#4275


# NORTH AMERICAN ENERGY ALLIANCE, LLC

**c/o William P. Short III**
**44 West 62nd Street**
**P.O. Box 2371773**
**New York, New York 10023-7173**
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**w.shortiii@verizon.net**




August 18, 2011

Rhode Island Public Utilities Commission
Attn: Renewable Energy Resources Eligibility
89 Jefferson Boulevard
Warwick, Rhode Island 02888

Re: Application of Red Bridge Project for Certification as a 20.88% Rhode Island New Renewable Energy Resource and a 79.12% Rhode Island Existing Renewable Energy Resource

Dear Sir:

Attached please find an application for certification by the Rhode Island Public Utilities Commission (the "Commission") of the Red Bridge Project (the "Project" or the "Facility") of North America Energy Alliance, LLC ("NAEA") as a 20.88% Rhode Island New Renewable Energy Resource and a 79.12% Rhode Island Existing Renewable Energy Resource (the "Application").

In 2008, NAEA purchased the Project. NAEA is a Delaware limited liability company with its principal place of business at 99 Wood Avenue South, Suite 200, Iselin, New Jersey 08830. The company owns a portfolio of 1,755 megawatts of clean and efficient electricity producing power stations located in the Northeastern United States. NAEA is wholly-owned by Industry Funds Management Pty Ltd ("IFM"), an Australian company which has completed 47 transactions in its 16-year period with approximately $5.9 billion invested in the infrastructure sector. Additional information on NAEA and IFM may be found at www.naeallc.com and www.industryfundsmanagement.us, respectively.

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PUBLIC UTILITIES COMMISSION

For purposes of responding to inquiries regarding the Application, persons should contact the following:


**Primary Contact**

William P. Short III
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44 West 62nd Street
P.O. Box 237173
New York, New York 10023-7173
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**Secondary Contact**

John J. Bahrs III
Director, Asset Management
North American Energy Alliance, LLC
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The Red Bridge Project (FERC No. P-10676) is a 4,500 KW exempt from licensing, limited pond-and-release hydro-electric project located on the Chicopee River in the Towns of Wilbraham, Ludlow, Palmer and Belchertown in Hampden and Hampshire Counties, Massachusetts. The station has an estimated annual production of 19,000 MWh. A FERC exemption from licensing was issued September 11, 1992 and subsequently amended on December 29, 1999 and again on November 8, 2001. The Project has been in continuous compliance with its requirements for exemption from licensing since 1992.

NAEA is filing this application with the Commission after having done a substantial review of the records of the Project. That review showed that in early part of the last decade, Consolidated Edison Energy, Inc. ("CEEI")[1] upgraded the generation capacity of Red Bridge Project, from 3,600 KW to 4,500 KW with a series of capital improvements. Based upon the increased production attributed to these capital improvements and after adjusting for a permanent decrease in streamflow, NAEA requests that 20.88% of the generation of the Red Bridge Project be certified as a Rhode Island New Renewable Energy Resource while the balance, 79.12%, be certified as a Rhode Island Existing Renewable Energy Resource. Unfortunately, the actual increase in generating capacity,[2] the precise date when the capacity increase occurred[3] and in-service date of an automatic flow gate that permanently reduced flow to the Project's generators[4] make it hard to decipher from the record this percentage unless one examines the history of the FERC licensing of the Project starting in late 1989.

Specifically, on December 6, 1989,[5] Western Massachusetts Electric Company ("WMECO") filed an application to exempt the existing and operating 3,600 KW Red Bridge Project from the licensing requirements set forth in Part I of the Federal Power Act (Act). WMECO proposed to install a 695 KW minimum flow turbine-generator unit, bringing the

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[1] The actual owner of the Red Bridge Project was a wholly-owned subsidiary of CEEI, Consolidated Edison Energy Massachusetts, Inc ("CEEMI").
[2] 900 KW from 3,600 KW to 4,500 KW.
[3] Between late December 1999 and September 2000.
[4] On or about March 1, 2003.
[5] Given the length of this document, NAEA has decided not to provide this document with the Application; however, if the Commission believes that a copy is needed to complete its review of the Application, a copy will be provided.

Project's installed generation capacity to 4,295 KW. The proposed small hydropower project was described in the public notice filed with the application. During the comment period, no protests or motions to intervene were filed pursuant to the public notice. The comments of interested agencies and individuals, including the Department of Interior and the state fish and wildlife agencies, were fully considered in determining whether to issue the exemption from licensing.

On September 11, 1992, the Federal Energy Regulatory Commission ("FERC") granted WMECO an exemption from licensing for the Red Bridge Project. The Project qualified for an exemption from licensing under Part I of the Federal Power Act because WMECO proposed adding additional capacity by installing a minimum flow turbine unit at the Project. The Project was authorized to contain the following existing and new generating units:

**TABLE 1**

| FERC Project No. | Number Of Existing Units | Total Existing Capacity (KW) | New Min. Flow Unit Capacity (KW) | Authorized Capacity (KW) |
|---|---|---|---|---|
| 10676 | 2 | 3,600 | 695 | 4,295 |

Besides generating power, the other principal purpose of the minimum flow unit was to guaranty a permanent, minimum of 237 cfs (or inflow into the Red Bridge impoundment if less) of water at the base of the spillway in order to maintain the water quality of the Chicopee River. The exemption indicated that the minimum flow unit will be installed at such time that minimum flow unit becomes economically feasible.

WMECO requested two extensions of time to extend the deadline to commence and complete construction of the Project. In an August 30, 1996 order, the FERC extended the deadlines to begin and finish construction until September 10, 1998, and September 10, 2000, respectively. Ordering paragraph (B) of the order stated that in the event WMECO cannot comply with the deadline requirements, then it shall by September 10, 1998, either file a license application to convert its exemption into a license, or cease operation and file to surrender its exemption pursuant to the FERC's rules and regulations.

In a February 12, 1998 letter, WMECO informed the FERC that the minimum flow unit were not economically feasible. WMECO requested the FERC eliminate the requirement to install minimum flow unit at the Project and stated it would complete a performance test of the existing units and, if feasible, upgrade the turbines at the Project. In a letter dated April 13, 1998, the FERC accepted WMECO's proposal to eliminate the minimum flow unit and upgrade the existing runner.

On July 23, 1999, CEEI purchased from WMECO the Project, along with several other hydro-electric generating stations. CEEI reviewed all the options for increasing the capacity and concluded that minimum flow unit and upgraded runner for the Project were not economical. CEEI filed a revised development plan with the Commission on July 30, 1999. In a letter dated

October 27, 1999, the FERC requested CEEI to provide additional information regarding the plan. CEEI submitted its response in a supplemental filing dated December 6, 1999.

DEVELOPMENT PLAN

In the July 30, 1999 filing, CEEI submitted a proposed plan for a capacity increase at Red Bridge Project as follows:

> The existing powerhouse contains two active units with a total installed capacity of 3,600 kW. The powerhouse also has two inactive units which were retired in 1938. The active units were rewound between 1981 and 1987.
>
> CEEI proposed to replace the existing current limiting reactor and install cooling fans for the station transformer in order to increase the generating capacity of the project.[6] In addition, CEEI proposed to install new generator nameplates reflecting the rewinding of the units. In the Plan, CEEI explained that the proposed work will not affect impoundment water levels or required minimum flow. CEEI intended to operate the project with a one-foot drawdown during fish spawning season, and a two-foot drawdown for the remainder of the year.

A FERC staff review of the environmental impacts of the proposed measures for the Project found that an Environmental Assessment ("EA") was not required since there were sufficient environmental safeguards included in the existing exemption orders, as fully described below:

> The Red Bridge Project includes a dam, a canal headgate house (with 10 intake gates), a power canal, two operating penstocks and a powerhouse. CEEI proposed to increase the generating capacity at the Red Bridge Project by upgrading the existing transformer through the installation of new cooling fans. The proposed measure would not have any land-disturbing impacts.
>
> The exemption required a continuous minimum flow release of 237 cfs, or inflow, at the base of the spillway. The exemption also limits pond drawdowns to one foot below the crest of the dam from April to June and two feet for the remainder of the year. During a June 22, 1999, meeting, the resource agencies indicated the drawdowns would not likely have an adverse impact on fish habitat, but could adversely impact the existing boat launch. Also, Fish & Wildlife Service indicated the present flow release mechanism is inadequate for a permanent measure due to large fluctuations in actual release amounts.
>
> CEEI agreed to implement limitations for the pond level and proposed to review whether a one- or two-foot drawdown would affect the existing boat launch ramp. CEEI also proposed to install an automated slide gate at the spillway. The new slide gate would be capable of releasing the required

[6] As described in more detail below, these improvements essentially moved the limiting piece of equipment for the Project from the transformer to the turbines.

minimum flow from a single point on the spillway during full and low pond conditions. The CEEI indicated in the December 6, 1999 letter that the use of a new slide gate at the spillway was also acceptable to both the FWS and the MADFW.

Articles 12 and 13 of the exemption precluded adverse impacts to historic resources. Article 12 required CEEI to: (1) consult with the State Historic Preservation Officer ("SHPO") before undertaking any construction activity that would result in any modification of the project's existing historic facilities; and (2) file, for FERC approval, its final design drawings, including SHPO's comments on these drawings. Article 13 required that CEEI consult with the SHPO and, if necessary, develop and implement a cultural resource management plan before undertaking any project-related construction activity that is not specifically authorized by the 1992 exemption order. Since the proposed automatic slide gate was not authorized by the subject order, CEEI had to fulfill the measures delineated by Articles 12 and 13 before proceeding with its proposed installation.

Also, Article 14 of the exemption required CEEI to file, for FERC approval, an erosion control plan before the start of any land-disturbing, land-clearing or spoil-producing activities at the project. Development and implementation of the erosion control plan will minimize any adverse impacts of slide gate installation on water quality and fishery resources.

FERC Staff found the impacts from the proposed development plans are less than the anticipated impacts resulting from installation of the minimum flow unit, since less ground disturbance is required. FERC Staff concluded that approving CEEI's proposed plan and amending the exemptions would not constitute a major federal action significantly affecting the quality of the human environment.

Subsequently, the FERC Director ordered, among other things, the following:

(A) the exemption for the Red Bridge project, FERC No. 10676, was amended as provided by this order, effective the first day of the month (December 1999) in which this order is issued.

(B) The development plan for the Red Bridge project filed on July 30, 1999, and supplemented on December 6, 1999, is approved by this order.

(C) The project description for the Red Bridge exemptions revised, in part, to read: Description of Project: " . . . ; (5) a powerhouse containing two generating units, with a rated capacity of 2,315 kW each, for a total installed capacity of 4,630 (KW . . . ".

(D) Within 60 days of issuance of this order, the exemptee shall install new generator nameplates on the units at the Red Bridge project to indicate its new capacity. Within 30 days of installation of the nameplates, the exemptee

shall provide photographs of nameplates to the FERC with a copy to the FERC's New York Regional Office, for verification.

On September 13, 2000, and supplemented on June 1, 2001,[7] CEEI filed documentation regarding the generating units installed at the Project with the FERC. CEEI submitted the filing in accordance with ordering paragraph (D) of the Order Amending Exemptions issued on December 29, 1999.

BACKGROUND

On December 29, 1999, the FERC approved a Development Plan to amend the installed capacity at the Red Bridge Project. In the Plan, CEEI proposed miscellaneous upgrades or modifications to increase the installed capacity at the Project, as shown in Table 2.

**TABLE 2**

| FERC Project No. | Unit No. | Generator (KW) | Turbine Rating (HP) | Total Proposed Capacity (KW) |
|---|---|---|---|---|
| 10676 | 3 & 4 | 2 @ 2,315 | 2 @ 3,000 | 4,630 |

Ordering paragraph (D) of the order required CEEI to install new generator nameplates on the units at the Project to indicate its new capacities. The order also required CEEI to file with the FERC photographs of new nameplates for verification.

REVIEW

In the September 13, 2000, filing CEEI provided information regarding the as-built generator capacity of the units installed at the Red Bridge Project. In the filing, CEEI indicated that new transformers fans were installed at the Red Bridge Project, and included photo documentation of new generator nameplates for the Project. The new turbine and generator ratings for the Project are indicated in Table 3.

**TABLE 3**

| Project Name & FERC Number | Unit Number | Turbine HP | Turbine KW | Generator KVA Rating & Power Factor | Generator KW | Limiting Unit Capacity | Installed Capacity (KW) |
|---|---|---|---|---|---|---|---|
| Red Bridge (10676) | 3 | 3,000 | 2,250 | 2,815 @ 0.8 | 2,252 | 2,250 | 2,250 |
| Red Bridge (10676) | 4 | 3,000 | 2,250 | 2,963 @ 0.8 | 2,370 | 2,250 | 2,250 |
| Totals | | 6,000 | 4,500 | 5,778 @ 0.8 | 4,622 | 4,500 | 4,500 |

[7] A copy of this latter filing could not be located in either the NAEA or FERC files.

The installed capacity is based on the lesser of ratings of the turbine or generator units. A turbine's rating in HP is multiplied by 3/4 to convert to KW. The KVA rating is multiplied by Power Factor to convert to KW.

In its review of the installed capacity for the Project, the FERC found that **now** the turbines are the limiting factor for power production for the Red Bridge Project.[8] Therefore, this FERC order solely revised the project description of the exemption to reflect the as-built capacities. The total installed capacity of Red Bridge exemption was revised as shown in the above table.

Subsequently, the FERC Director ordered, among other things, the following:

(A) The exemption for the Red Bridge project was amended, effective the first day of the month in which this order is issued (November 2001).

(B) The project description for the Red Bridge Project was revised, in part, to read: Description of Project: " . . . ; (5) a powerhouse containing two generating units, with a total installed capacity of 4,500 kW . . . ".

In summary, the Project prior to January 1, 1998 was 3,600 KW hydro-electric project subject to an order to maintain a minimum flow 237 cfs and to install a 695 KW minimum flow turbine-generator at such time that the minimum flow unit becomes economically feasible. By late 1999, it became evident that the minimum flow unit was not economical but that the minimum flow had not been achieved. Accordingly, it was decided to install an automated slide gate at the spillway to satisfy the minimum flow requirement of 237 cfs as well as replace the existing current limiting reactor and install cooling fans for the station transformer in order to increase the generating capacity at the Red Bridge Project by 1,150 KW from 3,600 KW to 4,650 KW.

Permission was received from the FERC to move ahead with these tasks on December 29, 1999. By September 13, 2000, the cooling fans for the station transformer and the other capital improvements had been installed. The FERC was notified of the increase in generating capacity; however, the generating uprate of the Project was found only to be 900 KW. On November 8, 2001, the FERC updated its prior order by adjusting the generating capacity of the Project to 4,500 KW.

On December 13, 2002, FERC was informed that the civil portions of the minimum flow gate were substantially completed and that the gate would be fully operational in the spring after CEEMI completed the balance of the electrical work. Thus, both the upgrade to the generation capacity and the installation of the automatic flow gate were completed on or about March 1, 2003.

NAEA believes that the record is clear that the Project increased its generating capacity after December 31, 1997 by 900 KW or 25% from 3,600 KW to 4,500 KW. Furthermore,

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[8] Previously, the limiting piece of equipment had been the transformer.

NAEA believes that this capacity increase did not involve any new impoundment or diversion of water with an average salinity of twenty (20) parts per thousand or less.

NAEA reviewed the generation and streamflow records for Red Bridge Project and USGS gage at Indian Orchard for the period of 1995 through 2010, respectively.[9] Except for the period of the last six months of 1999 and all of 2000, monthly generation records for the Project were obtained from EIA or the NEPOOL GIS. Monthly streamflow data of the Chicopee River at the USGS gage at Indian Orchard were obtained from the USGS for the period of 1995 through mid-year 2010. The streamflow data was then reduced by 4% to account for reduction in watershed between the Indian Orchard gage and the Red Bridge Project.

Several calculations of the hydro-electric power plant efficiency (electric production in MWh divided by streamflow in cfs) of the Project for both the pre- and post-improvement periods were made. For the period of 1995-1999, the average monthly hydro-electric power plant efficiency was calculated to be 1.3718 while for the period of 1995-1997 the average monthly hydro-electric power plant efficiency was calculated to be 1.4889. After February 2003, the average monthly hydro-electric power plant efficiency was calculated to be 1.3644.

If one subtracts 237 (or inflow, if less) cfs from the average streamflow for the period after February 2003 to account for the permanent diversion of 237 cfs of flow, the average monthly hydro-electric power plant efficiency increased to 5.9496. This analysis indicates that nearly 75% of the post February 2003-electric production is attributed to the post-1997 capital improvements.

An examination of the individual monthly data shows that there are both extraneous high and low data points.[10] Subtracting out those data points lowers for the period of 1995-1999, the average monthly hydro-electric power plant efficiency falls to 1.3038 while for the period of 1995-1997 the average monthly hydro-electric power plant efficiency falls to 1.3505. For the post-February 2003, the average monthly hydro-electric power plant efficiency falls to 1.6021. This revised analysis indicates that 15.71% of the post February 2003-electric production is attributed to the post-1997 capital improvements.

If one adds 633 MWh[11] per month (or proportionally less, if monthly inflow is less than 237 cfs)[12] to the monthly electric generation for the period after February 2003 to account for the permanent diversion of 237 cfs of flow (but keeping the streamflow data unchanged), the average monthly efficiency increases to 1.7606. This analysis indicates that nearly 23.30% of the post February 2003-electric production is attributed to the post-1997 capital improvements.

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[9] Indian Orchard gage is located approximately 8 miles downstream of Red Bridge Project.

[10] Four data points from pre-2000 were discarded while 4 data points from post-February 2003 were discarded.

[11] 633 MWh is the power production lost by the permanent diversion of 237 cfs and is calculated by assuming 1230 cfs of flow produces 4.500 MW or 3,285 MWh per month; 633 MWh represents 237 cfs divided by 1230 cfs times 3,285 MWh.

[12] If streamflow in a month was greater than 1230 cfs, no adjustment to generation was made since the Project was assumed to be already operating at maximum output.

The pre- and combined post average monthly efficiencies produce an average monthly hydro-electric power plant efficiency of 1.3505 and 1.7071,[13] respectively. This analysis indicates that 20.88% of the post February 2003-electric production is attributed to the post-1997 capital improvements. Accordingly, NAEA requests that the Rhode Island Public Utilities Commission certify the Red Bridge Project as a 20.88% Rhode Island New Renewable Energy Resource and a 79.12% Rhode Island Existing Renewable Energy Resource.

Upon your review of our application, if you have any questions on comments, please do not hesitate to contact either John Bahrs or myself.

Sincerely yours,

*William P. Short III*

attachments

cc: John J. Bahrs III
Kim Marsili
David Schmidt
Nicholas Hollister

[13] The average post-February 2003 hydro-electric power plant efficiency is the average of 1.6021 (the 237 cfs adjustment) and 1.7606 (the 633 MWh adjustment) numbers.

# LISTS OF ATTACHMENTS

Application for Certification of the Red Bridge Project, dated August 18, 2011

FERC Order Granting Exemption from Licensing, issued September 11, 1992

FERC Order Granting Extension of Time, issued August 30, 1996

WMECO (NU) Letter, dated February 12, 1998

FERC Letter, dated April 13, 1998

ConEd Energy Letter, dated July 29, 1999

FERC Letter, dated October 27, 1999

ConEd Energy Letter, dated December 6, 1999

FERC Order Amending Exemptions, issued December 29, 1999

ConEd Energy Letter, dated September 13, 2000

FERC Order Amending Exemptions, issued November 8, 2001

Kleinschmidt Letter, dated December 13, 2002

Analysis of Red Bridge Project Hydro-electric Dam Efficiency (1995-2010)

Analysis of Red Bridge Project Hydro-electric Dam Efficiency with 237 cfs Streamflow Adjustment (1995-2010)

Analysis of Red Bridge Project Efficiency Hydro-electric Dam with 633 MWh Generation Adjustment (1995-2010)

CT DPUC Order Docket No. # 04-01-23, dated February 22, 2006

CT DPUC Order Docket No. # 04-01-23RE, dated April 20, 2006

CT DPUC Order Docket No. # 04-01-23RE01, dated June 28, 2006

| RIPUC Use Only | |
|---|---|
| Date Application Received: | __ __/__ __/__ __ |
| Date Review Completed: | __ __/__ __/__ __ |
| Date Commission Action: | __ __/__ __/__ __ |
| Date Commission Approved: | __ __/__ __/__ |

| GIS Certification #: |
|---|
| MSS # 874 |

# RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM

## The Standard Application Form
## Required of all Applicants for Certification of Eligibility of Renewable Energy Resource
## (Version 7 – June 11, 2010)

## STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
## Pursuant to the Renewable Energy Act
## Section 39-26-1 et. seq. of the General Laws of Rhode Island

**NOTICE:**
**When completing this Renewable Energy Resources Eligibility Form and any applicable Appendices, please refer to the State of Rhode Island and Providence Plantations Public Utilities Commission Rules and Regulations Governing the Implementation of a Renewable Energy Standard (RES Regulations, Effective Date: January 1, 2006), and the associated RES Certification Filing Methodology Guide. All applicable regulations, procedures and guidelines are available on the Commission's web site: www.ripuc.org/utilityinfo/res.html. Also, all filings must be in conformance with the Commission's Rules of Practice and Procedure, in particular, Rule 1.5, or its successor regulation, entitled "Formal Requirements as to Filings."**

**• Please complete the Renewable Energy Resources Eligibility Form and Appendices using a typewriter or black ink.**

**• Please submit one original and three copies of the completed Application Form, applicable Appendices and all supporting documentation to the Commission at the following address:**

**Rhode Island Public Utilities Commission**
**89 Jefferson Blvd**
**Warwick, RI 02888**
**Attn: Renewable Energy Resources Eligibility**

**In addition to the paper copies, electronic/email submittals are required under Commission regulations. Such electronic submittals should be sent to: Luly E. Massaro, Commission Clerk at lmassaro@puc.state.ri.us**

**• In addition to filing with the Commission, Applicants are required to send, electronically or electronically and in paper format, a copy of the completed Application including all attachments and supporting documentation, to the Division of Public Utilities and Carriers and to all interested parties. A list of interested parties can be obtained from the Commission's website at www.ripuc.org/utilityinfo/res.html.**

**• Keep a copy of the completed Application for your records.**

**• The Commission will notify the Authorized Representative if the Application is incomplete.**

**• Pursuant to Section 6.0 of the RES Regulations, the Commission shall provide a thirty (30) day period for public comment following posting of any administratively complete Application.**

**• Please note that all information submitted on or attached to the Application is considered to be a public record unless the Commission agrees to deem some portion of the application confidential after consideration under section 1.2(g) of the Commission's Rules of Practice and Procedure.**

**• In accordance with Section 6.2 of the RES Regulations, the Commission will provide prospective reviews for Applicants seeking a preliminary determination as to whether a facility would be eligible prior to the formal certification process described in Section 6.1 of the RES Regulations. Please note that space is provided on the Form for applicant to designate the type of review being requested.**

**• Questions related to this Renewable Energy Resources Eligibility Form should be submitted in writing, preferably via email and directed to: Luly E. Massaro, Commission Clerk at lmassaro@puc.state.ri.us**

**SECTION I: Identification Information**

1.1 Name of Generation Unit (sufficient for full and unique identification):

**Red Bridge Project**

1.2 Type of Certification being requested (check one):

X Standard Certification ❑ Prospective Certification (Declaratory Judgment)

1.3 This Application includes: (Check all that apply)[1]

- ❑ APPENDIX A: Authorized Representative Certification for Individual Owner or Operator
- X APPENDIX B: Authorized Representative Certification for Non-Corporate Entities Other Than Individuals
- X APPENDIX C: Existing Renewable Energy Resources
- ❑ APPENDIX D: Special Provisions for Aggregators of Customer-sited or Off-grid Generation Facilities
- ❑ APPENDIX E: Special Provisions for a Generation Unit Located in a Control Area Adjacent to NEPOOL
- ❑ APPENDIX F: Fuel Source Plan for Eligible Biomass Fuels

1.4 Primary Contact Person name and title:

**William P. Short III, Consultant**

1.5 Primary Contact Person address and contact information:

Address:
**P.O. Box 237173**
**New York, New York 10023-7173**
Phone: **(917) 206-0001** Fax: **(917) 206-0001**
Email: **w.shortiii@verizon.net**

1.6 Backup Contact Person name and title:
**John J. Bahrs, Director and General Manager, New England Region**

1.7 Backup Contact Person address and contact information:

Address: **North American Energy Alliance, LLC**
**99 Wood Avenue, Suite 200**
**Iselin, New Jersey 08830**
Phone: **(732) 623-7476** Fax: **(732) 623-8813**
Email: **john.bahrs@naeallc.com**

[1] Please note that all Applicants are required to complete the Renewable Energy Resources Eligibility Standard Application Form and all of the Appendices that apply to the Generation Unit or Owner or Operator that is the subject of this Form. Please omit Appendices that do not apply.

1.8 Name and Title of Authorized Representative (*i.e.*, the individual responsible for certifying the accuracy of all information contained in this form and associated appendices, and whose signature will appear on the application):

**William P. Short III, Consultant**

Appendix A or B (as appropriate) completed and attached? X Yes ❑ No ❑ N/A

1.9 Authorized Representative address and contact information:
Address:
**P.O. Box 237173**
**New York, New York 10023-7173**
Phone: **(917) 206-0001** Fax: **(917) 206-0001**
Email: **w.shortiii@verizon.net**

1.10 Owner name and title:
**John J. Bahrs, Director and General Manager, New England Region**

1.11 Owner address and contact information:
Address: **North American Energy Alliance, LLC**
**99 Wood Avenue, Suite 200**
**Iselin, New Jersey 08830**
Phone: **(732) 623-7476** Fax: **(732) 623-8813**
Email: **john.bahrs@naeallc.com**

1.12 Owner business organization type (check one):
❑ Individual
❑ Partnership
❑ Corporation
X Other: **Delaware Limited Liability Company**

1.13 Operator name and title: **John J. Bahrs, Director and General Manager, New England Region**
Operator address and contact information:
Address: **North American Energy Alliance, LLC**
**99 Wood Avenue, Suite 200**
**Iselin, New Jersey 08830**
Phone: **(732) 623-7476** Fax: **(732) 623-8813**
Email: **john.bahrs@naeallc.com**

1.15 Operator business organization type (check one):
❑ Individual
❑ Partnership
❑ Corporation
X Other: **Delaware Limited Liability Company**

**SECTION II: Generation Unit Information, Fuels, Energy Resources and Technologies**

2.1 ISO-NE Generation Unit Asset Identification Number or NEPOOL GIS Identification Number (either or both as applicable): **MSS # 874**

2.2 Generation Unit Nameplate Capacity: **4.500 MW**

2.3 Maximum Demonstrated Capacity: **4.532 MW (source: 2010 ISO-NE CELT Report)**

2.4 Please indicate which of the following Eligible Renewable Energy Resources are used by the Generation Unit: (Check ALL that apply) – *per RES Regulations Section 5.0*

- ❑ Direct solar radiation
- ❑ The wind
- ❑ Movement of or the latent heat of the ocean
- ❑ The heat of the earth
- X Small hydro facilities
- ❑ Biomass facilities using Eligible Biomass Fuels and maintaining compliance with all aspects of current air permits; Eligible Biomass Fuels may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from multi-fuel facilities shall be considered eligible.
- ❑ Biomass facilities using unlisted biomass fuel
- ❑ Biomass facilities, multi-fueled or using fossil fuel co-firing
- ❑ Fuel cells using a renewable resource referenced in this section

2.5 If the box checked in Section 2.4 above is "Small hydro facilities", please certify that the facility's aggregate capacity does not exceed 30 MW. – *per RES Regulations Section 3.32*

X ← check this box to certify that the above statement is true

❑ N/A or other (please explain) _____

_____

2.6 If the box checked in Section 2.4 above is "Small hydro facilities", please certify that the facility does not involve any new impoundment or diversion of water with an average salinity of twenty (20) parts per thousand or less. – *per RES Regulations Section 3.32*

X ← check this box to certify that the above statement is true

❑ N/A or other (please explain) _____

_____

2.7 If you checked one of the Biomass facilities boxes in Section 2.4 above, please respond to the following:

A. Please specify the fuel or fuels used or to be used in the Unit: _____

_____

B. Please complete and attach Appendix F, Eligible Biomass Fuel Source Plan.

Appendix F completed and attached? ❑ Yes ❑ No ❑ N/A

2.8 Has the Generation Unit been certified as a Renewable Energy Resource for eligibility in another state's renewable portfolio standard?

X Yes ❑ No If yes, please attach a copy of that state's certifying order.

Copy of State's certifying order attached? X Yes ❑ No ❑ N/A

**SECTION III: Commercial Operation Date**

Please provide documentation to support all claims and responses to the following questions:

3.1 Date Generation Unit first entered Commercial Operation: 1 / 1 / 1926 at the site.

If the commercial operation date is after December 31, 1997, please provide independent verification, such as the utility log or metering data, showing that the meter first spun after December 31, 1997. This is needed in order to verify that the facility qualifies as a New Renewable Energy Resource.

Documentation attached? ❑ Yes ❑ No ❑ N/A

3.2 Is there an Existing Renewable Energy Resource located at the site of Generation Unit?

X Yes
❑ No

3.3 If the date entered in response to question 3.1 is earlier than December 31, 1997 or if you checked "Yes" in response to question 3.2 above, please complete Appendix C.

Appendix C completed and attached? X Yes ❑ No ❑ N/A

3.4 Was all or any part of the Generation Unit used on or before December 31, 1997 to generate electricity at any other site?

❑ Yes
X No

3.5 If you checked "Yes" to question 3.4 above, please specify the power production equipment used and the address where such power production equipment produced electricity (attach more detail if the space provided is not sufficient):

_____

_____

_____

**SECTION IV: Metering**

4.1 Please indicate how the Generation Unit's electrical energy output is verified (check all that apply):

X ISO-NE Market Settlement System
❑ Self-reported to the NEPOOL GIS Administrator

❑ Other (please specify below and see Appendix D: Eligibility for Aggregations):

_____

Appendix D completed and attached? ❑ Yes ❑ No X N/A

**SECTION V: Location**

5.1 Please check one of the following that apply to the Generation Unit:

X Grid Connected Generation
❑ Off-Grid Generation (not connected to a utility transmission or distribution system)
❑ Customer Sited Generation (interconnected on the end-use customer side of the retail electricity meter in such a manner that it displaces all or part of the metered consumption of the end-use customer)

5.2 Generation Unit address: **The Red Bridge Project is located in the Towns of Wilbraham, Ludlow, Palmer and Belchertown in Hampden and Hampshire Counties, Massachusetts, at approximate river mile 15.2 on the Chicopee River. The Project dam crosses the town line between Wilbraham and Ludlow; the powerhouse is located in Wilbraham.**

5.3 Please provide the Generation Unit's geographic location information:

A. Universal Transverse Mercator Coordinates: _____

B. Longitude/Latitude: **$42^0$ 10'33.71" N /$72^0$ 24'34.26" W**

5.4 The Generation Unit located: (please check the appropriate box)

X In the NEPOOL control area
❑ In a control area adjacent to the NEPOOL control area
❑ In a control area other than NEPOOL which is not adjacent to the NEPOOL control area ← *If you checked this box, then the generator does not qualify for the RI RES – therefore, please do not complete/submit this form.*

5.5 If you checked "In a control area adjacent to the NEPOOL control area" in Section 5.4 above, please complete Appendix E.

Appendix E completed and attached? ❑ Yes ❑ No X N/A

## SECTION VI: Certification

6.1 Please attach documentation, using one of the applicable forms below, demonstrating the authority of the Authorized Representative indicated in Section 1.8 to certify and submit this Application.

**Corporations**

If the Owner or Operator is a corporation, the Authorized Representative shall provide **either**:

(a) Evidence of a board of directors vote granting authority to the Authorized Representative to execute the Renewable Energy Resources Eligibility Form, **or**

(b) A certification from the Corporate Clerk or Secretary of the Corporation that the Authorized Representative is authorized to execute the Renewable Energy Resources Eligibility Form or is otherwise authorized to legally bind the corporation in like matters.

Evidence of Board Vote provided? ❑ Yes ❑ No X N/A

Corporate Certification provided? ❑ Yes ❑ No X N/A

**Individuals**

If the Owner or Operator is an individual, that individual shall complete and attach APPENDIX A, or a similar form of certification from the Owner or Operator, duly notarized, that certifies that the Authorized Representative has authority to execute the Renewable Energy Resources Eligibility Form.

Appendix A completed and attached? ❑ Yes ❑ No X N/A

**Non-Corporate Entities**

(Proprietorships, Partnerships, Cooperatives, etc.) If the Owner or Operator is not an individual or a corporation, it shall complete and attach APPENDIX B or execute a resolution indicating that the Authorized Representative named in Section 1.8 has authority to execute the Renewable Energy Resources Eligibility Form or to otherwise legally bind the non-corporate entity in like matters.

Appendix B completed and attached? X Yes ❑ No ❑ N/A

6.2 Authorized Representative Certification and Signature:

I hereby certify, under pains and penalties of perjury, that I have personally examined and am familiar with the information submitted herein and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties, both civil and criminal, for submitting false information, including possible fines and punishment. My signature below certifies all information submitted on this Renewable Energy Resources Eligibility Form. The Renewable Energy Resources Eligibility Form includes the Standard Application Form and all required Appendices and attachments. I acknowledge that the Generation Unit is obligated to and will notify the Commission promptly in the event of a change in a generator's eligibility status (including, without limitation, the status of the air permits) and that when and if, in the Commission's opinion, after due consideration, there is a material change in the characteristics of a Generation Unit or its fuel stream that could alter its eligibility, such Generation Unit must be re-certified in accordance with Section 9.0 of the RES Regulations. I further acknowledge that the Generation Unit is obligated to and will file such quarterly or other reports as required by the Regulations and the Commission in its certification order. I understand that the Generation Unit will be immediately de-certified if it fails to file such reports.

Signature of Authorized Representative:

SIGNATURE: William P. Short III DATE: 8/18/11

**Consultant**
(Title)

GIS Certification #:
MSS # 874

# APPENDIX B
## (Required When Owner or Operator is a Non-Corporate Entity Other Than An Individual)

## STATE OF RHODE ISLAND
## PUBLIC UTILITIES COMMISION

## RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
**Pursuant to the Renewable Energy Act**
**Section 39-26-1 et. seq. of the General Laws of Rhode Island**

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**RESOLUTION OF AUTHORIZATION**

**Resolved**: that William P. Short III, named in Section 1.8 of the Renewable Energy Resources Eligibility Form as Authorized Representative, is authorized to execute the Application on the behalf of North American Energy Alliance, LLC, the Owner or Operator of the Generation Unit named in section 1.1 of the Application.

SIGNATURE: _____ DATE: 8/18/11

JOHN J. BARRS

DIRECTOR + GM, NEW ENGLAND REGION

State: NEW JERSEY

County: MIDDLESEX

(TO BE COMPLETED BY NOTARY) I, CYNTHIA A. LANE as a notary public, certify that I witnessed the signature of the above named JOHN J. BARRS, and that said person stated that he/she is authorized to execute this resolution, and the individual verified his/her identity to me, on this date: AUGUST 18, 2011.

SIGNATURE: Cynthia A Lane DATE: 8/18/2011

My commission expires on: 11/13/2013 NOTARY SEAL:

CYNTHIA A. LANE
I.D. # 2379951
Notary Public of New Jersey
Commission Expires 11/13/2013

GIS Certification #:
MSS # 874

# APPENDIX C
## (Revised 6/11/10)
## (Required of all Applicants with Generation Units at the Site of Existing Renewable Energy Resources)

## STATE OF RHODE ISLAND
## PUBLIC UTILITIES COMMISION

## RENEWABLE ENERGY RESOURCES ELIGIBILITY FORM
**Pursuant to the Renewable Energy Act**
**Section 39-26-1 et. seq. of the General Laws of Rhode Island**

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If the Generation Unit: (1) first entered into commercial operation before December 31, 1997; or (2) is located at the exact site of an Existing Renewable Energy Resource, please complete the following and attach documentation, as necessary to support all responses:

C.1 Is the Generating Unit seeking certification, either in whole or in part, as a New Renewable Energy Resource? X Yes ❑ No

C.2 If you answered "Yes" to question C.1, please complete the remainder of Appendix C. If you answered "No" and are seeking certification entirely as an Existing Renewable Energy Resource, you do NOT need to complete the remainder of Appendix C.

C.3 If an Existing Renewable Energy Resource is/was located at the site, has such Existing Renewable Energy Resource been retired and replaced with the new Generation Unit at the same site? ❑ Yes X No

C.4 Is the Generation Unit a Repowered Generation Unit (as defined in Section 3.29 of the RES Regulations) which uses Eligible Renewable Energy Resources and which first entered commercial operation after December 31, 1997 at the site of an existing Generation Unit? ❑ Yes X No

C.5 If you checked "Yes" to question C.4 above, please provide documentation to support that the entire output of the Repowered Generation Unit first entered commercial operation after December 31, 1997.

C.6 Is the Generation Unit a multi-fuel facility in which an Eligible Biomass Fuel is first co-fired with fossil fuels after December 31, 1997? ❑ Yes X No

C.7 If you checked "Yes" to question C.6 above, please provide documentation to support that the renewable energy fraction of the energy output first occurred after December 31, 1997.

C.8 Is the Generation Unit an Existing Renewable Energy Resource other than an Intermittent Resource (as defined in Sections 3.10 and 3.15 of the RES Regulations)? ☐ Yes X No

C.9 If you checked "Yes" to question C.8 above, please attach evidence of completed capital investments after December 31, 1997 attributable to efficiency improvements or additions of capacity that are sufficient to, were intended to, and can be demonstrated to increase annual electricity output in excess of ten percent (10%). As specified in Section 3.23.v of the RES Regulations, the determination of incremental production shall not be based on any operational changes at such facility **not directly** associated with the efficiency improvements or additions of capacity.

Please provide the single proposed percentage of production to be deemed incremental, attributable to the efficiency improvements or additions of capacity placed in service after December 31, 1997. Please make this calculation by comparing actual electrical output over the three calendar years 1995-1997 (the "Historical Generation Baseline") with the actual output following the improvements. The incremental production above the Historical Generation Baseline will be considered "New" generation for the purposes of RES. Please give the percentage of the facility's total output that qualifies as such to be considered "New" generation.

C.10 Is the Generating Unit an Existing Renewable Energy Resource that is an Intermittent Resource? X Yes ☐ No

C.11 If you checked "Yes" to question C.10 above, please attach evidence of completed capital investments after December 31, 1997 attributable to efficiency improvements or additions of capacity that are sufficient to, were intended to, and have demonstrated on a normalized basis to increase annual electricity output in excess of ten percent (10%). The determination of incremental production shall not be based on any operational changes at such facility **not directly** associated with the efficiency improvements or additions of capacity. In no event shall any production that would have existed during the Historical Generation Baseline period in the absence of the efficiency improvements or additions to capacity be considered incremental production. Please refer to Section 3.23.vi of the RES Regulations for further guidance.

C.12 If you checked "Yes" to C.10, provide the single proposed percentage of production to be deemed incremental, attributable to the efficiency improvements or additions of capacity placed in service after December 31, 1997. The incremental production above the Historical Generation Baseline will be considered "New" generation for the purposes of RES. Please make this calculation by comparing actual monthly electrical output over the three calendar years 1995-1997 (the "Historical Generation Baseline") with the actual output following the improvements on a normalized basis. Please provide back-up

information sufficient for the Commission to make a determination of this incremental production percentage.

For example, for small hydro facilities, please use historical river flow data to create a monthly normalized comparison (e.g. average MWh produced per cubic foot/second of river flow for each month) between actual output values post-improvements with the Historical Generation Baseline. For solar and wind facilities, please use historical solar irradiation, wind flow, or other applicable data to normalize the facility's current production against the Historical Generation Baseline.

C.13 If you checked "no" to both C.3 and C.4 above, please complete the following:

a. Was the Existing Renewable Energy Resource located at the exact site at any time during calendar years 1995 through 1997? X Yes ☐ No

b. If you checked "yes" in Subsection (a) above, please provide the Generation Unit Asset Identification Number and the average annual electrical production (MWhs) for the three calendar years 1995 through 1997, or for the first 36 months after the Commercial Operation Date if that date is after December 31, 1994, for each such Generation Unit.

c. Please attach a copy of the derivation of the average provided in (b) above, along with documentation support (such as ISO reports) for the information provided in Subsection (b) above. Data must be consistent with quantities used for ISO Market Settlement System.