Summit Hydropower, Inc.
6 Far Hills Drive
Avon, Connecticut 06001
(860) 255-7744; (860) 428-2793
dbroatch@earthlink.net

June 1, 2013

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

Re: Application of Summit Hydropower's Wyre Wynd Hydroelectric Project for Certification as a 20.45% Rhode Island New Renewable Energy Resource and a 79.55% Rhode Island Existing Renewable Energy Resource (the "Application")

Dear Sir:

Attached please find an application for certification by the Rhode Island Public Utilities Commission (the "Commission") of the Wyre Wynd Hydroelectric Project (the "Project" or the "Facility") of Summit Hydropower, Inc. ("Summit") as a 20.45% Rhode Island New Renewable Energy Resource and a 79.55% Rhode Island Existing Renewable Energy Resource (the "Application").

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

Primary Contact

William P. Short III
Consultant
44 West 62nd Street
P.O. Box 237173
New York, New York 10023-7173
(917) 206-0001 Office
(201) 970-3707 Cell
w.shortiii@verizon.net

Secondary Contact

Duncan S. Broatch
President
Summit Hydropower, Inc.
6 Far Hills Drive
Avon, Connecticut 06001
(860) 255-7744 Office
(860) 428-2793 Cell
dbroatch@earthlink.net

The Wyre Wynd Hydroelectric Project (FERC No. P-3472) is a 2.78 MW hydro-electric project. The Project is located on the Quinebaug River at 81 Anthony Street, Jewett City in New London and Windham Counties, Connecticut. The Facility is located at approximate river mile 12 on the Quinebaug River from its confluence with the Thames River, approximately one river mile above the USGS gage also located in Jewett City, Connecticut. The Project now has an estimated annual production of nearly 13,000 MWh[1] under normal streamflow, up from approximately 10,300 MWh[2] before the capital and efficiency improvements were initially made.

In March 1997, Summit purchased the Project. Summit is a Connecticut corporation with its principal place of business at 6 Far Hills Drive, Avon, Connecticut 06001.

A FERC license was issued May 19, 1982 and subsequently amended on April 27, 1995.[3] The Project has been in continuous compliance with its requirements for licensing since May 19, 1982. The Project does not involve any new impoundment or diversion of water with an average salinity of twenty (20) parts per thousand or less.

Monthly generation records for the Project were obtained from the prior dam owner for the period of 1995 through March1997, from the current owner for the period of March 1997 through 2001 and from the NEPOOL GIS for the period from 2002 through 2012. Monthly streamflow data of the Quinebaug River at the USGS gage at Jewett City, Connecticut were obtained from the USGS for the period of 1991 through 2012, a twenty-two year period. The streamflow data was then decreased by 8.98% to account for the decrease in the watershed between the gage and the Project.[4]

Summit is filing this application with the Commission after having completed a number of capital and efficiency improvements to increase the Project's electric production. When Summit purchased the Project in March 1997, the Project had not been upgraded with modern controls[5] or equipment[6] since it was first placed in-service in February 1984. While these capital and efficiency improvements completed by Summit after 1997 did not increase the nameplate of the Project, they did materially increase the annual production of the Facility, adjusting for changes in streamflow, from slightly less than 10,300 MWh (January 1995 - September 1998) to approximately 13,000 MWh now (November 2009 through 2012).

Calculation of 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.

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[1] This production is from the period November 2009 through December 2012. This period is described as Post Improvement Period. In the attached analysis, this period is referred to as "Outliers Removed ST." A longer post improvement period was also analyzed, covering the period of October 1998 to December 2012. In the attached analysis, this period is referred to as "Outliers Removed LT."

[2] This production is from the period January 1995 through September 1998. This period is described as Pre-Improvement Period.

[3] Other license amendments were issued by FERC for the Project; however, none of those are germane to this application. Nevertheless, upon request, Summit will supply copies of these amendments to the Commission.

[4] The Project drains an area of 649 square miles while the Quinebaug River at the gage drains an area of 713 square miles.

[5] For example, switchgear control system was upgraded in June 2006.

[6] For example, the installation of a semi-automatic trash rake was completed in September 1998.

Any monthly flow above 2,343 cfs was discarded as were the results for those months when the Facility was out-of-service for lengthy repairs or maintenance or the installation of capital or efficiency improvements. On the former adjustment, the Project is undersized for monthly streamflows of greater than 2,343 cfs. On the latter adjustment, these results were discarded because low generation is not indicative of equipment performance.

The Pre-Improvement and Post-Improvement periods produce an average monthly hydro-electric power plant efficiency of 0.638 and 0.869, respectively. This analysis indicates that 25.71% of the Post-Improvement electric production is attributed to the post-September 1998 capital and efficiency improvements when compared to the Pre-Improvement time period. Accordingly, Summit requests that the Rhode Island Public Utilities Commission certify the Project as a 20.45% Rhode Island New Renewable Energy Resource and a 79.55% Rhode Island Existing Renewable Energy Resource.[7]

Summit has already self-certified the entire Facility as a Maine Class II renewable resource. The Maine Public Utility Commission ("MPUC") has certified the production as being from a Maine Class I renewable resource based on capital improvements completed between September 2005 and October 2009. The Connecticut Department of Public Utility Commission ("CT DPUC") has certified the production as being from a Connecticut Class I source. Summit intends to qualify the production as a New Hampshire Class I resource in the future.

The Facility's electrical output is read by Connecticut Light & Power Company ("CL&P"). The output of the Project is reported by CL&P under Asset ID #797. This information is conveyed to ISO New England, Inc. ("ISO-NE"), which in turn conveys it directly to APX, Inc., the operator of the NEPOOL Generation Information System ("GIS"). NEPOOL GIS reports this production under MSS #797.

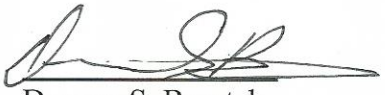
The Applicant has authorized APX to disclose to the Commission the Facility's monthly generation production.

[7] If one rounds off to the nearest tenth of a decimal, the New and Existing Percentage would be 20.5% and 79.5%, respectively. If one rounds off to the nearest integer, the New and Existing Percentage would be 20% and 80%, respectively.

Upon review of our application, if you have any questions or concerns, please do not hesitate to contact either of the aforementioned persons.

Sincerely,

SUMMIT HYDROPOWER, INC.



Duncan S. Broatch
President

enclosures

cc: William P. Short III (e-mail only)
Service List (e-mail only)

LISTS OF ENCLOSURES

Application for Certification of the Wyre Wynd Hydroelectric Project, dated June 1, 2013

Analysis of Wyre-Wynd Project Efficiency Hydro-electric Dam (1995-2012)

FERC Order Granting License, issued May 19, 1983

FERC Order Amending License and Revising Annual Charge, issued April 27, 1995

CT DPUC Order Docket No. # 09-01-19, dated March 26, 2009

MPUC Order Docket No. 2010-104, dated August 10, 2010[8]

[8] The MPUC does not issue orders confirming that generation facilities have been certified as Maine Class II renewable resources.

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

GIS Certification #:

MSS #797

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 RHODEISLAND 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, RI02888
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):

Wyre Wynd Hydroelectric 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
- ❑ 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:

Duncan S. Broatch, President

1.7 Backup Contact Person address and contact information:

Address: **Summit Hydropower, Inc.**
6 Far Hills Drive
Avon, Connecticut 06001
Phone: **(860) 255-7744** Fax: **(860) 679-9529**
Email: **dbroatch@earthlink.net**

[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:

Duncan S. Broatch, President

1.11 Owner address and contact information:
Address: **Summit Hydropower, Inc.**
6 Far Hills Drive
Avon, Connecticut 06001
Phone: **(860) 255-7744** Fax: **(860) 679-9529**
Email: **dbroatch@earthlink.net**

1.12 Owner business organization type (check one):
❑ Individual
❑ Partnership
X Corporation
❑ Other: _____

1.13 Operator name and title: **Duncan S. Broatch, President**
Operator address and contact information:
Address: **Summit Hydropower, Inc.**
6 Far Hills Drive
Avon, Connecticut 06001
Phone: **(860) 255-7744** Fax: **(860) 679-9529**
Email: **dbroatch@earthlink.net**

1.15 Operator business organization type (check one):
❑ Individual
❑ Partnership
X Corporation
❑ Other: _____

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 #797**

2.2 Generation Unit Nameplate Capacity: **2.780 MW**

2.3 Maximum Demonstrated Capacity: **2.780 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 X 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: **2 / 1 / 1984** 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 X 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 Wyre Wynd Hydroelectric Project is located on the Quinebaug River at 81 Anthony Street, Jewett City in New London and Windham Counties, Connecticut. The Project is located on Quinebaug River at river mile 12 from its confluence with the Thames River. The Project dam is located at 1 river mile above the USGS gage.**

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

A. Universal Transverse Mercator Coordinates: _____

B. Latitude / Longitude: **41^0 36' 31.43"N** / **71^0 58' 05.90" 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 **X** No ❑ N/A

Corporate Certification provided? **X** Yes ❑ No ❑ 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? ❑ Yes ❑ No **X** 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: 6/1/13

Consultant
(Title)

SECRETARY'S CERTIFICATE

The undersigned Secretary of Summit Hydropower, Inc., a Connecticut corporation (the *"Corporation"*) hereby certifies as follows:

(a) I am the duly elected Secretary of the Corporation authorized to execute and deliver this Certificate on its behalf,

(b) The following persons are duly elected, qualified and acting officers of the Corporation, serving in the offices set forth opposite their names and the respective signatures are true and genuine:

NAME	OFFICE	SIGNATURE
Duncan S. Broatch	President, Secretary, Treasurer	

(c) Duncan S. Broatch, as President, Secretary and Treasurer of the Corporation, is authorized for and on behalf of the Corporation to execute and deliver all agreements, contracts, commitment, promissory notes and other instruments which he deems to be in the best interests of the Corporation and such authority has not been limited in any way by vote of the Board of Directors of the Corporation, or its Articles of Organization or By-Laws.

(d) Duncan S. Broatch has named William P. Short, III as its Authorized Representative and has authorized him to execute the Renewable Energy Resources Eligibility Form for the 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.

Witness my hand and seal this 30th day of MAY, 2013.

Duncan S. Broatch, Secretary

GIS Certification #:
MSS #797

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

STATE OF RHODEISLAND
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

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.

WYRE WYND PROJECT

Month	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Average Monthly Streamflow at Jewett City, Connecticut Gage (cfs) (1991 --2012) (1)																							
January	1,594.0	1,465.0	2,196.0	1,555.0	2,212.0	2,722.0	2,339.0	2,240.0	2,606.0	1,202.0	686.4	440.7	1,470.0	1,297.0	2,692.0	3,130.0	1,778.0	1,276.0	1,779.0	1,865.0	789.3	1,862.0	1,781.7
February	1,544.0	1,217.0	1,220.0	1,508.0	1,267.0	2,938.0	2,118.0	2,475.0	2,667.0	1,527.0	1,184.0	544.0	1,157.0	999.7	2,083.0	2,836.0	707.0	4,074.0	1,549.0	1,969.0	1,323.0	1,172.0	1,730.9
March	2,458.0	1,743.0	2,549.0	4,258.0	1,933.0	2,166.0	1,818.0	4,073.0	3,125.0	2,323.0	3,189.0	1,114.0	3,175.0	1,300.0	1,957.0	952.9	2,718.0	3,667.0	1,895.0	5,404.0	4,233.0	1,042.0	2,595.1
April	1,631.0	1,806.0	4,120.0	2,677.0	1,185.0	3,319.0	2,961.0	2,219.0	1,095.0	2,867.0	3,211.0	1,224.0	2,746.0	4,157.0	3,377.0	840.2	4,298.0	1,736.0	2,083.0	3,461.0	2,394.0	925.8	2,469.7
May	1,386.0	1,027.0	1,057.0	1,230.0	921.4	1,839.0	1,380.0	2,072.0	820.9	1,777.0	805.4	1,840.0	1,449.0	1,665.0	1,716.0	2,147.0	1,703.0	1,265.0	1,049.0	887.7	1,684.0	1,184.0	1,404.8
June	334.6	863.5	428.0	440.4	337.0	560.4	430.0	2,725.0	234.9	1,533.0	1,783.0	1,275.0	2,486.0	585.3	542.2	3,469.0	723.1	524.0	908.8	658.7	1,158.0	770.4	1,035.0
July	153.6	491.4	182.3	201.9	121.8	709.8	163.0	1,371.0	157.5	442.3	461.8	237.2	715.9	368.1	399.6	963.2	265.9	547.8	2,352.0	240.0	517.7	235.9	513.6
August	898.7	802.5	124.5	503.2	171.2	312.0	208.4	338.8	104.3	444.8	338.5	132.3	650.0	429.5	125.7	419.6	158.1	638.3	878.7	156.7	1,596.0	279.9	441.4
September	707.0	470.9	260.2	451.3	100.5	646.4	127.4	229.0	753.9	310.3	213.9	221.4	545.3	1,017.0	130.7	388.3	124.0	1,270.0	324.3	126.2	2,995.0	362.6	535.3
October	990.8	500.6	474.9	322.9	783.9	1,762.0	179.3	698.0	874.5	304.8	254.3	316.3	987.9	978.7	3,469.0	888.8	164.6	1,048.0	775.4	484.3	2,129.0	684.6	866.9
November	1,637.0	1,333.0	756.5	798.7	1,742.0	1,791.0	789.2	611.4	888.1	535.8	227.5	1,018.0	1,398.0	996.2	2,276.0	2,756.0	344.7	1,394.0	1,053.0	667.1	2,365.0	779.9	1,189.0
December	1,652.0	3,044.0	2,457.0	1,819.0	883.3	4,447.0	671.2	518.5	1,216.0	1,045.0	338.3	1,969.0	2,251.0	2,398.0	2,191.0	1,649.0	569.2	3,741.0	2,168.0	1,208.0	3,211.0	1,015.0	1,839.2
Totals	14,986.7	14,763.9	15,825.4	15,765.4	11,658.1	23,212.6	13,184.5	19,570.7	14,543.1	14,312.0	12,693.1	10,331.9	19,031.1	16,191.5	20,959.2	20,440.0	13,553.6	21,181.1	16,815.2	17,127.7	24,395.0	10,314.1	16,402.5
Average	1,248.9	1,230.3	1,318.8	1,313.8	971.5	1,934.4	1,098.7	1,630.9	1,211.9	1,192.7	1,057.8	861.0	1,585.9	1,349.3	1,746.6	1,703.3	1,129.5	1,765.1	1,401.3	1,427.3	2,032.9	859.5	1,366.9

Total CFS (1991-2012)	360,856	Total CFS (1995-1997)	48,055	Total CFS (1998-2012)	251,459	Total CFS (2006-2012)	123,827	
Average Monthly CFS (1991-2012)	1,367	Average Monthly CFS (1995-1997)	1,335	Average Monthly CFS (1998-2012)	1,397	Average Monthly CFS (May 2008-2011)	1,474	

Adjusted Average Monthly Streamflow for Wyre Wynd Project (cfs) (1991 --2012) (1)																							
January	1,451	1,333	1,999	1,415	2,013	2,478	2,129	2,039	2,372	1,094	625	401	1,338	1,181	2,450	2,849	1,618	1,161	1,619	1,698	718	1,695	1,621.7
February	1,405	1,108	1,110	1,373	1,153	2,674	1,928	2,253	2,428	1,390	1,078	495	1,053	910	1,896	2,581	644	3,708	1,410	1,792	1,204	1,067	1,575.5
March	2,237	1,587	2,320	3,876	1,759	1,972	1,655	3,707	2,844	2,114	2,903	1,014	2,890	1,183	1,781	867	2,474	3,338	1,725	4,919	3,853	948	2,362.2
April	1,485	1,644	3,750	2,437	1,079	3,021	2,695	2,020	997	2,610	2,923	1,114	2,500	3,784	3,074	765	3,912	1,580	1,896	3,150	2,179	843	2,248.0
May	1,262	935	962	1,120	839	1,674	1,256	1,886	747	1,617	733	1,675	1,319	1,516	1,562	1,954	1,550	1,151	955	808	1,533	1,078	1,278.7
June	305	786	390	401	307	510	391	2,480	214	1,395	1,623	1,161	2,263	533	494	3,158	658	477	827	600	1,054	701	942.1
July	140	447	166	184	111	646	148	1,248	143	403	420	216	652	335	364	877	242	499	2,141	218	471	215	467.5
August	818	730	113	458	156	284	190	308	95	405	308	120	592	391	114	382	144	581	800	143	1,453	255	401.8
September	644	429	237	411	91	588	116	208	686	282	195	202	496	926	119	353	113	1,156	295	115	2,726	330	487.2
October	902	456	432	294	714	1,604	163	635	796	277	231	288	899	891	3,158	809	150	954	706	441	1,938	623	789.1
November	1,490	1,213	689	727	1,586	1,630	718	557	808	488	207	927	1,273	907	2,072	2,509	314	1,269	958	607	2,153	710	1,082.3
December	1,504	2,771	2,236	1,656	804	4,048	611	472	1,107	951	308	1,792	2,049	2,183	1,994	1,501	518	3,405	1,973	1,100	2,923	924	1,674.1
Totals	13,641	13,439	14,405	14,350	10,612	21,129	12,001	17,814	13,238	13,027	11,554	9,404	17,323	14,738	19,078	18,605	12,337	19,280	15,306	15,590	22,205	9,388	14,930.2
Average	1,137	1,120	1,200	1,196	884	1,761	1,000	1,485	1,103	1,086	963	784	1,444	1,228	1,590	1,550	1,028	1,607	1,275	1,299	1,850	782	1,244.2

Total CFS (1991-2012)	328,465	Total CFS (1995-1997)	43,742	Total CFS (1998-2012)	228,888	Total CFS (2006-2012)	112,712	
Average Monthly CFS (1991-2012)	1,244	Average Monthly CFS (1995-1997)	1,215	Average Monthly CFS (1998-2012)	1,272	Average Monthly CFS (2006-2012)	1,342	

WYRE WYND PROJECT

Month	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Monthly Generation for Wyre Wynd Project (MWh) (1995 -- 2012) (2)																							
January					1,760	1,330	1,480	1,405	1,409	1,047	553	371	1,398	1,121	1,711	1,915	1,584	1,127	1,498	1,359	738	1,594	1,300.0
February					984	771	1,360	1,476	1,543	1,073	993	447	1,239	800	1,408	1,556	559	1,667	1,289	1,091	985	1,031	1,126.2
March					1,208	1,275	1,216	1,739	1,860	1,700	1,495	985	499	1,301	1,410	883	1,544	1,798	1,583	1,688	1,773	1,012	1,387.2
April					600	1,413	1,794	1,679	988	1,602	1,594	1,071	1,771	1,716	1,575	724	1,833	1,377	1,587	1,593	1,556	715	1,399.3
May					616	1,129	1,265	1,429	717	1,524	714	1,377	1,726	1,283	1,545	1,442	1,437	1,139	999	832	1,489	1,078	1,207.9
June					200	950	348	1,206	167	1,167	1,094	1,068	1,053	703	507	1,584	603	470	680	645	1,055	697	788.6
July					0	125	105	869	103	350	391	188	1,760	321	358	887	200	507	1,403	215	473	187	469.1
August					8	222	34	184	70	350	226	76	645	390	67	356	109	609	756	84	520	241	274.7
September					8	17	55	166	496	183	118	129	557	504	0	300	16	959	117	85	1,626	279	311.9
October					424	584	80	622	672	210	154	250	321	815	1,210	570	71	876	485	467	1,602	528	552.3
November					1,112	896	612	475	810	405	122	713	588	814	1,562	1,553	270	1,149	913	654	1,660	665	831.9
December					688	1,688	542	468	1,082	769	280	1,398	998	1,706	1,553	1,357	523	1,668	1,615	1,079	1,816	930	1,120.1
Totals					7,608	10,399	8,891	11,719	9,918	10,380	7,733	8,072	12,555	11,474	12,907	13,127	8,749	13,347	12,926	9,791	15,293	8,956	10,769.3
Average					634	867	741	977	827	865	644	673	1,046	956	1,076	1,094	729	1,112	1,077	816	1,274	746	897.4

Total MWh (1995-1997)	26,898	Total MWh (1998-2005)	84,759	Total MWh (2006-2012)	82,190
Average Monthly MWh (1995-1997)	747.17	Average Monthly MWh (1998-2005)	882.90	Average Monthly MWh (2006-2012)	978.45

Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Monthly Generation (MWh) (1995 -- 2012)/Average Monthly Streamflow (cfs) (1995 -- 2012)																			
January	0.8741	0.5367	0.6951	0.6889	0.5941	0.9568	0.8848	0.9239	1.0449	0.9497	0.6984	0.6722	0.9790	0.9707	0.9252	0.8005	1.0273	0.9402	0.8705
February	0.8532	0.2883	0.7054	0.6552	0.6357	0.7717	0.9210	0.9023	1.1769	0.8790	0.7426	0.6029	0.8683	0.4494	0.9139	0.6088	0.8180	0.9666	0.7942
March	0.6866	0.6469	0.7348	0.4690	0.6538	0.8039	0.5151	0.9715	0.1728	1.0993	0.7917	1.0175	0.6242	0.5387	0.9178	0.3432	0.4602	1.0674	0.6964
April	0.5563	0.4678	0.6655	0.8314	0.9913	0.6139	0.5453	0.9617	0.7087	0.4534	0.5125	0.9466	0.4685	0.8716	0.8369	0.5055	0.7140	0.8483	0.7206
May	0.7345	0.6743	1.0072	0.7578	0.9601	0.9423	0.9740	0.8222	1.3083	0.8468	0.9891	0.7379	0.9273	0.9894	1.0464	1.0295	0.9712	1.0001	0.9535
June	0.6520	1.8615	0.8882	0.4861	0.7807	0.8362	0.6738	0.9202	0.4654	1.3187	1.0265	0.5016	0.9156	0.9864	0.8224	1.0757	1.0009	0.9933	0.8536
July	0.0000	0.1935	0.7092	0.6966	0.7195	0.8700	0.9300	0.8705	2.7005	0.9592	0.9854	1.0116	0.8257	1.0164	0.6554	0.9845	1.0040	0.8704	1.0066
August	0.0513	0.7804	0.1819	0.5956	0.7359	0.8646	0.7321	0.6313	1.0900	0.9977	0.5841	0.9320	0.7552	1.0477	0.9446	0.5907	0.3582	0.9444	0.7869
September	0.0875	0.0281	0.4747	0.7983	0.7231	0.6470	0.6064	0.6381	1.1215	0.5442	0.0000	0.8474	0.1396	0.8294	0.3975	0.7366	0.5966	0.8468	0.6315
October	0.5942	0.3641	0.4890	0.9798	0.8445	0.7579	0.6673	0.8674	0.3565	0.9149	0.3832	0.7043	0.4744	0.9184	0.6876	1.0592	0.8267	0.8471	0.7526
November	0.7013	0.5496	0.8521	0.8537	1.0026	0.8310	0.5888	0.7692	0.4617	0.8979	0.7540	0.6192	0.8619	0.9055	0.9531	1.0767	0.7709	0.9369	0.8189
December	0.8557	0.4170	0.8872	0.9918	0.9773	0.8081	0.9103	0.7801	0.4873	0.7817	0.7789	0.9043	1.0088	0.4900	0.8185	0.9813	0.6213	1.0068	0.8231
Totals	6.6467	6.8083	8.2905	8.8043	9.6187	9.7035	8.9488	10.0583	11.0945	10.6427	8.2464	9.4976	8.8483	10.0135	9.9194	9.7924	9.1694	11.2683	9.7084
Average	0.5539	0.5674	0.6909	0.7337	0.8016	0.8086	0.7457	0.8382	0.9245	0.8869	0.6872	0.7915	0.7374	0.8345	0.8266	0.8160	0.7641	0.9390	0.8090

Total Efficiency (1995-1997)	21.745	Total Monthly Efficiency (1998-2005)	77.117	Total Efficiency (2006-2012)	68.509
Average Efficiency (1995-1997)	0.6040	Average Monthly Efficiency (1998-2005)	0.8033	Average Monthly Efficiency (2006-2012)	0.8156
		Percent "New"	24.81%	Percent "New"	25.94%

(1) Source: USGS gage at Jewett City, Connecticut
(2) Duncan Broatch

WYRE WYND PROJECT

22-years flow data, 1991-2012

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average	**Flow (cfs)**	1,621.73	1,575.49	2,362.19	2,248.00	1,278.69	942.11	467.52	401.82	487.21	789.12	1,082.28	1,674.07	1,244.19

***Based on data from Jewett City, Connecticut Gage divided by 649 sq. mile/713 sq. mile to account for decrease in drainage area at Summit Hydro**

WYRE WYND PROJECT

Avg. kW = (Avg. Operating Head x Avg. Flow (CFS) x Efficiency) / 11.8

Avg Operating Head:	20	
Assumed Efficiency:	70%	<-- non issue, since MWH caps are never exceeded
Nameplate kW	2780	
cfs that produces 2.78 MW	**2343.143**	**<-- Post-improvement cap**

Avg Operating Head:	20	
Assumed Efficiency:	70%	<-- non issue, since MWH caps are never exceeded
Nameplate kW	2780	
cfs that produces 2.78 MW	**2343.143**	**<--- pre-improvement cap**

WYRE WYND PROJECT
NO OUTLIERS REMOVED

(Historical Baseline Period (based on 649/713% of flow at USGS Jewett City, Connecicut Gauging Station Data)

Pre-Upgrade

		January	February	March	April	May	June	July	August	September	October	November	December	
1995	Flow (cfs)	2,013	1,153	1,759	1,079	839	307	111	156	91	714	1,586	804	10,612
	Generation (MWH)	1,760	984	1,208	600	616	200	0	8	8	424	1,112	688	7,608
2343	**MWH/cfs**	**0.874**	**0.853**	**0.687**	**0.556**	**0.734**	**0.652**	**0.000**	**0.051**	**0.087**	**0.594**	**0.701**	**0.856**	**6.647**
	Capped Flow (cfs)	2,013	1,153	1,759	1,079	839	307	111	156	91	714	1,586	804	10,612
	MWH/Capped cfs	**0.874**	**0.853**	**0.687**	**0.556**	**0.734**	**0.652**	**0.000**	**0.051**	**0.087**	**0.594**	**0.701**	**0.856**	**6.647**
1996	Flow (cfs)	2,478	2,674	1,972	3,021	1,674	510	646	284	588	1,604	1,630	4,048	21,129
	Generation (MWH)	1,330	771	1,275	1,413	1,129	950	125	222	17	584	896	1,688	10,399
	MWH/cfs	**0.537**	**0.288**	**0.647**	**0.468**	**0.674**	**1.861**	**0.194**	**0.780**	**0.028**	**0.364**	**0.550**	**0.417**	**6.808**
	Capped Flow (cfs)	2,343	2,343	1,972	2,343	1,674	510	646	284	588	1,604	1,630	2,343	18,281
	MWH/Capped cfs	**0.567**	**0.329**	**0.647**	**0.603**	**0.674**	**1.861**	**0.194**	**0.780**	**0.028**	**0.364**	**0.550**	**0.720**	**7.319**
1997	Flow (cfs)	2,129	1,928	1,655	2,695	1,256	391	148	190	116	163	718	611	12,001
	Generation (MWH)	1,480	1,360	1,216	1,794	1,265	348	105	34	55	80	612	542	8,891
	MWH/cfs	**0.695**	**0.705**	**0.735**	**0.666**	**1.007**	**0.888**	**0.709**	**0.182**	**0.475**	**0.489**	**0.852**	**0.887**	**8.290**
	Capped Flow (cfs)	2,129	1,928	1,655	2,343	1,256	391	148	190	116	163	718	611	11,649
	MWH/Capped cfs	**0.695**	**0.705**	**0.735**	**0.766**	**1.007**	**0.888**	**0.709**	**0.182**	**0.475**	**0.489**	**0.852**	**0.887**	**8.390**
	Average MWH/Non-Capped Flow (1995-1997)	**0.702**	**0.616**	**0.689**	**0.563**	**0.805**	**1.134**	**0.301**	**0.338**	**0.197**	**0.482**	**0.701**	**0.720**	**7.248**
	Average MWH/Capped Flow (1995-1997)	**0.712**	**0.629**	**0.689**	**0.642**	**0.805**	**1.134**	**0.301**	**0.338**	**0.197**	**0.482**	**0.701**	**0.821**	**7.452**

Extended Pre-Upgrade Period

		January	February	March	April	May	June	July	August	September	October	November	December	
1998	Flow (cfs)	2,039	2,253	3,707	2,020	1,886	2,480	1,248	308	208	635	557	472	17,814
	Generation (MWH)	1,405	1,476	1,739	1,679	1,429	1,206	869	184	166	622	475	468	11,719
	MWH/cfs	**0.689**	**0.655**	**0.469**	**0.831**	**0.758**	**0.486**	**0.697**	**0.596**	**0.798**				**5.979**
	Capped Flow (cfs)	2,039	2,253	2,343	2,020	1,886	2,343	1,248	308	208	635	557	472	16,312
	MWH/Capped cfs	**0.689**	**0.655**	**0.742**	**0.831**	**0.758**	**0.515**	**0.697**	**0.596**	**0.798**				**6.281**
	Average MWH/Non-Capped Flow	**0.689**	**0.655**	**0.469**	**0.831**	**0.758**	**0.486**	**0.697**	**0.596**	**0.798**				**5.979**
	Average MWH/Capped Flow (1998-Sept.1998)	**0.689**	**0.655**	**0.742**	**0.831**	**0.758**	**0.515**	**0.697**	**0.596**	**0.798**				**6.281**
	Average MWH/Capped Flow (1995-Sept.1998)	**0.706**	**0.636**	**0.703**	**0.689**	**0.793**	**0.979**	**0.400**	**0.402**	**0.347**	**0.482**	**0.701**	**0.821**	**7.660**

Post-Improvement Period

1998	Flow (cfs)	2,039	2,253	3,707	2,020	1,886	2,480	1,248	**308**	208	635	557	472	17,814
	Generation (MWH)	1,405	1,476	1,739	1,679	1,429	1,206	869	184	166	622	475	468	11,719
	MWH/cfs										**0.980**	**0.854**	**0.992**	**2.825**
	Capped Flow (cfs)	2,039	2,253	2,343	2,020	1,886	2,343	1,248	308	208	635	557	472	16,312
	MWH/Capped cfs										**0.980**	**0.854**	**0.992**	**2.825**
1999	Flow (cfs)	2,372	2,428	2,844	997	747	214	143	95	686	796	808	1,107	13,238
	Generation (MWH)	1,409	1,543	1,860	988	717	167	103	70	496	672	810	1,082	9,918
	MWH/cfs	**0.594**	**0.636**	**0.654**	**0.991**	**0.960**	**0.781**	**0.720**	**0.736**	**0.723**	**0.845**	**1.003**	**0.977**	**9.619**
	Capped Flow (cfs)	2,343	2,343	2,343	997	747	214	143	95	686	796	808	1,107	12,623
	MWH/Capped cfs	**0.601**	**0.659**	**0.794**	**0.991**	**0.960**	**0.781**	**0.720**	**0.736**	**0.723**	**0.845**	**1.003**	**0.977**	**9.789**
2000	Flow (cfs)	1,094	1,390	2,114	2,610	1,617	1,395	403	405	282	277	488	951	13,027

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	Generation (MWH)	1,047	1,073	1,700	1,602	1,524	1,167	350	350	183	210	405	769	10,380
	MWH/cfs	**0.957**	**0.772**	**0.804**	**0.614**	**0.942**	**0.836**	**0.870**	**0.865**	**0.647**	**0.758**	**0.831**	**0.808**	**9.704**
	Capped Flow (cfs)	1,094	1,390	2,114	2,343	1,617	1,395	403	405	282	277	488	951	12,761
	MWH/Capped cfs	**0.957**	**0.772**	**0.804**	**0.684**	**0.942**	**0.836**	**0.870**	**0.865**	**0.647**	**0.758**	**0.831**	**0.808**	**9.773**
2001	Flow (cfs)	625	1,078	2,903	2,923	733	1,623	420	308	195	231	207	308	11,554
	Generation (MWH)	553	993	1,495	1,594	714	1,094	391	226	118	154	122	280	7,733
	MWH/cfs	**0.885**	**0.921**	**0.515**	**0.545**	**0.974**	**0.674**	**0.930**	**0.732**	**0.606**	**0.667**	**0.589**	**0.910**	**8.949**
2343	Capped Flow (cfs)	625	1,078	2,343	2,343	733	1,623	420	308	195	231	207	308	10,415
	MWH/Capped cfs	**0.885**	**0.921**	**0.638**	**0.680**	**0.974**	**0.674**	**0.930**	**0.732**	**0.606**	**0.667**	**0.589**	**0.910**	**9.207**
2002	Flow (cfs)	401	495	1,014	1,114	1,675	1,161	216	120	202	288	927	1,792	9,404
	Generation (MWH)	371	447	985	1,071	1,377	1,068	188	76	129	250	713	1,398	8,072
	MWH/cfs	**0.924**	**0.902**	**0.972**	**0.962**	**0.822**	**0.920**	**0.871**	**0.631**	**0.638**	**0.867**	**0.769**	**0.780**	**10.058**
	Capped Flow (cfs)	401	495	1,014	1,114	1,675	1,161	216	120	202	288	927	1,792	9,404
	MWH/Capped cfs	**0.924**	**0.902**	**0.972**	**0.962**	**0.822**	**0.920**	**0.871**	**0.631**	**0.638**	**0.867**	**0.769**	**0.780**	**10.058**
2003	Flow (cfs)	1,338	1,053	2,890	2,500	1,319	2,263	652	592	496	899	1,273	2,049	17,323
	Generation (MWH)	1,398	1,239	499	1,771	1,726	1,053	1,760	645	557	321	588	998	12,555
	MWH/cfs	**1.045**	**1.177**	**0.173**	**0.709**	**1.308**	**0.465**	**2.700**	**1.090**	**1.122**	**0.356**	**0.462**	**0.487**	**11.094**
	Capped Flow (cfs)	1,338	1,053	2,343	2,343	1,319	2,263	652	592	496	899	1,273	2,049	16,620
	MWH/Capped cfs	**1.045**	**1.177**	**0.213**	**0.756**	**1.308**	**0.465**	**2.700**	**1.090**	**1.122**	**0.356**	**0.462**	**0.487**	**11.182**
2004	Flow (cfs)	1,181	910	1,183	3,784	1,516	533	335	391	926	891	907	2,183	14,738
	Generation (MWH)	1,121	800	1,301	1,716	1,283	703	321	390	504	815	814	1,706	11,474
	MWH/cfs	**0.950**	**0.879**	**1.099**	**0.453**	**0.847**	**1.319**	**0.959**	**0.998**	**0.544**	**0.915**	**0.898**	**0.782**	**10.643**
	Capped Flow (cfs)	1,181	910	1,183	2,343	1,516	533	335	391	926	891	907	2,183	13,297
	MWH/Capped cfs	**0.950**	**0.879**	**1.099**	**0.732**	**0.847**	**1.319**	**0.959**	**0.998**	**0.544**	**0.915**	**0.898**	**0.782**	**10.921**
2005	Flow (cfs)	2,450	1,896	1,781	3,074	1,562	494	364	114	119	3,158	2,072	1,994	19,078
	Generation (MWH)	1,711	1,408	1,410	1,575	1,545	507	358	67	0	1,210	1,562	1,553	12,907
	MWH/cfs	**0.698**	**0.743**	**0.792**	**0.512**	**0.989**	**1.027**	**0.985**	**0.584**	**0.000**	**0.383**	**0.754**	**0.779**	**8.246**
	Capped Flow (cfs)	2,343	1,896	1,781	2,343	1,562	494	364	114	119	2,343	2,072	1,994	17,425
	MWH/Capped cfs	**0.730**	**0.743**	**0.792**	**0.672**	**0.989**	**1.027**	**0.985**	**0.584**	**0.000**	**0.516**	**0.754**	**0.779**	**8.571**
2006	Flow (cfs)	2,849	2,581	867	765	1,954	3,158	877	382	353	809	2,509	1,501	18,605
	Generation (MWH)	1,915	1,556	883	724	1,442	1,584	887	356	300	570	1,553	1,357	13,127
	MWH/cfs	**0.672**	**0.603**	**1.018**	**0.947**	**0.738**	**0.502**	**1.012**	**0.932**	**0.847**	**0.704**	**0.619**	**0.904**	**9.498**
	Capped Flow (cfs)	2,343	2,343	867	765	1,954	2,343	877	382	353	809	2,343	1,501	16,881
	MWH/Capped cfs	**0.817**	**0.664**	**1.018**	**0.947**	**0.738**	**0.676**	**1.012**	**0.932**	**0.847**	**0.704**	**0.663**	**0.904**	**9.922**
2007	Flow (cfs)	1,618	644	2,474	3,912	1,550	658	242	144	113	150	314	518	12,337
	Generation (MWH)	1,584	559	1,544	1,833	1,437	603	200	109	16	71	270	523	8,749
	MWH/cfs	**0.979**	**0.868**	**0.624**	**0.468**	**0.927**	**0.916**	**0.826**	**0.755**	**0.140**	**0.474**	**0.862**	**1.009**	**8.848**
	Capped Flow (cfs)	1,618	644	2,343	2,343	1,550	658	242	144	113	150	314	518	10,637
	MWH/Capped cfs	**0.979**	**0.868**	**0.659**	**0.782**	**0.927**	**0.916**	**0.826**	**0.755**	**0.140**	**0.474**	**0.862**	**1.009**	**9.197**
2008	Flow (cfs)	1,161	3,708	3,338	1,580	1,151	477	499	581	1,156	954	1,269	3,405	19,280
	Generation (MWH)	1,127	1,667	1,798	1,377	1,139	470	507	609	959	876	1,149	1,668	13,347
	MWH/cfs	**0.971**	**0.449**	**0.539**	**0.872**	**0.989**	**0.986**	**1.016**	**1.048**	**0.829**	**0.918**	**0.906**	**0.490**	**10.014**

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	Capped Flow (cfs)	1,161	2,343	2,343	1,580	1,151	477	499	581	1,156	954	1,269	2,343	15,858
	MWH/Capped cfs	**0.971**	**0.711**	**0.767**	**0.872**	**0.989**	**0.986**	**1.016**	**1.048**	**0.829**	**0.918**	**0.906**	**0.712**	**10.726**
2009	Flow (cfs)	1,619	1,410	1,725	1,896	955	827	2,141	800	295	706	958	1,973	15,306
	Generation (MWH)	1,498	1,289	1,583	1,587	999	680	1,403	756	117	485	913	1,615	12,926
	MWH/cfs	**0.925**	**0.914**	**0.918**	**0.837**	**1.046**	**0.822**	**0.655**	**0.945**	**0.398**	**0.688**	**0.953**	**0.819**	**9.919**
	Capped Flow (cfs)	1,619	1,410	1,725	1,896	955	827	2,141	800	295	706	958	1,973	15,306
	MWH/Capped cfs	**0.925**	**0.914**	**0.918**	**0.837**	**1.046**	**0.822**	**0.655**	**0.945**	**0.398**	**0.688**	**0.953**	**0.819**	**9.919**
2010	Flow (cfs)	1,698	1,792	4,919	3,150	808	600	218	143	115	441	607	1,100	15,590
	Generation (MWH)	1,359	1,091	1,688	1,593	832	645	215	84	85	467	654	1,079	9,791
	MWH/cfs	**0.801**	**0.609**	**0.343**	**0.506**	**1.030**	**1.076**	**0.985**	**0.591**	**0.737**	**1.059**	**1.077**	**0.981**	**9.792**
	Capped Flow (cfs)	1,698	1,792	2,343	2,343	808	600	218	143	115	441	607	1,100	12,207
	MWH/Capped cfs	**0.801**	**0.609**	**0.720**	**0.680**	**1.030**	**1.076**	**0.985**	**0.591**	**0.737**	**1.059**	**1.077**	**0.981**	**10.344**
2011	Flow (cfs)	718	1,204	3,853	2,179	1,533	1,054	471	1,453	2,726	1,938	2,153	2,923	22,205
	Generation (MWH)	738	985	1,773	1,556	1,489	1,055	473	520	1,626	1,602	1,660	1,816	15,293
	MWH/cfs	**1.027**	**0.818**	**0.460**	**0.714**	**0.971**	**1.001**	**1.004**	**0.358**	**0.597**	**0.827**	**0.771**	**0.621**	**9.169**
	Capped Flow (cfs)	718	1,204	2,343	2,179	1,533	1,054	471	1,453	2,343	1,938	2,153	2,343	19,733
	MWH/Capped cfs	**1.027**	**0.818**	**0.757**	**0.714**	**0.971**	**1.001**	**1.004**	**0.358**	**0.694**	**0.827**	**0.771**	**0.775**	**9.717**
2012	Flow (cfs)	1,695	1,067	948	843	1,078	701	215	255	330	623	710	924	9,388
	Generation (MWH)	1,594	1,031	1,012	715	1,078	697	187	241	279	528	665	930	8,956
	MWH/cfs	**0.940**	**0.967**	**1.067**	**0.848**	**1.000**	**0.993**	**0.870**	**0.944**	**0.847**	**0.847**	**0.937**	**1.007**	**11.268**
	Capped Flow (cfs)	1,695	1,067	948	843	1,078	701	215	255	330	623	710	924	9,388
	MWH/Capped cfs	**0.940**	**0.967**	**1.067**	**0.848**	**1.000**	**0.993**	**0.870**	**0.944**	**0.847**	**0.847**	**0.937**	**1.007**	**11.268**
	Average MWH/Capped Flow	**0.897**	**0.829**	**0.801**	**0.797**	**0.967**	**0.892**	**1.029**	**0.801**	**0.627**	**0.761**	**0.822**	**0.848**	**10.071**

Baseline Period	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Annual**
Long Term Flow at Dam (per USGS 1991-2012 data)	1,621.7	1,575.5	2,362.2	2,248.0	1,278.7	942.1	467.5	401.8	487.2	789.1	1,082.3	1,674.1	1,244.2
Capped Long Term Flow (cfs)	1,622	1,575	2,343	2,248	1,279	942	468	402	487	789	1,082	1,674	1,243
Average MWH/Capped Flow (cfs) - Hist Base	0.712	0.629	0.689	0.642	0.805	1.134	0.301	0.338	0.197	0.482	0.701	0.821	7.452
MWH, Long-Term Avg. - Capped Hist Base	**1,155**	**991**	**1,615**	**1,442**	**1,030**	**1,068**	**141**	**136**	**96**	**381**	**759**	**1,375**	**10,189**
Average MWH/Capped Flow (cfs) - Ex Base	0.706	0.636	0.703	0.689	0.793	0.979	0.400	0.402	0.347	0.482	0.701	0.821	7.660
MWH, Long-Term Avg. - Capped - Ex Base	**1,146**	**1,002**	**1,646**	**1,549**	**1,015**	**922**	**187**	**162**	**169**	**381**	**759**	**1,375**	**10,311**

Post Improvement Period	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Annual**
Long Term Flow at Dam (per USGS 1991-2012 data)	1,622	1,575	2,362	2,248	1,279	942	468	402	487	789	1,082	1,674	1,244
Capped Long Term Flow (cfs)	1,622	1,575	2,343	2,248	1,279	942	468	402	487	789	1,082	1,674	1,243
Average MWH/Capped Flow (cfs)	0.897	0.829	0.801	0.797	0.967	0.892	1.029	0.801	0.627	0.761	0.822	0.848	10.071
MWH, Long-Term Avg. - Capped	**1,454**	**1,306**	**1,877**	**1,791**	**1,237**	**841**	**481**	**322**	**305**	**601**	**889**	**1,420**	**12,525**
% Change, Base to New - Capped - Ex Base	**27%**	**30%**	**14%**	**16%**	**22%**	**-9%**	**157%**	**99%**	**80%**	**58%**	**17%**	**3%**	**21.47%**
% Change, Base to New - Capped - Hist Base	**26%**	**32%**	**16%**	**24%**	**20%**	**-21%**	**242%**	**137%**	**218%**	**58%**	**17%**	**3%**	**22.93%**

% Change, Base to New - Capped - Ex Base	**21%**	**23%**	**12%**	**14%**	**18%**	**-10%**	**61%**	**50%**	**45%**	**37%**	**15%**	**3%**	**17.67%**
% Change, Base to New - Capped - Hist Base	79%	77%	88%	86%	82%	110%	39%	50%	55%	63%	85%	97%	**82.33%**
													100.0%

WYRE WYND PROJECT
OUTLIERS REMOVED (LT)

(Historical Baseline Period (based on 649/731% of flow at USGS Jewett City, Connecticut Gauging Station Data)

Pre-Upgrade

		January	February	March	April	May	June	July	August	September	October	November	December	
1995	Flow (cfs)	2,013	1,153	1,759	1,079	839	307	111	156	91	714	1,586	804	10,612
	Generation (MWH)	1,760	984	1,208	600	616	200	0	8	8	424	1,112	688	7,608
2343	**MWH/cfs**	**0.874**	**0.853**	**0.687**	**0.556**	**0.734**	**0.652**	**0.000**	**0.051**	**0.087**	**0.594**	**0.701**	**0.856**	**6.647**
	Capped Flow (cfs)	2,013	1,153	1,759	1,079	839	307	111	156	91	714	1,586	804	10,612
	MWH/Capped cfs	**0.874**	**0.853**	**0.687**	**0.556**	**0.734**	**0.652**	**0.000**	**0.051**	**0.087**	**0.594**	**0.701**	**0.856**	**6.647**
1996	Flow (cfs)	2,478	2,674	1,972	3,021	1,674	510	646	284	588	1,604	1,630	4,048	21,129
	Generation (MWH)	1,330	771	1,275	1,413	1,129	950	125	222	17	584	896	1,688	10,399
	MWH/cfs	**0.537**	**0.288**	**0.647**	**0.468**	**0.674**	**1.861**	**0.194**	**0.780**	**0.028**	**0.364**	**0.550**	**0.417**	**6.808**
	Capped Flow (cfs)	2,343	2,343	1,972	2,343	1,674	510	646	284	588	1,604	1,630	2,343	18,281
	MWH/Capped cfs	**0.567**	**0.329**	**0.647**	**0.603**	**0.674**	**1.861**	**0.194**	**0.780**	**0.028**	**0.364**	**0.550**	**0.720**	**7.319**
1997	Flow (cfs)	2,129	1,928	1,655	2,695	1,256	391	148	190	116	163	718	611	12,001
	Generation (MWH)	1,480	1,360	1,216	1,794	1,265	348	105	34	55	80	612	542	8,891
	MWH/cfs	**0.695**	**0.705**	**0.735**	**0.666**	**1.007**	**0.888**	**0.709**	**0.182**	**0.475**	**0.489**	**0.852**	**0.887**	**8.290**
	Capped Flow (cfs)	2,129	1,928	1,655	2,343	1,256	391	148	190	116	163	718	611	11,649
	MWH/Capped cfs	**0.695**	**0.705**	**0.735**	**0.766**	**1.007**	**0.888**	**0.709**	**0.182**	**0.475**	**0.489**	**0.852**	**0.887**	**8.390**
	Average MWH/Non-Capped Flow (1995-1997)	**0.702**	**0.616**	**0.689**	**0.563**	**0.805**	**1.134**	**0.301**	**0.338**	**0.197**	**0.482**	**0.701**	**0.720**	**7.248**
	Average MWH/Capped Flow (1995-1997)	**0.712**	**0.629**	**0.689**	**0.642**	**0.805**	**1.134**	**0.301**	**0.338**	**0.197**	**0.482**	**0.701**	**0.821**	**7.452**

Extended Pre-Upgrade Period

		January	February	March	April	May	June	July	August	September	October	November	December	
1998	Flow (cfs)	2,039	2,253	3,707	2,020	1,886	2,480	1,248	308	208	635	557	472	17,814
	Generation (MWH)	1,405	1,476	1,739	1,679	1,429	1,206	869	184	166	622	475	468	11,719
	MWH/cfs	**0.689**	**0.655**	**0.469**	**0.831**	**0.758**	**0.486**	**0.697**	**0.596**	**0.798**				**5.979**
	Capped Flow (cfs)	2,039	2,253	2,343	2,020	1,886	2,343	1,248	308	208	635	557	472	16,312
	MWH/Capped cfs	**0.689**	**0.655**	**0.742**	**0.831**	**0.758**	**0.515**	**0.697**	**0.596**	**0.798**				**6.281**
	Average MWH/Non-Capped Flow	**0.689**	**0.655**	**0.469**	**0.831**	**0.758**	**0.486**	**0.697**	**0.596**	**0.798**				**5.979**
	Average MWH/Capped Flow (1998-Sept.1998)	**0.689**	**0.655**	**0.742**	**0.831**	**0.758**	**0.515**	**0.697**	**0.596**	**0.798**				**6.281**
	Average MWH/Capped Flow (1995-Sept.1998)	**0.706**	**0.636**	**0.703**	**0.689**	**0.793**	**0.979**	**0.400**	**0.402**	**0.347**	**0.482**	**0.701**	**0.821**	**7.660**

Post-Improvement Period

		January	February	March	April	May	June	July	August	September	October	November	December	
1998	Flow (cfs)	2,039	2,253	3,707	2,020	1,886	2,480	1,248	**308**	208	635	557	472	17,814
	Generation (MWH)	1,405	1,476	1,739	1,679	1,429	1,206	869	184	166	622	475	468	11,719
	MWH/cfs										**0.980**	**0.854**	**0.992**	**2.825**
	Capped Flow (cfs)	2,039	2,253	2,343	2,020	1,886	2,343	1,248	308	208	635	557	472	16,312
	MWH/Capped cfs										**0.980**	**0.854**	**0.992**	**2.825**
1999	Flow (cfs)	2,372	2,428	2,844	997	747	214	143	95	686	796	808	1,107	13,238
	Generation (MWH)	1,409	1,543	1,860	988	717	167	103	70	496	672	810	1,082	9,918
	MWH/cfs	**0.594**	**0.636**	**0.654**	**0.991**	**0.960**	**0.781**	**0.720**	**0.736**	**0.723**	**0.845**	**1.003**	**0.977**	**9.619**
	Capped Flow (cfs)	2,343	2,343	2,343	997	747	214	143	95	686	796	808	1,107	12,623
	MWH/Capped cfs	**0.601**	**0.659**	**0.794**	**0.991**	**0.960**	**0.781**	**0.720**	**0.736**	**0.723**	**0.845**	**1.003**	**0.977**	**9.789**

WYRE WYND PROJECT
OUTLIERS REMOVED (LT)

2000	Flow (cfs)	1,094	1,390	2,114	2,610	1,617	1,395	403	405	282	277	488	951	13,027
	Generation (MWH)	1,047	1,073	1,700	1,602	1,524	1,167	350	350	183	210	405	769	10,380
	MWH/cfs	**0.957**	**0.772**	**0.804**	**0.614**	**0.942**	**0.836**	**0.870**	**0.865**	**0.647**	**0.758**	**0.831**	**0.808**	**9.704**
	Capped Flow (cfs)	1,094	1,390	2,114	2,343	1,617	1,395	403	405	282	277	488	951	12,761
	MWH/Capped cfs	**0.957**	**0.772**	**0.804**	**0.684**	**0.942**	**0.836**	**0.870**	**0.865**	**0.647**	**0.758**	**0.831**	**0.808**	**9.773**
2001	Flow (cfs)	625	1,078	2,903	2,923	733	1,623	420	308	195	231	207	308	11,554
	Generation (MWH)	553	993	1,495	1,594	714	1,094	391	226	118	154	122	280	7,733
	MWH/cfs	**0.885**	**0.921**	**0.515**	**0.545**	**0.974**	**0.674**	**0.930**	**0.732**	**0.606**	**0.667**	**0.589**	**0.910**	**8.949**
2343	Capped Flow (cfs)	625	1,078	2,343	2,343	733	1,623	420	308	195	231	207	308	10,415
	MWH/Capped cfs	**0.885**	**0.921**	**0.638**	**0.680**	**0.974**	**0.674**	**0.930**	**0.732**	**0.606**	**0.667**	**0.589**	**0.910**	**9.207**
2002	Flow (cfs)	401	495	1,014	1,114	1,675	1,161	216	120	202	288	927	1,792	9,404
	Generation (MWH)	371	447	985	1,071	1,377	1,068	188	76	129	250	713	1,398	8,072
	MWH/cfs	**0.924**	**0.902**	**0.972**	**0.962**	**0.822**	**0.920**	**0.871**	**0.631**	**0.638**	**0.867**	**0.769**	**0.780**	**10.058**
	Capped Flow (cfs)	401	495	1,014	1,114	1,675	1,161	216	120	202	288	927	1,792	9,404
	MWH/Capped cfs	**0.924**	**0.902**	**0.972**	**0.962**	**0.822**	**0.920**	**0.871**	**0.631**	**0.638**	**0.867**	**0.769**	**0.780**	**10.058**
2003	Flow (cfs)	1,338	1,053	2,890	2,500	1,319	2,263	652	592	496	899	1,273	2,049	17,323
	Generation (MWH)	1,398	1,239	499	1,771	1,726	1,053	1,760	645	557	321	588	998	12,555
	MWH/cfs	**1.045**	**1.177**	**0.173**	**0.709**	**1.308**	**0.465**	**2.700**	**1.090**	**1.122**	**0.356**	**0.462**	**0.487**	**11.094**
	Capped Flow (cfs)	1,338	1,053	2,343	2,343	1,319	2,263	652	592	496	899	1,273	2,049	16,620
	MWH/Capped cfs	**1.045**	**1.177**	**0.213**	**0.756**	**1.308**	**0.465**	**2.700**	**1.090**	**1.122**	**0.356**	**0.462**	**0.487**	**11.182**
2004	Flow (cfs)	1,181	910	1,183	3,784	1,516	533	335	391	926	891	907	2,183	14,738
	Generation (MWH)	1,121	800	1,301	1,716	1,283	703	321	390	504	815	814	1,706	11,474
	MWH/cfs	**0.950**	**0.879**	**1.099**	**0.453**	**0.847**	**1.319**	**0.959**	**0.998**	**0.544**	**0.915**	**0.898**	**0.782**	**10.643**
	Capped Flow (cfs)	1,181	910	1,183	2,343	1,516	533	335	391	926	891	907	2,183	13,297
	MWH/Capped cfs	**0.950**	**0.879**	**1.099**	**0.732**	**0.847**	**1.319**	**0.959**	**0.998**	**0.544**	**0.915**	**0.898**	**0.782**	**10.921**
2005	Flow (cfs)	2,450	1,896	1,781	3,074	1,562	494	364	114	119	3,158	2,072	1,994	19,078
	Generation (MWH)	1,711	1,408	1,410	1,575	1,545	507	358	67	0	1,210	1,562	1,553	12,907
	MWH/cfs	**0.698**	**0.743**	**0.792**	**0.512**	**0.989**	**1.027**	**0.985**	**0.584**	**0.000**	**0.383**	**0.754**	**0.779**	**8.246**
	Capped Flow (cfs)	2,343	1,896	1,781	2,343	1,562	494	364	114	119	2,343	2,072	1,994	17,425
	MWH/Capped cfs	**0.730**	**0.743**	**0.792**	**0.672**	**0.989**	**1.027**	**0.985**	**0.584**	**0.000**	**0.516**	**0.754**	**0.779**	**8.571**
2006	Flow (cfs)	2,849	2,581	867	765	1,954	3,158	877	382	353	809	2,509	1,501	18,605
	Generation (MWH)	1,915	1,556	883	724	1,442	1,584	887	356	300	570	1,553	1,357	13,127
	MWH/cfs	**0.672**	**0.603**	**1.018**	**0.947**	**0.738**	**0.502**	**1.012**	**0.932**	**0.847**	**0.704**	**0.619**	**0.904**	**9.498**
	Capped Flow (cfs)	2,343	2,343	867	765	1,954	2,343	877	382	353	809	2,343	1,501	16,881
	MWH/Capped cfs	**0.817**	**0.664**	**1.018**	**0.947**	**0.738**	**0.676**	**1.012**	**0.932**	**0.847**	**0.704**	**0.663**	**0.904**	**9.922**
2007	Flow (cfs)	1,618	644	2,474	3,912	1,550	658	242	144	113	150	314	518	12,337
	Generation (MWH)	1,584	559	1,544	1,833	1,437	603	200	109	16	71	270	523	8,749
	MWH/cfs	**0.979**	**0.868**	**0.624**	**0.468**	**0.927**	**0.916**	**0.826**	**0.755**	**0.140**	**0.474**	**0.862**	**1.009**	**8.848**
	Capped Flow (cfs)	1,618	644	2,343	2,343	1,550	658	242	144	113	150	314	518	10,637
	MWH/Capped cfs	**0.979**	**0.868**	**0.659**	**0.782**	**0.927**	**0.916**	**0.826**	**0.755**	**0.140**	**0.474**	**0.862**	**1.009**	**9.197**
2008	Flow (cfs)	1,161	3,708	3,338	1,580	1,151	477	499	581	1,156	954	1,269	3,405	19,280
	Generation (MWH)	1,127	1,667	1,798	1,377	1,139	470	507	609	959	876	1,149	1,668	13,347
	MWH/cfs	**0.971**	**0.449**	**0.539**	**0.872**	**0.989**	**0.986**	**1.016**	**1.048**	**0.829**	**0.918**	**0.906**	**0.490**	**10.014**

WYRE WYND PROJECT
OUTLIERS REMOVED (LT)

	Capped Flow (cfs)	1,161	2,343	2,343	1,580	1,151	477	499	581	1,156	954	1,269	2,343	15,858
	MWH/Capped cfs	**0.971**	**0.711**	**0.767**	**0.872**	**0.989**	**0.986**	**1.016**	**1.048**	**0.829**	**0.918**	**0.906**	**0.712**	**10.726**
2009	Flow (cfs)	1,619	1,410	1,725	1,896	955	827	2,141	800	295	706	958	1,973	15,306
	Generation (MWH)	1,498	1,289	1,583	1,587	999	680	1,403	756	117	485	913	1,615	12,926
	MWH/cfs	**0.925**	**0.914**	**0.918**	**0.837**	**1.046**	**0.822**	**0.655**	**0.945**	**0.398**	**0.688**	**0.953**	**0.819**	**9.919**
	Capped Flow (cfs)	1,619	1,410	1,725	1,896	955	827	2,141	800	295	706	958	1,973	15,306
	MWH/Capped cfs	**0.925**	**0.914**	**0.918**	**0.837**	**1.046**	**0.822**	**0.655**	**0.945**	**0.398**	**0.688**	**0.953**	**0.819**	**9.919**
2010	Flow (cfs)	1,698	1,792	4,919	3,150	808	600	218	143	115	441	607	1,100	15,590
	Generation (MWH)	1,359	1,091	1,688	1,593	832	645	215	84	85	467	654	1,079	9,791
	MWH/cfs	**0.801**	**0.609**	**0.343**	**0.506**	**1.030**	**1.076**	**0.985**	**0.591**	**0.737**	**1.059**	**1.077**	**0.981**	**9.792**
	Capped Flow (cfs)	1,698	1,792	2,343	2,343	808	600	218	143	115	441	607	1,100	12,207
	MWH/Capped cfs	**0.801**	**0.609**	**0.720**	**0.680**	**1.030**	**1.076**	**0.985**	**0.591**	**0.737**	**1.059**	**1.077**	**0.981**	**10.344**
2011	Flow (cfs)	718	1,204	3,853	2,179	1,533	1,054	471	1,453	2,726	1,938	2,153	2,923	22,205
	Generation (MWH)	738	985	1,773	1,556	1,489	1,055	473	520	1,626	1,602	1,660	1,816	15,293
	MWH/cfs	**1.027**	**0.818**	**0.460**	**0.714**	**0.971**	**1.001**	**1.004**	**0.358**	**0.597**	**0.827**	**0.771**	**0.621**	**9.169**
	Capped Flow (cfs)	718	1,204	2,343	2,179	1,533	1,054	471	1,453	2,343	1,938	2,153	2,343	19,733
	MWH/Capped cfs	**1.027**	**0.818**	**0.757**	**0.714**	**0.971**	**1.001**	**1.004**	**0.358**	**0.694**	**0.827**	**0.771**	**0.775**	**9.717**
2012	Flow (cfs)	1,695	1,067	948	843	1,078	701	215	255	330	623	710	924	9,388
	Generation (MWH)	1,594	1,031	1,012	715	1,078	697	187	241	279	528	665	930	8,956
	MWH/cfs	**0.940**	**0.967**	**1.067**	**0.848**	**1.000**	**0.993**	**0.870**	**0.944**	**0.847**	**0.847**	**0.937**	**1.007**	**11.268**
	Capped Flow (cfs)	1,695	1,067	948	843	1,078	701	215	255	330	623	710	924	9,388
	MWH/Capped cfs	**0.940**	**0.967**	**1.067**	**0.848**	**1.000**	**0.993**	**0.870**	**0.944**	**0.847**	**0.847**	**0.937**	**1.007**	**11.268**
	Average MWH/Capped Flow	**0.897**	**0.829**	**0.801**	**0.797**	**0.967**	**0.892**	**1.029**	**0.817**	**0.698**	**0.767**	**0.822**	**0.848**	**10.164**

Baseline Period	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Annual**
Long Term Flow at Dam (per USGS 1991-2012 data)	1,621.7	1,575.5	2,362.2	2,248.0	1,278.7	942.1	467.5	401.8	487.2	789.1	1,082.3	1,674.1	1,244.2
Capped Long Term Flow (cfs)	1,622	1,575	2,343	2,248	1,279	942	468	402	487	789	1,082	1,674	1,243
Average MWH/Capped Flow (cfs) - Hist Base	0.712	0.629	0.689	0.642	0.805	1.134	0.301	0.338	0.197	0.482	0.701	0.821	7.452
MWH, Long-Term Avg. - Capped Hist Base	**1,155**	**991**	**1,615**	**1,442**	**1,030**	**1,068**	**141**	**136**	**96**	**381**	**759**	**1,375**	**10,189**
Average MWH/Capped Flow (cfs) - Ex Base	0.706	0.636	0.703	0.689	0.793	0.979	0.400	0.402	0.347	0.482	0.701	0.821	7.660
MWH, Long-Term Avg. - Capped - Ex Base	**1,146**	**1,002**	**1,646**	**1,549**	**1,015**	**922**	**187**	**162**	**169**	**381**	**759**	**1,375**	**10,311**

Post Improvement Period	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Annual**
Long Term Flow at Dam (per USGS 1991-2012 data)	1,622	1,575	2,362	2,248	1,279	942	468	402	487	789	1,082	1,674	1,244
Capped Long Term Flow (cfs)	1,622	1,575	2,343	2,248	1,279	942	468	402	487	789	1,082	1,674	1,243
Average MWH/Capped Flow (cfs)	0.897	0.829	0.801	0.797	0.967	0.892	1.029	0.817	0.698	0.767	0.822	0.848	10.164
MWH, Long-Term Avg. - Capped	**1,454**	**1,306**	**1,877**	**1,791**	**1,237**	**841**	**481**	**328**	**340**	**605**	**889**	**1,420**	**12,570**
% Change, Base to New - Capped - Ex Base	**27%**	**30%**	**14%**	**16%**	**22%**	**-9%**	**157%**	**103%**	**101%**	**59%**	**17%**	**3%**	**21.91%**
% Change, Base to New - Capped - Hist Base	**26%**	**32%**	**16%**	**24%**	**20%**	**-21%**	**242%**	**142%**	**255%**	**59%**	**17%**	**3%**	**23.38%**

% Change, Base to New - Capped - Ex Base	**21%**	**23%**	**12%**	**14%**	**18%**	**-10%**	**61%**	**51%**	**50%**	**37%**	**15%**	**3%**	**17.97%**
% Change, Base to New - Capped - Hist Base	79%	77%	88%	86%	82%	110%	39%	49%	50%	63%	85%	97%	**82.03%**
													100.0%

WYRE WYND PROJECT
OUTLIERS REMOVED (ST)

(Historical Baseline Period (based on 649/713% of flow at USGS Jewett City, Connecticut Gauging Station Data)

Pre-Upgrade

		January	February	March	April	May	June	July	August	September	October	November	December	
1995	Flow (cfs)	2,013	1,153	1,759	1,079	839	307	111	156	91	714	1,586	804	10,612
	Generation (MWH)	1,760	984	1,208	600	616	200	0	8	8	424	1,112	688	7,608
2343	**MWH/cfs**	**0.874**	**0.853**	**0.687**	**0.556**	**0.734**	**0.652**	**0.000**	**0.051**	**0.087**	**0.594**	**0.701**	**0.856**	**6.647**
	Capped Flow (cfs)	2,013	1,153	1,759	1,079	839	307	111	156	91	714	1,586	804	10,612
	MWH/Capped cfs	**0.874**	**0.853**	**0.687**	**0.556**	**0.734**	**0.652**	**0.000**	**0.051**	**0.087**	**0.594**	**0.701**	**0.856**	**6.647**
1996	Flow (cfs)	2,478	2,674	1,972	3,021	1,674	510	646	284	588	1,604	1,630	4,048	21,129
	Generation (MWH)	1,330	771	1,275	1,413	1,129	950	125	222	17	584	896	1,688	10,399
	MWH/cfs	**0.537**	**0.288**	**0.647**	**0.468**	**0.674**	**1.861**	**0.194**	**0.780**	**0.028**	**0.364**	**0.550**	**0.417**	**6.808**
	Capped Flow (cfs)	2,343	2,343	1,972	2,343	1,674	510	646	284	588	1,604	1,630	2,343	18,281
	MWH/Capped cfs	**0.567**	**0.329**	**0.647**	**0.603**	**0.674**	**1.861**	**0.194**	**0.780**	**0.028**	**0.364**	**0.550**	**0.720**	**7.319**
1997	Flow (cfs)	2,129	1,928	1,655	2,695	1,256	391	148	190	116	163	718	611	12,001
	Generation (MWH)	1,480	1,360	1,216	1,794	1,265	348	105	34	55	80	612	542	8,891
	MWH/cfs	**0.695**	**0.705**	**0.735**	**0.666**	**1.007**	**0.888**	**0.709**	**0.182**	**0.475**	**0.489**	**0.852**	**0.887**	**8.290**
	Capped Flow (cfs)	2,129	1,928	1,655	2,343	1,256	391	148	190	116	163	718	611	11,649
	MWH/Capped cfs	**0.695**	**0.705**	**0.735**	**0.766**	**1.007**	**0.888**	**0.709**	**0.182**	**0.475**	**0.489**	**0.852**	**0.887**	**8.390**
	Average MWH/Non-Capped Flow (1995-1997)	**0.702**	**0.616**	**0.689**	**0.563**	**0.805**	**1.134**	**0.301**	**0.338**	**0.197**	**0.482**	**0.701**	**0.720**	**7.248**
	Average MWH/Capped Flow (1995-1997)	**0.712**	**0.629**	**0.689**	**0.642**	**0.805**	**1.134**	**0.301**	**0.338**	**0.197**	**0.482**	**0.701**	**0.821**	**7.452**

Extended Pre-Upgrade Period

		January	February	March	April	May	June	July	August	September	October	November	December	
1998	Flow (cfs)	2,039	2,253	3,707	2,020	1,886	2,480	1,248	308	208	635	557	472	17,814
	Generation (MWH)	1,405	1,476	1,739	1,679	1,429	1,206	869	184	166	622	475	468	11,719
	MWH/cfs	**0.689**	**0.655**	**0.469**	**0.831**	**0.758**	**0.486**	**0.697**	**0.596**	**0.798**				**5.979**
	Capped Flow (cfs)	2,039	2,253	2,343	2,020	1,886	2,343	1,248	308	208	635	557	472	16,312
	MWH/Capped cfs	**0.689**	**0.655**	**0.742**	**0.831**	**0.758**	**0.515**	**0.697**	**0.596**	**0.798**				**6.281**
	Average MWH/Non-Capped Flow	**0.689**	**0.655**	**0.469**	**0.831**	**0.758**	**0.486**	**0.697**	**0.596**	**0.798**				**5.979**
	Average MWH/Capped Flow (1998-Sept.1998)	**0.689**	**0.655**	**0.742**	**0.831**	**0.758**	**0.515**	**0.697**	**0.596**	**0.798**				**6.281**
	Average MWH/Capped Flow (1995-Sept.1998)	**0.706**	**0.636**	**0.703**	**0.689**	**0.793**	**0.979**	**0.400**	**0.402**	**0.347**	**0.482**	**0.701**	**0.821**	**7.660**

Post-Improvement Period

		January	February	March	April	May	June	July	August	September	October	November	December	
1998	Flow (cfs)	2,039	2,253	3,707	2,020	1,886	2,480	1,248	**308**	208	635	557	472	17,814
	Generation (MWH)	1,405	1,476	1,739	1,679	1,429	1,206	869	184	166	622	475	468	11,719
	MWH/cfs										**0.980**	**0.854**	**0.992**	**2.825**
	Capped Flow (cfs)	2,039	2,253	2,343	2,020	1,886	2,343	1,248	308	208	635	557	472	16,312
	MWH/Capped cfs										**0.980**	**0.854**	**0.992**	**2.825**
1999	Flow (cfs)	2,372	2,428	2,844	997	747	214	143	95	686	796	808	1,107	13,238
	Generation (MWH)	1,409	1,543	1,860	988	717	167	103	70	496	672	810	1,082	9,918
	MWH/cfs	**0.594**	**0.636**	**0.654**	**0.991**	**0.960**	**0.781**	**0.720**	**0.736**	**0.723**	**0.845**	**1.003**	**0.977**	**9.619**
	Capped Flow (cfs)	2,343	2,343	2,343	997	747	214	143	95	686	796	808	1,107	12,623
	MWH/Capped cfs	**0.601**	**0.659**	**0.794**	**0.991**	**0.960**	**0.781**	**0.720**	**0.736**	**0.723**	**0.845**	**1.003**	**0.977**	**9.789**
2000	Flow (cfs)	1,094	1,390	2,114	2,610	1,617	1,395	403	405	282	277	488	951	13,027

WYRE WYND PROJECT
OUTLIERS REMOVED (ST)

	Generation (MWH)	1,047	1,073	1,700	1,602	1,524	1,167	350	350	183	210	405	769	10,380
	MWH/cfs	**0.957**	**0.772**	**0.804**	**0.614**	**0.942**	**0.836**	**0.870**	**0.865**	**0.647**	**0.758**	**0.831**	**0.808**	**9.704**
	Capped Flow (cfs)	1,094	1,390	2,114	2,343	1,617	1,395	403	405	282	277	488	951	12,761
	MWH/Capped cfs	**0.957**	**0.772**	**0.804**	**0.684**	**0.942**	**0.836**	**0.870**	**0.865**	**0.647**	**0.758**	**0.831**	**0.808**	**9.773**
2001	Flow (cfs)	625	1,078	2,903	2,923	733	1,623	420	308	195	231	207	308	11,554
	Generation (MWH)	553	993	1,495	1,594	714	1,094	391	226	118	154	122	280	7,733
	MWH/cfs	**0.885**	**0.921**	**0.515**	**0.545**	**0.974**	**0.674**	**0.930**	**0.732**	**0.606**	**0.667**	**0.589**	**0.910**	**8.949**
2343	Capped Flow (cfs)	625	1,078	2,343	2,343	733	1,623	420	308	195	231	207	308	10,415
	MWH/Capped cfs	**0.885**	**0.921**	**0.638**	**0.680**	**0.974**	**0.674**	**0.930**	**0.732**	**0.606**	**0.667**	**0.589**	**0.910**	**9.207**
2002	Flow (cfs)	401	495	1,014	1,114	1,675	1,161	216	120	202	288	927	1,792	9,404
	Generation (MWH)	371	447	985	1,071	1,377	1,068	188	76	129	250	713	1,398	8,072
	MWH/cfs	**0.924**	**0.902**	**0.972**	**0.962**	**0.822**	**0.920**	**0.871**	**0.631**	**0.638**	**0.867**	**0.769**	**0.780**	**10.058**
	Capped Flow (cfs)	401	495	1,014	1,114	1,675	1,161	216	120	202	288	927	1,792	9,404
	MWH/Capped cfs	**0.924**	**0.902**	**0.972**	**0.962**	**0.822**	**0.920**	**0.871**	**0.631**	**0.638**	**0.867**	**0.769**	**0.780**	**10.058**
2003	Flow (cfs)	1,338	1,053	2,890	2,500	1,319	2,263	652	592	496	899	1,273	2,049	17,323
	Generation (MWH)	1,398	1,239	499	1,771	1,726	1,053	1,760	645	557	321	588	998	12,555
	MWH/cfs	**1.045**	**1.177**	**0.173**	**0.709**	**1.308**	**0.465**	**2.700**	**1.090**	**1.122**	**0.356**	**0.462**	**0.487**	**11.094**
	Capped Flow (cfs)	1,338	1,053	2,343	2,343	1,319	2,263	652	592	496	899	1,273	2,049	16,620
	MWH/Capped cfs	**1.045**	**1.177**	**0.213**	**0.756**	**1.308**	**0.465**	**2.700**	**1.090**	**1.122**	**0.356**	**0.462**	**0.487**	**11.182**
2004	Flow (cfs)	1,181	910	1,183	3,784	1,516	533	335	391	926	891	907	2,183	14,738
	Generation (MWH)	1,121	800	1,301	1,716	1,283	703	321	390	504	815	814	1,706	11,474
	MWH/cfs	**0.950**	**0.879**	**1.099**	**0.453**	**0.847**	**1.319**	**0.959**	**0.998**	**0.544**	**0.915**	**0.898**	**0.782**	**10.643**
	Capped Flow (cfs)	1,181	910	1,183	2,343	1,516	533	335	391	926	891	907	2,183	13,297
	MWH/Capped cfs	**0.950**	**0.879**	**1.099**	**0.732**	**0.847**	**1.319**	**0.959**	**0.998**	**0.544**	**0.915**	**0.898**	**0.782**	**10.921**
2005	Flow (cfs)	2,450	1,896	1,781	3,074	1,562	494	364	114	119	3,158	2,072	1,994	19,078
	Generation (MWH)	1,711	1,408	1,410	1,575	1,545	507	358	67	0	1,210	1,562	1,553	12,907
	MWH/cfs	**0.698**	**0.743**	**0.792**	**0.512**	**0.989**	**1.027**	**0.985**	**0.584**	**0.000**	**0.383**	**0.754**	**0.779**	**8.246**
	Capped Flow (cfs)	2,343	1,896	1,781	2,343	1,562	494	364	114	119	2,343	2,072	1,994	17,425
	MWH/Capped cfs	**0.730**	**0.743**	**0.792**	**0.672**	**0.989**	**1.027**	**0.985**	**0.584**	**0.000**	**0.516**	**0.754**	**0.779**	**8.571**
2006	Flow (cfs)	2,849	2,581	867	765	1,954	3,158	877	382	353	809	2,509	1,501	18,605
	Generation (MWH)	1,915	1,556	883	724	1,442	1,584	887	356	300	570	1,553	1,357	13,127
	MWH/cfs	**0.672**	**0.603**	**1.018**	**0.947**	**0.738**	**0.502**	**1.012**	**0.932**	**0.847**	**0.704**	**0.619**	**0.904**	**9.498**
	Capped Flow (cfs)	2,343	2,343	867	765	1,954	2,343	877	382	353	809	2,343	1,501	16,881
	MWH/Capped cfs	**0.817**	**0.664**	**1.018**	**0.947**	**0.738**	**0.676**	**1.012**	**0.932**	**0.847**	**0.704**	**0.663**	**0.904**	**9.922**
2007	Flow (cfs)	1,618	644	2,474	3,912	1,550	658	242	144	113	150	314	518	12,337
	Generation (MWH)	1,584	559	1,544	1,833	1,437	603	200	109	16	71	270	523	8,749
	MWH/cfs	**0.979**	**0.868**	**0.624**	**0.468**	**0.927**	**0.916**	**0.826**	**0.755**	**0.140**	**0.474**	**0.862**	**1.009**	**8.848**
	Capped Flow (cfs)	1,618	644	2,343	2,343	1,550	658	242	144	113	150	314	518	10,637
	MWH/Capped cfs	**0.979**	**0.868**	**0.659**	**0.782**	**0.927**	**0.916**	**0.826**	**0.755**	**0.140**	**0.474**	**0.862**	**1.009**	**9.197**
2008	Flow (cfs)	1,161	3,708	3,338	1,580	1,151	477	499	581	1,156	954	1,269	3,405	19,280
	Generation (MWH)	1,127	1,667	1,798	1,377	1,139	470	507	609	959	876	1,149	1,668	13,347
	MWH/cfs	**0.971**	**0.449**	**0.539**	**0.872**	**0.989**	**0.986**	**1.016**	**1.048**	**0.829**	**0.918**	**0.906**	**0.490**	**10.014**

WYRE WYND PROJECT
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	Capped Flow (cfs)	1,161	2,343	2,343	1,580	1,151	477	499	581	1,156	954	1,269	2,343	15,858
	MWH/Capped cfs	**0.971**	**0.711**	**0.767**	**0.872**	**0.989**	**0.986**	**1.016**	**1.048**	**0.829**	**0.918**	**0.906**	**0.712**	**10.726**
2009	Flow (cfs)	1,619	1,410	1,725	1,896	955	827	2,141	800	295	706	958	1,973	15,306
	Generation (MWH)	1,498	1,289	1,583	1,587	999	680	1,403	756	117	485	913	1,615	12,926
	MWH/cfs	**0.925**	**0.914**	**0.918**	**0.837**	**1.046**	**0.822**	**0.655**	**0.945**	**0.398**	**0.688**	**0.953**	**0.819**	**9.919**
	Capped Flow (cfs)	1,619	1,410	1,725	1,896	955	827	2,141	800	295	706	958	1,973	15,306
	MWH/Capped cfs	**0.925**	**0.914**	**0.918**	**0.837**	**1.046**	**0.822**	**0.655**	**0.945**	**0.398**	**0.688**	**0.953**	**0.819**	**9.919**
2010	Flow (cfs)	1,698	1,792	4,919	3,150	808	600	218	143	115	441	607	1,100	15,590
	Generation (MWH)	1,359	1,091	1,688	1,593	832	645	215	84	85	467	654	1,079	9,791
	MWH/cfs	**0.801**	**0.609**	**0.343**	**0.506**	**1.030**	**1.076**	**0.985**	**0.591**	**0.737**	**1.059**	**1.077**	**0.981**	**9.792**
	Capped Flow (cfs)	1,698	1,792	2,343	2,343	808	600	218	143	115	441	607	1,100	12,207
	MWH/Capped cfs	**0.801**	**0.609**	**0.720**	**0.680**	**1.030**	**1.076**	**0.985**	**0.591**	**0.737**	**1.059**	**1.077**	**0.981**	**10.344**
2011	Flow (cfs)	718	1,204	3,853	2,179	1,533	1,054	471	1,453	2,726	1,938	2,153	2,923	22,205
	Generation (MWH)	738	985	1,773	1,556	1,489	1,055	473	520	1,626	1,602	1,660	1,816	15,293
	MWH/cfs	**1.027**	**0.818**	**0.460**	**0.714**	**0.971**	**1.001**	**1.004**	**0.358**	**0.597**	**0.827**	**0.771**	**0.621**	**9.169**
	Capped Flow (cfs)	718	1,204	2,343	2,179	1,533	1,054	471	1,453	2,343	1,938	2,153	2,343	19,733
	MWH/Capped cfs	**1.027**	**0.818**	**0.757**	**0.714**	**0.971**	**1.001**	**1.004**	**0.358**	**0.694**	**0.827**	**0.771**	**0.775**	**9.717**
2012	Flow (cfs)	1,695	1,067	948	843	1,078	701	215	255	330	623	710	924	9,388
	Generation (MWH)	1,594	1,031	1,012	715	1,078	697	187	241	279	528	665	930	8,956
	MWH/cfs	**0.940**	**0.967**	**1.067**	**0.848**	**1.000**	**0.993**	**0.870**	**0.944**	**0.847**	**0.847**	**0.937**	**1.007**	**11.268**
	Capped Flow (cfs)	1,695	1,067	948	843	1,078	701	215	255	330	623	710	924	9,388
	MWH/Capped cfs	**0.940**	**0.967**	**1.067**	**0.848**	**1.000**	**0.993**	**0.870**	**0.944**	**0.847**	**0.847**	**0.937**	**1.007**	**11.268**
	Average MWH/Capped Flow	**0.923**	**0.798**	**0.848**	**0.747**	**1.000**	**1.023**	**0.953**	**0.631**	**0.759**	**0.911**	**0.934**	**0.895**	**10.424**

Baseline Period	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Annual**
Long Term Flow at Dam (per USGS 1991-2012 data)	1,621.7	1,575.5	2,362.2	2,248.0	1,278.7	942.1	467.5	401.8	487.2	789.1	1,082.3	1,674.1	1,244.2
Capped Long Term Flow (cfs)	1,622	1,575	2,343	2,248	1,279	942	468	402	487	789	1,082	1,674	1,243
Average MWH/Capped Flow (cfs) - Hist Base	0.712	0.629	0.689	0.642	0.805	1.134	0.301	0.338	0.197	0.482	0.701	0.821	7.452
MWH, Long-Term Avg. - Capped Hist Base	**1,155**	**991**	**1,615**	**1,442**	**1,030**	**1,068**	**141**	**136**	**96**	**381**	**759**	**1,375**	**10,189**
Average MWH/Capped Flow (cfs) - Ex Base	0.706	0.636	0.703	0.689	0.793	0.979	0.400	0.402	0.347	0.482	0.701	0.821	7.660
MWH, Long-Term Avg. - Capped - Ex Base	**1,146**	**1,002**	**1,646**	**1,549**	**1,015**	**922**	**187**	**162**	**169**	**381**	**759**	**1,375**	**10,311**

Post Improvement Period	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Annual**
Long Term Flow at Dam (per USGS 1991-2012 data)	1,622	1,575	2,362	2,248	1,279	942	468	402	487	789	1,082	1,674	1,244
Capped Long Term Flow (cfs)	1,622	1,575	2,343	2,248	1,279	942	468	402	487	789	1,082	1,674	1,243
Average MWH/Capped Flow (cfs)	0.923	0.798	0.848	0.747	1.000	1.023	0.953	0.631	0.759	0.911	0.934	0.895	10.424
MWH, Long-Term Avg. - Capped	**1,496**	**1,257**	**1,987**	**1,680**	**1,279**	**964**	**446**	**254**	**370**	**719**	**1,011**	**1,499**	**12,962**
% Change, Base to New - Capped - Ex Base	**31%**	**25%**	**21%**	**8%**	**26%**	**5%**	**138%**	**57%**	**119%**	**89%**	**33%**	**9%**	**25.71%**
% Change, Base to New - Capped - Hist Base	**30%**	**27%**	**23%**	**16%**	**24%**	**-10%**	**217%**	**87%**	**286%**	**89%**	**33%**	**9%**	**27.22%**

% Change, Base to New - Capped - Ex Base	**23%**	**20%**	**17%**	**8%**	**21%**	**4%**	**58%**	**36%**	**54%**	**47%**	**25%**	**8%**	**20.45%**
% Change, Base to New - Capped - Hist Base	77%	80%	83%	92%	79%	96%	42%	64%	46%	53%	75%	92%	**79.55%**
													100.0%

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Southwire Company) Project No. 3472-001

ORDER ISSUING LICENSE (MAJOR)

(Issued May 19, 1982)

The Southwire Company filed on October 5, 1981, an application for license under Part I of the Federal Power Act (Act) to construct, operate and maintain the Wyre-Wynd Project No. 3472. 1/ The project would be located on the Quinebaug River, a stream subject to the jurisdiction of Congress in Jewett City, New London and Windham Counties, Connecticut. Notice of the application has been published and comments have been received from interested Federal, State, and local agencies. No protests or petitions to intervene have been received, and none of the agencies objected to issuance of the license.

The Wyre-Wynd Project consists of an existing 473-foot long, 19-foot high concrete dam with two-foot high flashboards, a 333-acre reservoir, an existing forebay-inlet canal with an overflow weir, and an existing tailrace. The Applicant proposes to construct a powerhouse within the west end of the forebay-inlet canal containing turbine-generator units with a total rated capacity of 2.5 MW. The project would generate up to 11,000,000 kWh annually saving the equivalent of 18,000 barrels of oil or 5,000 tons of coal. The project is owned by the Applicant. Energy developed at the project would be used in the Applicant's adjacent mill complex with the excess sold to the local utility.

Minimum Flow and Fish Passage

The Connecticut Department of Environmental Protection (DEP) in its water quality certification issued April 5, 1982), recommended a minimum flow release of 80 cubic feet per second (cfs) from the project dam for the maintenance of water quality and the protection of fish and wildlife. The U.S. Fish and Wildlife Service (FWS), in its letter of comment, recommended a minimum flow of 130 cfs at the dam to protect fishery resources. Applicant has agreed to release a minimum flow of 80 cfs. Article 32 prescribes an interim minimum flow of 80 cfs and Article 31 requires a study to determine

1/ Authority to act on this matter is delegated to the Director, Office of Electric Power Regulation under 18 C.F.R. §375.308 (1981).

a long-term minimum flow for the protection of fish and wildlife resources.

FWS also recommended that the license for the project be conditioned to require fish passage facilities when needed. Two dams now exist below the project and restoration efforts are underway with tentative plans for fish passage at the lower most dam on the Quinebaug/Thames River System. Article 15 of the L-11 Form (revised October, 1975) provides for construction of such facilities, in the future, if recommended by DEP or FWS after notice and opportunity for hearing.

Environmental Impacts

There would be minor impacts on water and air quality resulting from the construction activities at the project site, which will be limited to the construction period. Any adverse environmental effects resulting from the refurbishment of the existing project will be of short-term duration and minor in nature. No known Federally-listed threatened or endangered species, or historic or archeological sites would be affected by the project. On the basis of the record, including agency comments and Staff's independent analysis, it is concluded that approval of the application will not constitute a major Federal action significantly affecting the quality of the human environment.

In accordance with standard Commission practice, 2/ Article 26 of this license also requires cultural resources protection measures in the event of any future construction or development at the project, other than the original project development considered and authorized here.

Exhibits

Exhibit G Sheet 1 (FERC No. 3472-4) drawing as submitted with the Application, includes the Applicant's Mill complex as well as the project powerhouse within the project boundary. The Exhibit G Sheet 1 should be revised to include only lands necessary for the operation and maintenance of the project. The project boundary should be shown as either a contour or metes and bounds line pursuant to 18 C.F.R. 4.61(f)(4)(i). Article 33 requires the filing of a revised Exhibit G drawing within 90 days of completion of constructic

2/ See S. D. Warren, Project No. 2897, Order Denying Rehearing (issued February 19, 1980).

Safety and Adequacy

The Commission's New York Regional Office inspected the project on January 4, 1982, and found that the project dam has a significant hazard potential. The staff has analyzed the dam and finds that it would be stable under normal operating conditions. During extreme flood conditions the dam becomes unstable and would possibly fail. Failure of the dam under flood conditions would not significantly increase the hazard to personel and property located downstream from the project. It is concluded that the project under the conditions of this license will be safe and adequate. 3/

Comprehensive Development

The project powerhouse would contain a single turbine-generator unit with a rated capacity of 2,500 kW under a gross head of 21.9 feet. The plant hydraulic capacity is estimated to be 2,000 cfs.

The project would utilize existing facilities and would develop the flow and fall of the Quinebaug River to the extent practical. It is concluded that the project, as redeveloped, will be best adapted to the comprehensive development of the Quinebaug River upon compliance with the terms and conditions of this license.

Economic Feasibility

Staff has analyzed the economic feasibility of redevelopment of the Wyre-Wynd Project. It is concluded that the Wyre-Wynd Project is economically feasible to develop based on a comparison of the cost of pruchasing power from the local utility over the 40 year licensing period.

License Term

The proposed scale of development is less than that which would warrant a full 50-year term since the majority of the project facilities currently exist. Therefore pursuant to the Commission's

3/ As part of its responsibilities, the Licensee is required to comply with Commission dam safety regulations, as currently promulgated in Part 12 of the Commission's regulations, 18 C.F.R. §12.1-12.44 (1981). Part 12 includes the requirement to file an emergency action plan which would take effect under flood conditions.

policy for licensing projects involving moderate redevelopment, 4/ this license term will be for a period of 40 years.

It is ordered that:

(A) This license is issued to the Southwire Company, (Licensee), under Part I of the Federal Power Act (Act), for a period of 40 years, effective the first day of the month in which this order is issued, for the construction, operation, and maintenance of the Wyre-Wynd Project No. 3472 located in New London and Windham Counties, Connecticut, on the Quinebaug River. This license is subject to the terms and conditions of the Act, which are incorporated by reference as part of this license, and subject to the regulations the Commission issued under the provisions of the Act.

(B) The Wyre Wynd Project No. 3472 consists of:

(1) All lands, to the extent of the Licensee's interests in those lands, constituting the project area and enclosed by the project boundary. The project area and boundary are shown and described by certain exhibits that form part of the application for license and that are designated and described as:

Exhibit	FERC No. 3472-	Showing
G Sheet 1	4	Project Boundary
G Sheet 2	5	Project Boundary
G Sheet 3	6	Project Boundary
G Sheet 4	7	Project Boundary

Project works consisting of: (1) an existing 19-foot high, 473-foot long rubble masonry and concrete dam with 2-foot high flashboards; (2) an existing 20.75-foot high inlet gate section with five sluice gates; (3) a 333-acre reservoir with a usable storage capacity of 167 acre-feet at elevation 97.3 feet m.s.l.; (4) an existing 250-foot long, 50-foot wide forebay-inlet canal with five flood gates and an 110-foot long overflow weir which discharges below the dam; (5) a existing outlet gate at the west end of the forebay-canal with three 10-foot diameter penstocks; (6) a new powerhouse located within the forebay-inlet canal containing turbine-generators with a total rated capacity of 2,500 kW; (7) an existing tailrace canal; (8) the generator leads; and (9) appurtenant facilities.

4/ See The Montana Power Company, Mystic Lake Project No. 2301, Order Issuing New License (Major) (issued October 3, 1976).

The location, nature, and character of these project works are generally shown and described by the exhibits cited above and more specifically shown and described by certain other exhibits and reports that also form part of the application for license and that are designated and described as:

Exhibit	FERC No. 3472-	Showing
F Sheet 1	1	Project Site Plan
F Sheet 2	2	Powerplant plan, profile and Section
F Sheet 3	3	Sections

(3) All of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project and located within the project boundary, all portable property that may be employed in connection with the project, located within or outside the project boundary, as approved by the Commission, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibit A paragraph 3 which includes information on generating equipment and the Exhibit F and G drawings are approved and made a part of the license with the exception of Exhibit G Sheet 1 which is approved only to the extent that it shows the general project location.

(D) This license is also subject to Articles 1 through 18 set forth in Form L-11 (revised October, 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting the Interest of Interstate or Foreign Commerce," attached to and made a part of this license. The license is also subject to the following additional articles:

Article 24. The Licensee shall, within 90 days of completion of construction, file with the Director, Office of Electric Power Regulation in accordance with Commission's Rules and Regulations, revised "as-built" Exhibit L drawings showing the project as finally constructed.

Article 25. The Licensee shall file with the Commission's Regional Engineer and the Director, Office of Electric Power Regulation, one copy each of the contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouses, and water conveyance structures, at least 60 days prior to start of construction. The Director, Office of Electric Power Regulation may require changes in the plans and specifications to assure safe and adequate operation.

Article 26. Prior to commencement of any construction or development of any project works or other facilities at the project, the Licensee shall consult and cooperate with the State Historic Preservation Officer (SHPO) to determine the need for, and extent of, any archeological or historic resource surveys and any mitigative measures that may be necessary. The Licensee shall provide funds in a reasonable amount for such activity. If any previously unrecorded archeological or historic sites are discovered during the course of construction, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and the Licensee shall consult with the SHPO to develop a mitigation plan for the protection of significant archeological or historic resources. If the Licensee and the SHPO cannot agree on the amount of money to be expended on archeological or historic work related to the project, the Commission reserves the right to require the Licensee to conduct, at its own expense, any such work found necessary.

Article 27. The Licensee shall pay the United States the following annual charges, effective the first day of the month in which this license is issued.

For the purpose or reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 3,330 horsepower.

Article 28. The Licensee shall commence construction of the project within two years from the effective date of this license, and in good faith and with due diligence prosecute and complete construction of the project works within four years from the effective date of this license.

Article 29. The Licensee shall review and approve the design and construction procedures for contractor-designed cofferdams prior to the start of construction. The Licensee shall file with the Commission's Regional Engineer and Director, Office of Electric Power Regulationn, one copy of the approved construction drawings and specifications and a copy of the letter of approval.

Article 30. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other

environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable State and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary State and Federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary State and Federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary Federal and State water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary Federal and State approvals have been obtained; (5) private or public marinas that can accommodate no more that 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the Licensee must file a letter to the Director, Office of Electric Power Regulation, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any Federal or State agency official consulted, and any Federal or State approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

(e) The following additio.l conditions apply to any intended conveyance under paragraphs (c) .r (d) of this article:

(1) Before conveying .he interest, the Licensee shall consult with Federal and S.te fish and wildlife or recreation agencies, as appropriate, .d the State Historic Preservation Officer.

(2) Before conveying .he interest, the Licensee shall determine that the propose use of the lands to be conveyed is not inconsistent with any .proved Exhibit R or approved report on recreational res.rces of an Exhibit E; or, if the project does not have an a; roved Exhibit R or approved report on recreational resources, .hat the lands to be conveyed do not have recreational valu..

(3) The instrument o. conveyance must include covenants running with the land adeq.te to ensure that: (i) the use of the lands conveyed shall n. endanger health, create a nuisance, or otherwise be incompatib. with overall project recreational use; and (ii) the grantee .hall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities o. the conveyed lands will occur in a manner that will protect t.a scenic, recreational, and environmental values of the proje.t.

(4) The Commission r.serves the right to require the Licensee to take reasonabl. remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental va.ies.

(f) The conveyance of an .nterest in project lands under this article does not in itself chan.e the project boundaries. The project boundaries may be chang.d to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflect.ng exclusion of that land. Lands conveyed under this article wil. be excluded from the project only upon a determination that the l.nds are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of en.ironmental resources, and shoreline control, including shoreline a.sthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall .e consolidated for consideration when revised Exhibit G or K dr.wings would be filed for approval for other purposes.

Article 31. Licensee shall consult and cooperate with the Connecticut Fish and Game Department, and the Fish and Wildlife Service in conducting studies to determine the minimum flow release needed at the Wyre-Wynd Dam to ensure protection and enhancement of fish and wildlife resources. Further, Licensee shall, within 1 year from the date of issuance of this license, file a report of its findings with comments from the above mentioned agencies and, for Commission approval, recommendations for a minimum flow release from the project.

Article 32. Pending further order of the Commission, Licensee shall discharge an interim continuous minimum flow of 80 cubic feet per second from the Wyre-Wynd Dam or the inflow of the reservoir, whichever is less, for the purpose of protecting fish and wildlife resources. These flows may be temporarily modified if required by operating emergencies beyond the control of the Licensee, for the minimum flow study required by Article 31, and for short periods for fishery management purposes upon mutual agreement between the Licensee and the Connecticut Fish and Game Department.

Article 33. Licensee shall, within 90 days of completion of construction, file with the Director, Office of Electric Power Regulation in accordnace with the Commission's Regulations, a revised Exhibit G Sheet 1 drawing, showing a revised project boundary drawn in accordance with 18 C.F.R. 4.61(f).

Article 34. Pursuant to Section 10(d) of the Act, during the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate or return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserve acount shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital rate for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the Licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10 year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

(E) This order is final unless a petition appealing it to the Commission is filed within 30 days from the date of its issuance, as provided in Section 1.7(d) of the Commission's regulations, 18 C.F.R. Section 1.7(d) (1981). The filing of a petition appealing this order to the Commission or an application for rehearing as provided in Section 313(a) of the Act does not operate as a stay of the effective date of this license or of any other date specified in this order, except as specifically ordered by the Commission. The Licensee's failure to file a petition appealing this order to the Commission shall constitute acceptance of this license. In acknowledgment of acceptance of this license and its terms and conditions, it shall be signed by the Licensee and returned to the Commission within 60 days from the date this order is issued.

/S/ Schuyler for

Robert E. Cackowski
Acting Director, Office of
Electric Power Regulation

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Southwire Company — Project No. 3472-014
Connecticut

ORDER AMENDING LICENSE AND REVISING ANNUAL CHARGES

(Issued April 27, 1995)

On March 7, 1995, and supplemented on April 6, 1995, Southwire Company, licensee for the Wyre-Wynd Project, FERC No. 3472, filed a letter with the Commission requesting an amendment of its license.[1] The filing was made to correct a discrepancy between the capacity authorized in the license and the project's as-built installed capacity.

Background

During a compliance audit on September 12, 1994, staff observed that the primary turbine-generator is 3,000 kilovolt-amperes at 0.9 power factor, equivalent to 2,700 kW installed capacity, and the nameplate capacity for the minimum flow turbine-generator unit is 80 kW. The combined installed capacity for the project is 2,780 kW, while the Order Amending License[2] authorizes an installed capacity of 2,745 kW; 2,670 kW for the primary generating unit and 75 kW for the minimum flow unit.

In addition, staff observed that the three 10-foot-diameter penstocks located at the forebay canal referred to in Ordering Paragraph (B)(5) of the February 2, 1984 order, do not exist; in their place is one outlet gate. In a letter filed April 6, 1995, the licensee confirmed that the installed capacities are different than authorized and included a revised exhibit A for the Commission's approval.

Review

In our review of the licensee's filing, we found that the installed generating units are similar in type from what was previously approved. In addition, there is no change in the hydraulic capacity of the project. These minor changes to the project will not result in impacts to environmental resources other than those identified during the original project review.

[1] 19 FERC ¶ 62,283, Order Issuing License (Major), May 19, 1982.

[2] 26 FERC ¶ 62,080, February 2, 1984.

This change in installed capacity will revise the annual charges, effective May 31, 1984, the date the turbine/generator equipment went on-line.[3] The revised exhibit A filed on April 6, 1995, reflects the changes in installed capacity of 2,700 kW for the main generating unit and 80 kW for the minimum flow unit, and the minor changes made to the project's configuration. The revised exhibit A conforms to the Commission's rules and regulations.

The issuance of this order is necessary to revise the project's description to reflect the as-built condition of the project. The licensee must report to the Commission any future proposed changes to the project prior to implementing them.

The Director orders:

(A) The license for the Wyre-Wynd Project, FERC No. 3472, is amended as provided by this order, effective the first day of the month in which this order is issued.

(B) The total authorized installed capacity for the Wyre-Wynd Project is 2,780 kW.

(C) The revised exhibit A filed April 6, 1995, conforms to the Commission's rules and regulations and is approved and made part of the license. The revised exhibit A supersedes the current exhibit A.

(D) Ordering Paragraph (B)(1) of the license is revised, in part, to read:

> "....;(4) an existing 250-foot-long, 50-foot-wide forebay-inlet canal with five flood gates and an 110-foot-long overflow weir with an 80 kW minimum flow turbine-generator which discharges below the dam; (5) an outlet gate at the west end of the forebay-canal; (6) a powerhouse located within the forebay-inlet canal containing a single turbine-generator rated at 2,700 kW; ...."

[3] See 66 FERC ¶ 61,086, Order on Rehearing of the International Falls Power Company, which states that, with respect to changes in installed capacity that did not require prior Commission approval, the effective date for revised annual charges will be the date the revised capacity went on-line.

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC UTILITY CONTROL
TEN FRANKLIN SQUARE
NEW BRITAIN, CT 06051

DOCKET NO. 09-01-19 APPLICATION OF SUMMIT HYDROPOWER FOR QUALIFICATION OF WYRE WYND HYDROELECTRIC PROJECT AS A CLASS I RENEWABLE ENERGY SOURCE

March 26, 2009

By the following Commissioners:

John W. Betkoski, III
Kevin M. DelGobbo
Donald W. Downes

DECISION

I. INTRODUCTION

A. SUMMARY

In this Decision, the Department of Public Utility Control determines that the Wyre Wynd generating facility located in Jewett City, Connecticut qualifies as a Class I renewable energy source in any calendar quarter in which it demonstrates run-of-river operation. The Department assigns the Wyre Wynd facility Connecticut Renewable Portfolio Standard (RPS) Registration Number CT00308-09.

B. BACKGROUND OF THE PROCEEDING

By application received on January 21, 2009 (Application), SHI Inc. (SHI) requested that the Department of Public Utility Control (Department) determine that the Wyre Wynd generation facility (Wyre Wynd) qualifies as a Class I renewable energy source.

Wyre Wynd is a hydroelectric facility that commenced operation on May 31, 1984. The facility is located in Jewett City, Connecticut, and has a total rated capacity of 2.78 Megawatts.

C. CONDUCT OF THE PROCEEDING

There is no statutory requirement for a hearing, no person requested a hearing, and none was held.

D. PARTICIPANTS IN THE PROCEEDING

The Department recognized Summit Hydropower, Inc., 6 Far Hills Drive, Avon, Connecticut 06001; The United Illuminating Company, 157 Church Street, P.O. Box 1564, New Haven, Connecticut 06506-0901; The Connecticut Light and Power Company, P.O. Box 270, Hartford, Connecticut 06141-0270; and the Office of Consumer Counsel, Ten Franklin Square, New Britain, Connecticut 06051, as participants in this proceeding.

II. DEPARTMENT ANALYSIS

A. LEGAL STANDARDS

Pursuant to the General Statutes of Connecticut (C.G.S.) §16-1(a)(26), as amended by Public Act 03-135, An Act Concerning Revisions to the Electric Restructuring Legislation, and Public Act 03-221, An Act Concerning Technical Revisions to the Utility Statutes and Telecommunications Towers on Agricultural Land, "Class I renewable energy source" includes energy derived from a run-of-the-river[1] hydropower facility provided such facility has a generating capacity of not more than five megawatts, does not cause an appreciable change in the river flow, and began operation after July 1, 2003.

In interpreting C.G.S. §16-1(a)(26), the Department determined that:

(1) "Facility" refers to an entire hydroelectric plant at a single site rather than a turbine generating unit within a hydroelectric plant;

(2) The "generating capacity of not more than five megawatts" refers to a hydroelectric facility's nameplate capacity, not its actual or average generation output;

[1] "Run-of-the-river" and "run-of-river" are used interchangeably in the energy industry.

(3) In order to qualify as "run-of-the-river," a hydroelectric facility must show a current FERC license or exemption that requires the facility to operate in run-of-river mode. Hydroelectric facilities that are not regulated by FERC will be required to show a FERC order or a court decision stating that FERC has no jurisdiction, or has declined to exercise jurisdiction, over such facility. In such cases, the hydroelectric facility must show that its operation allows the river inflow to equal outflow instantaneously and therefore, does not cause an appreciable change in the river flow; and

(4) "Began operations" means (a) the date an existing facility with generation began commercial operation as shown in documentation from FERC; (b) the new date given to an abandoned or destroyed facility that comes back into operation as shown in its documentation from FERC or as determined by the Department; (c) the date upon which a facility changes operation from store-and-release to run-of-river as shown in documentation from FERC; or (d) the new date that incremental generation is in operation at an existing facility as shown in its documentation from FERC.

See Docket No. 04-02-07, DPUC Declaratory Ruling Concerning "Run-of-the-River Hydropower" as That Term is Used in the Definitions of Class I and Class II Renewable Energy Source in C.G.S. §16-1(a)(26) &(27).

B. DEPARTMENT DETERMINATION

As provided in the Application, Wyre Wynd is a hydroelectric facility located in Jewett City, Connecticut. Wyre Wynd is currently owned by SHI. According to SHI, there are 2 turbine generators at this facility, with a total combined nameplate capacity of 2.78 megawatts. Application, pp. 1-2.

The Wyre Wynd facility entered commercial operation on May 31, 1984 and operates pursuant to FERC license as Project No. 3472. The FERC license does not require run-of-river operation. SHI states that the project has been operating in store-and-release mode, which allows pond level deviations and flow fluctuations. In December, 2008 SHI completed installation of controls to establish and maintain automatic run-of-river operations, and requests the Department to establish an in-service date of January 1, 2009 as a new run-of-river hydroelectric facility. SHI proposes to provide proof of run-of-river operation at the conclusion of each calendar quarter in which it operates in the run-of-river mode of operation. Application, Attachments 1 and 2.

The Wyre Wynd facility includes two generating units: one main generator unit rated at 2700 kW and one mini generator unit rated at 80 kW. The main generator operates to provide the main output from the facility, and the mini generator unit operates to maintain a minimum flow of 120 cubic feet per second through the facility, which is a requirement of the FERC license. Responses to Interrogatories EL-1 and EL-3.

SHI states that it has installed the equipment necessary to establish and maintain automatic run-of-river operation at the Wyre Wynd facility. The equipment includes a

pond level sensor that sends a signal to a Programmable Logic Controller (PLC), which is a small computer that monitors pond level. The PLC sends a signal to the hydraulic control system that operates the wicket gates to control flow through the turbine. The design also includes a switch to quickly change the facility's operating mode from run-of-river to store-and-release, and vice versa. Response to Interrogatory EL-4. Therefore, the Wyre Wynd facility has the necessary equipment to control pond level to match inflows and outflows, which is the definition of run-of-river operation.

The Wyre Wynd FERC license does not require run-of-river operation. To clarify its license operational requirements, SHI requested FERC to determine that the facility is permitted to operate in run-of-river mode. SHI provided a copy of a letter from FERC dated December 29, 2008 stating that the project may operate in run-of-river mode, provided the minimum flow requirement is maintained. SHI also states that the Wyre Wynd facility has historically operated as a store-and-release hydroelectric facility, and did not begin run-of-river operations until January 1, 2009, after necessary equipment was installed. Application, Attachments 1 and 2. Because the Wyre Wynd facility did not operate in run-of-river mode prior to January 1, 2009 when all equipment and regulatory approval had been obtained, the Department determines that the Wyre Wynd facility has a "began operation" date of January 1, 2009 as a new run-of-river hydroelectric facility.

The Department determines that the SHI Facility is a small hydroelectric facility with a capacity of less than five megawatts, and has the capability to operate as a run-of-river facility that began operation after July 1, 2003. Therefore, the Wyre Wynd hydroelectric facility qualifies as a Class I renewable energy resource.

The Department further notes that the Wyre Wynd facility is not required to operate as a run-of-river hydroelectric facility by FERC. Therefore, the Department cannot rely on a facility license to ensure that the facility maintains run-of-river operations. The Department below orders SHI to provide quarterly operating data that supports its claim of run-of-river operations.

The Department assigns each renewable generation source a unique Connecticut RPS registration number. The project Connecticut RPS registration number is CT00308-09.

III. FINDINGS OF FACT

1. Wyre Wynd is a hydroelectric facility located in Jewett City.

2. Wyre Wynd is currently owned by SHI.

3. There are 2 turbine generators at this facility, with a total rated nameplate capacity of 2.78 megawatts.

4. Wyre Wynd began commercial operation on May 31, 1984.

5. SHI has installed the equipment necessary to operate the facility in the run-of-river mode of operation, and did not begin run-of-river operations until January 1, 2009.

6. SHI provided a copy of a letter from FERC indicating that the Wyre Wynd facility is permitted to operate in run-of-river mode of operation.

IV. CONCLUSION AND ORDER

A. CONCLUSION

Based on the evidence submitted, the Department finds that the Wyre Wynd facility qualifies as a Class I renewable generation facility pursuant to C.G.S. §16-1(a)(26). The Department assigns each renewable generation source a unique Connecticut RPS registration number. The Wyre Wynd facility Connecticut RPS registration number is CT00308-09.

The Department's determination in this docket is based on the information submitted by SHI. The Department may reverse its ruling if any material information provided by the Applicant proves to be false or misleading. The Department reminds SHI that it is obligated to notify the Department within 10 days of any changes to any of the information it has provided to the Department.

B. ORDER

1. Each calendar quarter that SHI claims renewable energy credits for the Wyre Wynd facility, SHI shall provide operating data that demonstrates run-of-river operation of the facility. SHI shall include, at a minimum, headpond level and unit electric output at an interval no less frequent than one reading every eight hours. SHI may provide this data in graphical format for ease of review. For any periods during which the facility did not operate in run-of-river mode, SHI shall separately identify such periods and provide an explanation why the facility did not operate in run-of-river mode. SHI shall also submit an affidavit affirming that the facility operated in run-of-river mode during that calendar quarter. The report is to be filed within 30 days following the end of each calendar quarter: January 30, April 30, July 30 and October 30.

DOCKET NO. 09-01-19 APPLICATION OF SUMMIT HYDROPOWER FOR QUALIFICATION OF WYRE WYND HYDROELECTRIC PROJECT AS A CLASS I RENEWABLE ENERGY SOURCE

This Decision is adopted by the following Commissioners:

John W. Betkoski, III

Kevin M. DelGobbo

Donald W. Downes

CERTIFICATE OF SERVICE

The foregoing is a true and correct copy of the Decision issued by the Department of Public Utility Control, State of Connecticut, and was forwarded by Certified Mail to all parties of record in this proceeding on the date indicated.

K. Santopietro

Kimberley J. Santopietro
Executive Secretary
Department of Public Utility Control

March 27, 2009
Date

STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2010-104

August 10, 2010

SUMMIT HYDROPOWER, INC.
Request for Certification for RPS Eligibility

ORDER GRANTING NEW RENEWABLE RESOURCE CERTIFICATION

CASHMAN, Chairman; VAFIADES Commissioner

I. SUMMARY

The Summit Hydropower, Inc. Wyre Wynd hydroelectric generator is certified as a Class I new renewable resource that is eligible to satisfy Maine's new renewable resource portfolio requirement pursuant to Chapter 311, § 3(B) of the Commission rules.

II. BACKGROUND

A. New Renewable Resource Portfolio Requirement

During its 2007 session, the Legislature enacted an Act To Stimulate Demand for Renewable Energy (Act). P.L. 2007, ch. 403 (codified at 35-A M.R.S.A. § 3210(3-A)). The Act added a mandate that specified percentages of electricity that supply Maine's consumers come from "new" renewable resources.[1] Generally, new renewable resources are renewable facilities that have an in-service date, resumed operation or were refurbished after September 1, 2005. The percentage requirement starts at one percent in 2008 and increases in annual one percent increments to ten percent in 2017, unless the Commission suspends the requirement pursuant to the provisions of the Act.

As required by the Act, the Commission modified its portfolio requirement rule (Chapter 311) to implement the "new" renewable resource requirement. *Order Adopting Rule and Statement of Factual and Policy Basis,* Docket No. 2007-391 (Oct. 22, 2007). The implementing rules designated the "new" renewable resource

[1] Maine's electric restructuring law, which became effective in March 2000, contained a portfolio requirement that mandated that at least 30% of the electricity to supply retail customers in the State come from eligible resources, which are either renewable or efficient resources. 35-A M.R.S.A. § 3210(3). The Act did not modify this 30% requirement.

requirement as "Class I"[2] and incorporated the resource type, capacity limit and the vintage requirements as specified in the Act. The rules thus state that a new renewable resource used to satisfy the Class I portfolio requirement must be of the following types:

- fuel cells;
- tidal power;
- solar arrays and installations;
- wind power installations;
- geothermal installations;
- hydroelectric generators that meet all state and federal fish
- passage requirement; or
- biomass generators, including generators fueled by landfill gas.

In addition, except for wind power installations, the generating resource must not have a nameplate capacity that exceeds 100 MW. Finally, the resource must satisfy one of four vintage requirements. These are:

1) renewable capacity with an in-service date after September 1, 2005;

2) renewable capacity that has been added to an existing facility after September 1, 2005;

3) renewable capacity that has not operated for two years or was not recognized as a capacity resource by the ISO-NE or the NMISA and has resumed operation or has been recognized by the ISO-NE or NMISA after September 1, 2005; or

4) renewable capacity that has been refurbished after September 1, 2005 and is operating beyond its useful life or employing an alternate technology that significantly increases the efficiency of the generation process.

The implementing rules (Chapter 311, § 3(B)(4)) establish a certification process that requires generators to pre-certify facilities as a new renewable resource under the requirements of the rule and provides for a Commission determination of resource eligibility on a case-by-case basis.[3] The rule contains the information that must be included in a petition for certification and specifies that the Commission shall provide an opportunity for public comment if a petitioner seeks certification under

[2] The "new" renewable resource requirement was designated as Class I because the requirement is similar to portfolio requirements in other New England states that are referred to as "Class I." Maine's pre-existing "eligible" resource portfolio requirement is designated as Class II.

[3] In the *Order Adopting Rule* at 6, the Commission noted that a request for certification can be made at any time so that a ruling can be obtained before a capital investment is made in a generation facility.

vintage categories 2, 3 and 4. Finally, the rule specifies that the Commission may revoke a certification if there is a material change in circumstance that renders the generation facility ineligible as a new renewable resource.

B. Petition for Certification

On March 29, 2010, Summit Hydropower, Inc. (Summit) filed a petition to certify its 2,780 kW Wyre Wynd hydroelectric generator (Facility) located in Jewett, Connecticut as a Class I new renewable resource. Summit seeks Class I certification under the refurbishment vintage category. According to the petition, at the time of the refurbishment, the dam had been in place for 117 years and much of the equipment was over 20 years old. Summit indicates that, since September 1, 2005, approximately $475,000 of capital refurbishment projects have been preformed on the Facility. The entire dam downstream surface was refurbished and equipment refurbishments were preformed on the switchgear, turbine and intake. Accordingly, Summit states that the Facility is operating beyond its useful life.

As required by our rules, the Commission provided interested persons with an opportunity to comment on the Avery petition. The Commission received no comments.

III. DECISION

The Commission has delegated to the Director of the Electric and Gas Division the authority to certify generation facilities as Class I new renewable resources pursuant to Chapter 311, § 3(B) of the Commission rules. *Delegation Order,* Docket No. 2008-184 (April 23, 2008). Based on the information provided by Summit, I conclude that the Wyre Wynd hydroelectric generator satisfies the resource type, capacity limit and vintage requirements of the rule. The Facility is a hydroelectric facility, it has a capacity below 100 MW, and it was refurbished after September 1, 2005 and is operating beyond its useful life. Accordingly, the Wyre Wynd hydroelectric generator facility is hereby certified as a Class I new renewable resource that is eligible to satisfy Maine's new renewable resource portfolio requirement pursuant to Chapter 311, § 3 of the Commission rules. Summit shall provide timely notice to the Commission of any material change in the operation of the facility from that described in the petition filed in this proceeding.

BY ORDER OF THE DIRECTOR OF THE ELECTRIC AND GAS
UTILILTY INDUSTRIES

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Faith Huntington