? \_\_\_\_\_ yes \_\_\_\_\_ no
20. If the answer to 19 is yes, provide e-mail address to send the report



## South Jersey Energy

*Where we put all of our energy*

November 3, 2008

Re: Exhibit A – Supplier Information

1. South Jersey energy Company
2. New Jersey Corporation
3. D & B 610003899
4. Tax – 22-1985596
5. Gina Merritt-Epps, 609-561-9000, 609- 561-7130, [gmerritt@sjindustries.com](mailto:gmerritt@sjindustries.com)
6. Lou DeCicco, 609-561-9000, 609-625-3994, [ldecicco@sjindustries.com](mailto:ldecicco@sjindustries.com)
7. [emerapowerdesk@emeraenergy.com](mailto:emerapowerdesk@emeraenergy.com)
8. Lou DeCicco, 609-561-9000, 609-625-3994, [ldecicco@sjindustries.com](mailto:ldecicco@sjindustries.com)
9. Completed National Grid Training, August 2007
10. 9/1/2007
11. Waiting for NHPUC license number
12. We will use utility account number
13. N/A
14. N/A

15. N/A

16. Emera Energy

17. Load Asset

18. None

19. N/A

20. Yes

21. [gjablonski@sjindustries.com](mailto:gjablonski@sjindustries.com)

## **Exhibit 2**



**Public Service  
of New Hampshire**

PSNH Energy Park  
780 North Commercial Street, Manchester, NH 03101

Public Service Company of New Hampshire  
P.O. Box 330  
Manchester, NH 03105-0330  
(603) 634-2236  
Fax (603) 634-2213  
macdojm@psnh.com

January 31, 2008

The Northeast Utilities System

John M. MacDonald  
Vice President - Energy Delivery and Generation

Mr. Robert R. Scott, Director  
Air Resources Division  
NH Dept. of Environmental Services  
29 Hazen Drive, PO Box 95  
Concord, NH 03302-0095

RECEIVED  
NEW HAMPSHIRE

FEB 04 2008

AIR RESOURCES DIVISION

Public Service Company of New Hampshire  
Merrimack Station – Clean Air Project  
2008 Merrimack Unit #2 Outage

Dear Mr. Scott:

In response to your letter dated June 12, 2006, Public Service Company of New Hampshire submits baseline emissions data and projected actual emissions data for Merrimack Unit #2 (MK2). This submittal is being made as part of an approach, agreed upon by PSNH and the Department of Environmental Services, Air Resources Division (DES), to allow for an expedited regulatory review of balance of plant projects planned to be completed during MK2's 2008 outage. As requested, the emissions data provided in Attachment 1 is being submitted 60 days prior to the upcoming MK2 outage scheduled to begin on April 1, 2008. Please note, while this project has been generally referred to as the scrubber project during its young life, PSNH has adopted the name, The Clean Air Project, as its formal description. We will endeavor to use this new name going forward.

Project Overview

As indicated in my letter to you dated June 7, 2006, the balance of plant projects planned to be completed during the 2008 MK2 outage, including the HP/IP project and associated generator repair work, are necessary in order to maintain the output of MK2 and comply with RSA 125-O:13 which requires PSNH to install a wet scrubber at Merrimack Station, no later than July 2013. Given the large power consumption of the proposed scrubber system, the completion of this energy efficiency project is vital to Merrimack Station's long term operation.

The HP/IP project involves the replacement of one of the six steam turbine components with a functionally equivalent component. The new, state of the art turbine blades will be energy

efficient. As part of this project, the HP/IP rotor, stationary blade rings, and inner and outer cylinder casings will be replaced. The repair work to the generator involves an in-kind replacement of the generator rotor. The replacement of the generator rotor is the most cost effective approach to repairing the generator and is being completed as an alternate to the previously proposed repair approach which included installation of a long retaining ring assembly, rewinding with new copper coils, etc. The replacement of the generator requires a shorter critical-path outage duration and eliminates unknowns and risks associated with repair work.

### Merrimack Unit #2 Operation

Merrimack Station is PSNH's prime base load electric generating station currently produces approximately 475 net megawatts of electricity, 321.75<sup>1</sup> of which is produced by MK2. Following the completion of the MK2 HP/IP turbine project and associated generator work MK2 is expected, per the contract guarantee, to produce an additional 6.5 megawatts of electricity. The actual net unit output will range between 6 and 13 megawatts – an increase that is necessary to support the large power consumption of the future, new scrubber system –due to the increased efficiency of the turbine blades. As a result of this energy efficiency project, MK2 will produce more energy without increasing fuel consumed.

Following the completion of the HP/IP turbine project and associated generator work, MK2 will be operated at the same fuel flow rates and emissions levels as it was operated prior to the MK2 2008 outage. Normal full load steam inlet conditions for flow, pressure and temperature will remain at their previous values. Because the coal flow will remain constant, there is no change or increase in air emissions associated with the HP/IP turbine and generator project.

Given the base load operation of Merrimack Station, PSNH anticipates that actual annual emissions from MK2 in the future will be very similar to historical emissions. A review of historical data for the period 1996 through 2007 reveals slight variability in MK2's annual average capacity factor, operating hours, and total fuel burned, largely the result of annual maintenance outage schedules which typically range between four and nine weeks and unplanned outages. Historical data is enclosed as Attachment 2.

### Regulatory Review

The approach proposed by PSNH for regulatory review is based on EPA guidance documents, specifically those applicable to Detroit Edison's Monroe Power Plant and Otter Tail Power's Coyote Station where similar projects have been undertaken. The proposed approach is also based on existing federal PSD regulations which allow electric utilities to determine applicability using projected actual emissions. This approach, which has previously been called the "actual-to-representative-actual-annual" emissions test, allows utilities to compare projected future

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<sup>1</sup> MK2's current winter claimed capability.

Mr. Robert R. Scott, Director  
January 28, 2008  
Page 3 of 4

annual emissions that will occur following a non-routine physical or operational change to actual baseline emissions preceding the change. Baseline emissions, calculated using utilization rate, fuel use and applicable emission factors, are based on an average annual emissions rate in tons per year for each pollutant emitted. Projected actual emissions are based on the maximum annual rate, in tons per year, at which a regulated PSD pollutant is projected to be emitted, less any emissions that could have been accommodated during the baseline period and are not related to the change. The proposed approach allows PSNH to document that there is no emissions increase associated with the MK2 HP/IP turbine and generator project.

#### Baseline Emissions

PSNH understands that baseline is calculated based on the average emissions, representative of normal operation, during 2 consecutive years during the previous 5 year period. PSNH has calculated baseline emissions for MK2 based on the annual average of emissions during two consecutive calendar years, or twenty-four consecutive months, preceding the 2008 outage, specifically 2006-2007. In addition to the enclosed historical data, summaries of emissions for the previous 5 years (2003-2007) as well as baseline for TSP, CO, VOCs, SO<sub>2</sub>, and NO<sub>x</sub> are provided in Attachment 2. The baseline for NO<sub>x</sub> and SO<sub>2</sub> was calculated using emissions data contained in PSNH's Quarterly Emissions Inventory Reports, as previously filed with DES and the NH Public Utilities Commission. Copies of these reports for the years 2006-2007 are also enclosed in Attachment 3. Baseline emissions for CO and VOCs were calculated using AP42 emissions factors published by DES and available on its web site. Baseline emissions for PM were calculated using the emissions rate documented during the most recent stack test. These calculations are identical to those used in PSNH's annual emissions reports and emissions based fees.

#### Projected Actual Emissions

Projected actual emissions for 2008 and 2009 have been calculated using forecasted annual capacity factors, fuel use, hours of operation and emissions rates. Projected emissions for 2008 are based on the average for the previous 5-year period, while projected emissions for 2009 are based on hours of operation, fuel use, and emissions similar to 2006. As previously stated, given the base load operation of Merrimack Station, PSNH anticipates that MK2's projected actual emissions will be comparable to its historical actual emissions. Projected actual emissions and forecasted capacity factors for MK2 are enclosed in Attachment 1. Historic capacity factors are contained in Attachments 1 and 2. In accordance with EPA guidance, the projection of post-change emissions does not include the portion of emissions that could have been accommodated before the change and is unrelated to the change. See letter from Francis X. Lyons, Regional Administrator, US EPA, to Henry Nickel, Counsel for the Detroit Edison Company, Hunton & Williams, dated May 23, 2000. Maximum potential emissions (i.e., emissions that can be accommodated prior to the change) currently allowed under TP-B-0462 and existing state and federal applicable requirements are contained in Attachment 4.



Mr. Robert R. Scott, Director  
January 28, 2008  
Page 4 of 4

Future Recordkeeping and Reporting

As specified under 40 CFR 52.21(b)(21)(v) and 40 CFR 52.24(f)(13)(v), PSNH will maintain and submit to DES, on an annual basis for a period of 5 years, information demonstrating that there are no emissions increases as a result of the HP/IP turbine and generator project. This information may include annual utilization data, emissions data, fuel use, etc. PSNH may exclude emissions increases that are caused by other factors including, for example, increases associated with variability in control technology operation and performance or coal characteristics. Emissions increases may also exclude increases associated with increased use of MK2 due to the growth in electrical demand for the utility system as a whole since the baseline period. See Detroit Edison Applicability Determination Detailed Analysis, dated May 23, 2000.

In addition to documenting that there is no increase in emissions associated with the HP/IP turbine and generator project, the enclosed baseline and projected actual emissions fulfills the request for documentation contained in your letter dated June 12, 2007. Should you have any questions or require additional information relative to the MK2 HP/IP turbine and generator project or the enclosed data, please contact me at 634-2851 or Laurel L. Brown, Senior Environmental Analyst, at 634-2331.

Sincerely,



William H. Smagula, P.E.  
Director – Generation

Enclosures

cc. Thomas S. Burack, Commissioner, DES  
Harold E. Keyes, PSNH Merrimack Station

**PSNH Merrimack Station  
Merrimack Unit #2**

**Attachment 1**

**Historic Emissions Data**

	<b>SO2</b>	<b>NOx</b>	<b>CO</b>	<b>PM</b>	<b>VOCs</b>
	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>
2003	17,387	2,685	196	218	43
2004	20,582	3,067	211	233	46
2005	22,948	3,283	220	234	48
2006	22,729	3,304	236	256	52
2007	25,062	2,250	228	249	50

**Historic Operational Data**

	<b>Capacity</b>	<b>Coal</b>	<b>#2 Oil</b>
	<b>Factor %</b>	<b>tons/yr</b>	<b>gal/yr</b>
2003	73.90	768,969	28,826
2004	80.50	841,129	22,867
2005	79.10	870,802	77,190
2006	83.90	937,595	29,070
2007	82.90	912,674	11,427

**Baseline Period: January 2006 - December 2007**

**Baseline Emissions**

	<b>SO2</b>	<b>NOx</b>	<b>CO</b>	<b>PM</b>	<b>VOCs</b>
	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>
	23,896	2,777	232	253	51

**Projected Capacity Factor and Representative Actual Emissions**

	<b>SO2</b>	<b>NOx</b>	<b>CO</b>	<b>PM</b>	<b>VOCs</b>	<b>Capacity</b>
	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>	<b>tons/yr</b>	<b>Factor %</b>
2008	21,742	2,918	218	238	48	80.1
2009	25,062	3,304	236	256	52	83.9

**PSNH Merrimack Station  
Merrimack Unit #2**

**Attachment 2**

Year	SO2 tons/yr	NOx tons/yr	CO tons/yr	PM tons/yr	VOCs tons/yr	Capacity Factor %	NOx lbs/mmBtu	SO2 lbs/mmBtu	Coal tons/yr	# 2 Oil gal/yr
1996	23,579.51	13,818.20	187.46	1,595.40	41.23	69.9	0.95	2.44	746,923	18,215
1997	26,128.10	9,804.50	223.47	1,837.00	49.16	83.0	0.88	2.15	860,559	13,054
1998	21,669.00	4,745.00	191.62	1,886.70	42.14	70.2	0.48	2.10	752,201	23,826
1999	20,518.00	4,628.00	180.78	1,416.50	39.76	68.5	0.47	2.16	692,942	16,645
2000	26,152.00	4,202.00	219.70	231.90	48.32	78.6	0.38	2.27	849,914	31,723
2001	24,562.00	3,130.00	201.17	216.20	44.25	74.8	0.30	2.31	788,202	14,317
2002	20,902.00	2,872.00	200.15	210.48	44.03	75.7	0.27	1.90	757,879	13,459
2003	17,387.00	2,684.80	195.80	217.76	43.06	73.9	0.26	1.58	768,969	28,826
2004	20,582.00	3,067.00	210.92	232.67	46.39	80.5	0.28	1.71	841,129	22,867
2005	22,948.00	3,263.00	219.70	234.11	48.30	79.1	0.29	1.93	870,802	77,190
2006	22,729.00	3,304.00	235.64	256.19	51.83	83.9	0.26	1.79	937,595	29,070
2007	25,062.40	2,249.60	228.20	249.24	50.20	82.9	0.18	1.97	912,674	11,427

MERRIMACK STATION  
2007 SO2 - NOx EMISSIONS CALCULATIONS

Month	COAL AS BURNED				% COAL				#2 OIL AS BURNED										
	MK1 Tons	MK2 Tons	TOTAL Tons	% Sulfur	MK1 % Sulfur	MK2 % Sulfur	Avg % Sulfur	MK1 Tons NOx	MK2 Tons NOx	CEM Tons NOx	MK1 Tons SO2	MK2 Tons SO2	TOTAL Tons SO2	MK1 Gal.	MK2 Gal.	TOTAL Gal.	% Sulfur	btu/lb	lbs/gal
JAN	32,573	92,454	125,027	1.59	13,024	13,049	1.50	73	193	1,047	2,895	3,742	-	266	266	266	0.02	19,612	7,080
FEB	26,943	64,951	91,294	1.58	13,046	12,778	1.56	68	149	953	2,209	3,162	-	2,321	2,321	2,321	0.02	19,612	7,080
MAR	28,874	94,336	123,210	1.41	13,208	12,927	1.40	68	164	832	2,495	3,327	-	903	903	903	0.02	19,612	7,080
APR	31,333	49,307	80,640	1.71	13,283	13,001	1.58	70	104	1,072	1,271	2,344	-	95	95	95	0.01	19,369	7,030
MAY	33,359	13,150	46,509	1.35	13,370	13,442	1.29	74	53	961	351	1,312	-	2,161	2,161	2,161	0.01	19,369	7,030
JUN	29,329	83,669	112,998	1.32	13,162	13,148	1.36	67	198	921	2,286	3,207	-	83	3,726	3,809	0.01	19,369	7,030
JUL	34,065	91,622	125,687	1.31	13,154	13,050	1.29	92	194	962	2,308	3,270	-	630	630	630	0.01	19,384	7,090
AUG	32,411	90,645	123,056	1.55	13,112	13,132	1.50	100	252	1,045	2,555	3,601	-	109	109	109	0.01	19,384	7,090
SEP	28,712	69,741	98,453	1.51	13,221	13,055	1.44	87	185	855	1,817	2,672	-	891	891	891	0.01	19,384	7,090
OCT	31,245	79,340	110,585	1.43	13,158	13,009	1.48	93	225	916	2,142	3,057	-	140	1,489	1,629	0.02	19,424	7,080
NOV	31,215	89,815	121,030	1.48	12,892	12,905	1.33	88	248	915	2,408	3,322	-	92	92	92	0.02	19,424	7,080
DEC	33,332	94,244	127,576	1.50	12,946	12,892	1.38	91	264	943	2,526	3,469	-	62	62	62	0.02	19,424	7,080
* ADDJ																			
YR TOTALS	373,391	912,674	1,286,065	1.48	13,138	13,004	1.43	971	2,248	11,420	25,054	36,484	-	2,265	11,427	13,693	0.01	19,444	7,059
10*12 BTU	9,811,158	23,737,47	33,549											0.0003	0.0016	0.0019			

NOTES:

- 1) ALL ANALYSES USED ARE "AS RECEIVED" ON THE FUEL ANALYSIS SHEETS.
  - 2) SULFUR VALUES ARE PERCENT BY WEIGHT.
  - 3) MONTHLY COMPOSITE ANALYSES USED FOR BOTH UNITS FOR REPORTING PURPOSES, EVEN DURING MONTHS WHEN TEST BURNS OCCURRED.
  - 4) COAL TONS ARE PRORATED BURN.
  - \* STARRED ENTRY IS AERIAL SURVEY ADJUSTMENT, FUEL ANALYSIS IS EQUAL TO STATION Y-T-D WEIGHTED AVERAGE (December was adjusted)
- Emissions are based on Average emissions rate of the current year

1.093 - COAL-AVE lb SULFUR PER MMBTU  
 0.007 - #2 OIL - AVE lb SULFUR PER MMBTU  
 1.093 - OVERALL AVE lb SULFUR PER MMBTU

2.175 - AVERAGE LBS SO2 PER MMBTU  
 4.000 - NH STATE REG MAX

0.182 - MK1 AVERAGE LBS NOx/MMBTU  
 0.186 - MK2 AVERAGE LBS NOx/MMBTU

MERRIMACK STATION  
2006 SO2 - NOx EMISSIONS CALCULATIONS

Month	COAL AS BURNED					% COAL AS BURNED					#2 OIL AS BURNED								
	MK1 Tons	MK2 Tons	TOTAL Tons	% Sulfur	% MK1	MK1 btu/lb	MK2 btu/lb	% Sulfur	% MK2	MK1 Tons SO2	MK2 Tons SO2	TOTAL Tons SO2	% Sulfur	MK1 Gal.	MK2 Gal.	TOTAL Gal.	% Sulfur		
JAN	30,088	90,857	120,745	1.21	13,066	1.15	13,097	1.16	209	434	809	3,003	0.04	4,813	4,179	8,992	0.04	19,474	7,020
FEB	24,956	66,161	91,117	1.31	13,393	1.08	13,281	1.14	179	327	808	2,182	0.04	3,708	5,721	9,429	0.04	19,474	7,020
MAR	31,789	88,337	120,126	1.53	13,330	1.23	13,345	1.31	227	424	990	2,968	0.04	1,193	1,780	2,973	0.04	19,474	7,020
APR	24,221	50,411	74,632	1.50	13,396	1.25	13,319	1.36	175	239	734	1,973	0.04	2,258	142	2,400	0.04	19,564	7,060
MAY	23,814	27,330	50,944	1.90	13,060	1.20	12,853	1.53	59	71	846	1,822	0.04	4,135	6,100	10,235	0.04	19,564	7,060
JUN	23,429	91,812	117,041	1.60	13,113	1.41	12,889	1.45	55	189	759	3,019	0.03	2,161	929	3,080	0.03	19,428	7,080
JUL	34,387	96,757	131,124	1.42	12,875	1.32	12,660	1.34	71	182	1,048	3,422	0.03	83	168	252	0.03	19,617	7,068
AUG	34,161	96,238	130,399	1.59	12,895	1.29	12,770	1.37	72	180	1,263	3,786	0.03	-	87	87	0.03	19,617	7,068
SEP	4,801	69,873	74,474	1.59	12,885	1.24	12,870	1.27	11	152	192	1,902	0.03	1,257	5,892	7,149	0.03	19,617	7,068
OCT	27,517	92,176	119,693	1.15	13,106	1.16	13,116	1.16	202	424	778	3,019	0.11	2,005	618	2,623	0.11	19,444	7,060
NOV	28,916	91,964	120,880	1.23	13,128	1.24	12,914	1.24	200	375	852	2,973	0.11	2,729	-	2,729	0.11	19,444	7,060
DEC	29,738	90,939	110,677	1.81	13,124	1.57	13,157	1.63	198	317	920	2,844	0.11	1,585	3,453	5,046	0.11	19,444	7,060
* ADDJ	(296)	(4,690)	(4,956)	1.48	13,114	1.27	13,010	1.32	-	-	-	-	-	-	-	-	-	-	-
YR TOTALS	319,301	937,595	1,256,896	1.48	13,114	1.27	13,010	1.32	1,658	3,304	9,996	32,728	0.05	25,927	29,070	54,997	0.05	19,506	7,047
YR AVERAGE	8,374,437	24,399,885	32,771											0.0036	0.0040	0.0076			

1,015 - COAL-AVE lb SULFUR PER MMBTU  
 0.026 - #2 OIL - AVE lb SULFUR PER MMBTU  
 1,015 - OVERALL AVE lb SULFUR PER MMBTU

1,997 - AVERAGE LBS SO2 PER MMBTU  
 4,000 - NH STATE REG MAX

0.372 - MK1 AVERAGE LBS NOx/MMBTU  
 0.284 - MK2 AVERAGE LBS NOx/MMBTU

- NOTES:
- 1) ALL ANALYSES USED ARE "AS RECEIVED" ON THE FUEL ANALYSIS SHEETS.
  - 2) SULFUR VALUES ARE PERCENT BY WEIGHT.
  - 3) MONTHLY COMPOSITE ANALYSES USED FOR BOTH UNITS FOR REPORTING PURPOSES, EVEN DURING MONTHS WHEN TEST BURNS OCCURRED.
  - 4) COAL TONS ARE PRORATED BURN.
- \* STARRED ENTRY IS AERIAL SURVEY ADJUSTMENT. FUEL ANALYSIS IS EQUAL TO STATION Y-T-D WEIGHTED AVERAGE (December was adjusted)  
 Emissions are based on Average emissions rate of the current year

PSNH Merrimack Station  
Merrimack Unit #2

Attachment 4

Current Permit Limits

max gross heat input	3,473	mmBtu/hr
max annual gross heat input	30,423,480	mmBtu
max sulfur content of coal burned	2.80	lb/mmBtu
max sulfur content of #2 fuel oil	0.40	% by weight
max fuel consumption (coal)	136.20	tons/hr
max fuel consumption (coal)	1,193,078.0	tons per 12-mo
max fuel consumption (#2 oil)	1,656.0	gal/hr
max fuel consumption (#2 oil)	14,500,000.0	gallons per 12-mo
NOx	15.40	tons per day
	5,621.00	tpy calculated = 15.4 tpd * 365
SO2	85,185.74	tpy calculated = 2.8 lb/mmBtu * 3473 mmBtu/hr * 8760 * 2 / 2000

## **Exhibit 3**

May 23, 2000

R-19J

Henry Nickel  
Counsel for the Detroit Edison Company  
Hunton & Williams  
1900 K Street, N.W.  
Washington D.C. 20006-1109

Dear Mr. Nickel:

I am responding to your request on behalf of the Detroit Edison Company for an applicability determination regarding the proposed replacement and reconfiguration of the high pressure section of two steam turbines at the company's Monroe Power Plant, referred to as the Dense Pack project. Specifically, you requested that the United States Environmental Protection Agency (EPA) determine whether the Dense Pack project at the Monroe Power Plant would be considered a major modification that would subject the project to pollution control requirements under the Prevention of Significant Deterioration (PSD) program.

We have reviewed your original request, dated June 8, 1999, and the supplemental information you submitted on December 10, 1999, and March 16, 2000. We provisionally conclude that the Dense Pack project would not be a major modification. Thus, Detroit Edison may proceed with the project without first obtaining a PSD permit. Although the Dense Pack project would constitute a nonroutine physical change to the facility that might well result in a significant increase in air pollution, Detroit Edison asserts that emissions will not in fact increase due to the construction activity, and EPA has no information to dispute that assertion.

As you know, nonroutine changes of any type, purpose, or magnitude at an electric utility steam generating unit -- ranging from projects to increase production efficiency to even the complete replacement of entire major components -- are excluded from PSD coverage as long as they do not significantly increase emissions from the source. Thus, Detroit Edison has been free to proceed at any time with the Dense Pack project without first obtaining a PSD permit as long as it adheres to its stated intention to not increase emissions as a result of the project. Indeed, EPA encourages the company to proceed with the project on this basis, since it appears to both reduce emissions per unit of output and not increase actual air pollution.



As you are also aware, under the applicable new source review regulations, in determining if a physical change will result in a significant emissions increase at an electric utility plant, companies may use an "actual" to "representative actual annual emissions" test for emissions from the electric utility steam generating unit, under which a calculation of baseline emissions and a projection of future emissions after the change is needed. Our determination of nonapplicability is provisional because Detroit Edison has not, to our knowledge, provided a calculation of baseline emissions or projected future emissions to the permitting agency, and this should be done prior to the start of construction. The basis for this determination is summarized below and is set forth in full in the enclosed detailed analysis.

In determining whether an activity triggers PSD, the Clean Air Act and EPA's regulations specify a two-step test. The first step is to determine if such activity is a physical or operational change, and if it is, the second step is to determine whether emissions will increase because of the change. The statute admits of no exception from its sweeping scope, but EPA's regulations contain some narrow exceptions to the definition of physical or operational change. In particular, Detroit Edison claims that the Dense Pack project is eligible for the exclusion for routine maintenance, repair, and replacement. The determination of whether a proposed physical change is "routine" is a case-specific determination which takes into consideration the nature, extent, purpose, frequency, and cost of the work, as well as other relevant factors. After carefully reviewing all the information you submitted in light of the relevant factors, EPA has determined that the proposed project is not "routine."

The purpose of the Dense Pack project, to significantly enhance the present efficiency of the high pressure section of the steam turbine, signifies that the project is not routine. An upgrade of this nature is markedly different from the frequent, inexpensive, necessary, and incremental maintenance and replacement of deteriorated blades that is commonly practiced in the utility industry. For instance, past blade maintenance and replacement of only the deteriorated blades at Detroit Edison has never increased efficiency over the original design. Accordingly, because increasing turbine efficiency by a total redesign of a major component is a defining feature of the proposed Dense Pack project, it clearly goes significantly beyond both historic turbine work at Detroit Edison, and what would otherwise be considered a regular, customary, or standard undertaking for the purpose of maintaining the existing steam turbine units. The project also goes well beyond routine turbine

maintenance, repair, and replacement activities for the utility industry in general.

The nature and extent of the work in question -- replacement of the entire high pressure sections of the steam turbines for Units 1 and 4 at Monroe -- suggests that the Dense Pack project is not routine. It would result in greater efficiency above the level that can be reached by simply replacing deteriorated blades with ones of the same design and, in addition, will substantially increase efficiency over the original design. Specifically, the Dense Pack upgrade would not only restore the 7 percent of the efficiency rating lost over the years at each unit but would improve the unit's efficiency by an additional 5 percent over its original design capacity. Accordingly, the proposed project represents a significant and major redesign and replacement of the entire high pressure sections of the steam turbines at Units 1 and 4 at the Monroe facility.

The frequency with which utilities have undertaken turbine upgrades like the Dense Pack project also indicates the nonroutine nature of the changes. The information provided by Detroit Edison, regarding past history at the Monroe facility, describes what is characterized as necessary maintenance, repair, and replacement of deteriorated turbine blades approximately every 4 years. During these overhaul periods, it is not uncommon for the company to replace up to several turbine blades at one time. It is common among other utilities to also perform similar turbine maintenance. However, Detroit Edison has not provided any information to suggest that a complete replacement and redesign of the high pressure section of a steam turbine is conducted frequently at Monroe or at any other individual utility. Instead, Detroit Edison relies on its claim that projects "similar" to the Dense Pack project have been performed at a number of utilities. This information does not indicate that the replacement of the high pressure section of the steam turbine is frequent at the typical utility source; to the contrary, the only available information reflects that projects like the Dense Pack project have been performed only one time, if ever, at individual sources.

The cost of the Dense Pack project is significant and tends to indicate that this project is nonroutine. Detroit Edison expects the Dense Pack replacement to cost approximately \$6 million for each turbine unit, for a total of \$12 million. The EPA has rejected claims of routineness in past cases where the cost was substantially less than this figure. Moreover, Detroit Edison intends to capitalize the entire cost of this project, and EPA believes that a \$12 million project that is 100 percent capital improvement indicates that it is a major undertaking.

Beyond the clearly significant absolute cost of this project, available information suggests that this expenditure far exceeds the cost typically associated with turbine blade maintenance activity. Detroit Edison provided only a summary of the total project costs for past maintenance and inspections at the facility, the total costs of which ranged from less than \$1 million to a little more than \$6 million. Although Detroit Edison did not provide any detail regarding what specific activities comprise these aggregated amounts, it acknowledges that it spent only \$18,700, \$33,100, and \$7,900 to replace high-pressure rotors in three turbine projects in 1981 and 1982. Further, the project is significantly more costly than simply replacing deteriorated blades today; Detroit Edison acknowledges that the Dense Pack upgrade would cost three times more than its alternative blade repair and replacement project. Accordingly, it appears that the costs associated with the Dense Pack project greatly exceed the amounts spent previously by Detroit Edison or that it would spend presently for the replacement of deteriorated turbine blades or rotors.

For the reasons delineated above, we conclude that the changes proposed by Detroit Edison are not routine. Detroit Edison's submissions do not demonstrate that projects such as the Dense Pack project are frequent, inexpensive, or done for the purpose of maintaining the facility in its present condition. Instead, the source relies on two principal arguments: (1) it claims that this project is less significant in scope than was the activity in question in the 1988 applicability determination for the Wisconsin Electric Power Company (WEPCO); and (2) it alleges that EPA has interpreted the exclusion for routine activity expansively to exempt all projects that do not increase a unit's emission rate. EPA rejects both of these arguments, the former because both EPA and the U.S. Court of Appeals for the Seventh Circuit viewed WEPCO's activity as "far from" routine and thus this attempted comparison to WEPCO is unsuitable, and the latter because it is demonstrably incorrect. The attached analysis addresses these points in significant detail.

When nonroutine physical or operational changes significantly increase emissions to the atmosphere, they are properly characterized as major modifications and are subject to the PSD program. In general, a physical change in the nature of the Dense Pack project, which provides for the more economical production of electricity, would be expected to result in the increased utilization of the affected units, and thus, increased emissions. Notwithstanding the fact the Monroe units may be high on the dispatch order, the Dense Pack project would allow Detroit Edison to produce electricity more cheaply per unit of output, thereby creating an incentive to run Units 1 and 4 above current

levels. Even a small increase over current normal levels in the utilization of the affected units would result in a significant increase in actual emissions of criteria pollutants. For example, in 1997, at the Monroe facility Unit 1 emitted approximately 14,000 tons of nitrogen oxides (NO<sub>x</sub>) and 41,000 tons of sulfur dioxide (SO<sub>2</sub>), and Unit 2 emitted 12,000 tons of NO<sub>x</sub> and 35,000 tons of SO<sub>2</sub>. Based on this information, if a one to five percent increase in operation were to result from the Dense Pack project, increases on the order of 160-800 tons of NO<sub>x</sub> and 400-2000 tons of SO<sub>2</sub> would occur.

Detroit Edison, however, maintains that emissions will not increase as a result of the Dense Pack project. Specifically, the company contends that representative actual annual emissions following the change will not be greater than its pre-change actual emissions, because the Dense Pack upgrade will not result in increased utilization of the units. As you are aware, the PSD regulations (under the provisions commonly known as the "WEPCO rule") allow a source undertaking a nonroutine change that could affect emissions at an electric utility steam generating unit to lawfully avoid the major source permitting process by using the unit's representative actual annual emissions to calculate emissions following the change if the source submits information for 5 years following the change to confirm its pre-change projection. In projecting post-change emissions, Detroit Edison does not have to include that portion of the unit's emissions which could have been accommodated before the change and is unrelated to the change, such as demand growth.

Under the WEPCO rule, Detroit Edison must compute baseline actual emissions and must project the future actual emissions from the modified unit for the 2-year period after the physical change (or another 2-year period that is more representative of normal operation in the unit's modified state). As noted above, Detroit Edison has not provided these figures to verify its projection of no increase in actual emissions, and should submit them to the Michigan Department of Environmental Quality prior to beginning construction. In addition, Detroit Edison must maintain and submit to the permitting agency on an annual basis for a period of at least 5 years (or a longer period not to exceed 10 years, if such a period is more representative of the modified unit's normal post-change operations) from the date the units at the Monroe Plant resume regular operation, information demonstrating that the renovation did not result in a significant emissions increase. If Detroit Edison fails to comply with the reporting requirements of the WEPCO rule or if the submitted information indicates that emissions have increased as a consequence of the change, it will be required to obtain a PSD permit for the Dense Pack project.

Finally, regardless of whether PSD review is triggered due to the Dense Pack project, Detroit Edison must meet all other applicable federal, state, and local air pollution requirements.

This determination will be final in 30 days unless, during that time, Detroit Edison seeks to confer with or appeal to the Administrator or her designee regarding it. If you have any questions regarding this determination, please contact Laura Hartman, Environmental Engineer, at (312) 353-5703, or Jane Woolums, Associate Regional Counsel, at (312) 886-6720.

Sincerely,

/s/

Francis X. Lyons  
Regional Administrator

Enclosure

cc: Peter Marquardt, Esq., Special Counsel  
Detroit Edison Company  
2000 Second Avenue - 688 WCB  
Detroit, Michigan 48336

Russell Harding, Director  
Michigan Department of Environmental Quality

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