

THE STATE OF NEW HAMPSHIRE

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Amy L. Ignatius

COMMISSIONERS
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Robert R. Scott

EXECUTIVE DIRECTOR
Debra A. Howland



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Website:
www.puc.nh.gov

PUBLIC UTILITIES COMMISSION

21 S. Fruit Street, Suite 10
Concord, N.H. 03301-2429

December 6, 2012

His Excellency, Governor John H. Lynch
and the Honorable Council
State House
Concord, NH 03301

Your Excellency and Honorable Councilors:

REQUESTED ACTION

Authorize the Public Utilities Commission (Commission) to amend an award of grant funds to the University of New Hampshire, Vendor #177867, in the amount of \$59,750, by extending the completion date from December 31, 2012 to February 28, 2013. The original grant was approved by the Governor and the Executive Council on August 22, 2012, Item #44E, for the purpose of lowering energy costs and reducing CO₂ emissions. No additional funding is involved in this time extension. Funding is 100% Renewable Energy Fund (REF), a non-lapsing special fund continually appropriated to the Commission pursuant to RSA 362-F:10.

EXPLANATION

With this grant award, the University of New Hampshire planned to install, own and operate a solar hot air system, with comprehensive energy production data monitoring, in Kingsbury Hall on the Durham campus. This solar hot air system will pre-heat the large volumes of fresh air that pass through the building's existing air handling units and thereby displace 890 million BTUs worth of heat energy per year from the campus's existing cogeneration system. The installation of this unique solar hot air technology on Kingsbury Hall is particularly relevant given the ventilation needs of a facility that houses many laboratory spaces.

It was anticipated that the installation would be completed by December 31, 2012; however, due to initial delays in the initiation of the project, UNH has requested a two-month no-cost extension. UNH represents that the project will be completed in February 2013. All other provisions of the grant remain in effect.

Your consideration of this request is appreciated.

Respectfully submitted,

Amy Ignatius
Amy L. Ignatius
Chairman

Attachments:
Amendment and copy of original grant



AMENDMENT #1 to
COOPERATIVE PROJECT AGREEMENT
between the
STATE OF NEW HAMPSHIRE, Public Utilities Commission
and the
University of New Hampshire of the UNIVERSITY SYSTEM OF NEW HAMPSHIRE

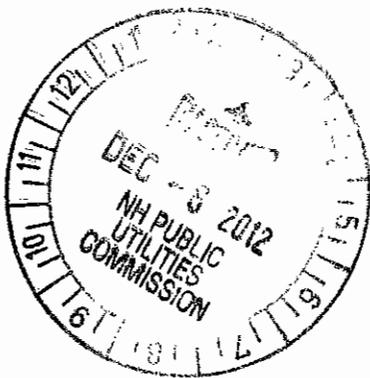
The Cooperative Project Agreement, approved by the State of New Hampshire Governor and Executive Council on **8/22/12**, item # **44E**, for the Project titled "**Kingsbury Hall Solar Heated Air System**," Campus Project Director, **Matthew O'Keefe**, is and all subsequent properly approved amendments are hereby modified by mutual consent of both parties for the reason(s) described below:

Purpose of Amendment (Choose all applicable items):

- Extend the Project Agreement and Project Period end date, at no additional cost to the State.
- Provide additional funding from the State for expansion of the Scope of Work under the Cooperative Project Agreement.
- Other:

Therefore, the Cooperative Project Agreement is and/or its subsequent properly approved amendments are amended as follows (Complete only the applicable items):

- Article A. is revised to replace the State Department name of _____ with _____ and/or USNH campus from _____ to _____.
- Article B. is revised to replace the Project End Date of **12/31/12** with the revised Project End Date of **02/28/13**, and Exhibit A, article B is revised to replace the Project Period of **06/01/12 – 12/31/12** with **06/31/12 – 02/28/13**.
- Article C. is amended to expand Exhibit A by including the proposal titled, " _____ ," dated _____.
- Article D. is amended to change the State Project Administrator to _____ and/or the Campus Project Administrator to _____.
- Article E. is amended to change the State Project Director to _____ and/or the Campus Project Director to _____.
- Article F. is amended to add funds in the amount of \$ _____ and will read:
Total State funds in the amount of \$ _____ have been allotted and are available for payment of allowable costs incurred under this Project Agreement. State will not reimburse Campus for costs exceeding the amount specified in this paragraph.
- Article F. is amended to change the cost share requirement and will read:
Campus will cost-share _____ % of total costs during the amended term of this Project Agreement.
- Article F. is amended to change the source of Federal funds paid to Campus and will read:
Federal funds paid to Campus under this Project Agreement as amended are from Grant/Contract/Cooperative Agreement No. _____ from _____ under CFDA# _____. Federal regulations required to be passed through to Campus as part of this Project Agreement, and in accordance with the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002, are attached



to this document as **revised** Exhibit B, the content of which is incorporated herein as a part of this Project Agreement.

- Article G. is exercised to amend Article(s) _____ of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002, as follows:

Article _____ is amended in its entirety to read as follows:
Article _____ is amended in its entirety to read as follows:

- Article H. is amended such that:

- State has chosen **not to take** possession of equipment purchased under this Project Agreement.
- State has chosen **to take** possession of equipment purchased under this Project Agreement and will issue instructions for the disposition of such equipment within 90 days of the Project Agreement's end-date. Any expenses incurred by Campus in carrying out State's requested disposition will be fully reimbursed by State.

- Exhibit A is amended as attached.
- Exhibit B is amended as attached.

All other terms and conditions of the Cooperative Project Agreement remain unchanged.

This Amendment, all previous Amendments, the Cooperative Project Agreement, and the Master Agreement constitute the entire agreement between State and Campus regarding the Cooperative Project Agreement, and supersede and replace any previously existing arrangements, oral and written; further changes herein must be made by written amendment and executed for the parties by their authorized officials.

This Amendment and all obligations of the parties hereunder shall become effective on the date the Governor and Executive Council of the State of New Hampshire or other authorized officials approve this Amendment to the Cooperative Project Agreement.

IN WITNESS WHEREOF, the following parties agree to this **Amendment #2** to the Cooperative Project Agreement.

**By An Authorized Official of:
University of New Hampshire**

Name: Karen M. Jensen
 Title: Manager, Sponsored Programs Administration
 Signature and Date: [Signature] 12/5/12

**By An Authorized Official of:
Public Utilities Commission**

Name: Amy L. Ignatius
 Title: CHAIRMAN, NH Public Utilities Comm.
 Signature and Date: [Signature] 12/6/12

**By An Authorized Official of: the New
Hampshire Office of the Attorney General**

Name: Fredrick Brecken
 Title: Civil Bureau Attorney
 Signature and Date: [Signature] 12/6/12

**By An Authorized Official of: the New
Hampshire Governor & Executive Council**

Name: _____
 Title: _____
 Signature and Date: _____

as to form substance & execution

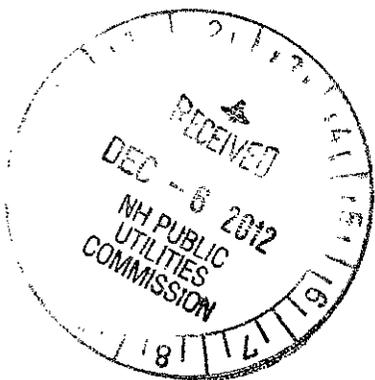


EXHIBIT A

- A. Project Title:**
- B. Project Period:** 06/01/12 - 02/28/13
- C. Objectives:**
- D. Scope of Work:**
- E. Deliverables Schedule:**
- F. Budget and Invoicing Instructions:**



THE STATE OF NEW HAMPSHIRE

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August 9, 2012

His Excellency, Governor John H. Lynch
and the Honorable Council
State House
Concord, NH 03301

His Excellency and Honorable Councilors:

G & C Date 8-22-12

Item Number 44E

Approved /

LQ# 132237

WU# 1650931

PO# 1025262

REQUESTED ACTION

Vote 677

Authorize the New Hampshire Public Utilities Commission to award grant funds in the amount of \$59,750 to the University of New Hampshire, Vendor #176895, to install, own, and operate a solar hot air system with comprehensive energy production data monitoring in Kingsbury Hall, from Governor and Council approval through December 31, 2012. Funding is 100% Renewable Energy Fund (REF), a non-lapsing special fund continually appropriated to the commission pursuant to RSA 362-F:10.

Funding is authorized from the account, Grants to Schools - State, as follows:

02-81-81-811010-54540000 Renewable Portfolio Standard 362-F:10

FY 2013

010-081-54540000-073-500583

Grants to Schools - State

\$59,750

EXPLANATION

Pursuant to RSA 362-F:10, the New Hampshire Public Utilities Commission (Commission) is charged with administering the Renewable Energy Fund (REF), the purpose of which is to support thermal and electrical renewable energy initiatives.

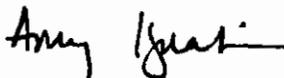
The Commission issued a Request for Proposals (RFP) on February 1, 2012 for renewable energy projects in the commercial and industrial sectors. The RFP was developed in consultation with the state's Energy Efficiency and Sustainable Energy Board, other state agencies, and stakeholders in the renewable energy sector. The RFP is funded with monies from the Renewable Energy Fund pursuant to RSA 362-F:10 and issued pursuant to legislation passed in 2010, HB 1270, stating that the Commission shall issue, on an annual basis no later than March 1 of each year, an RFP for projects in the commercial and industrial sectors.

The Commission received twenty-six proposals requesting a total of \$6.93 million in funds in response to the RFP. The University of New Hampshire and seven others have been selected to receive a total of \$997,750 in this funding round. Attachment A provides additional information on the grant review and award process.

With these funds, the University of New Hampshire will install, own, and operate a solar hot air system, with comprehensive energy production data monitoring, in Kingsbury Hall on the Durham campus. This solar hot air system will pre-heat the large volumes of fresh air that pass through the building's existing air handling units and thereby displace 890 million BTUs worth of heat energy per year from the campus's existing cogeneration system. The application of this unique solar hot air technology on Kingsbury Hall is particularly relevant given the ventilation needs of a facility that houses many laboratory spaces. Additionally, this proven, albeit relatively new technology has significant deployment potential around New Hampshire; having a large system at UNH will ensure critical energy data mining, analysis, and public dissemination.

The grant is contingent on sufficient REF funds being available upon the effective date of the grant agreement. These funds have already been allocated to this RFP round, and are being held in the fund. In the event that the REF funds are insufficient or are no longer available, General Funds will not be requested to support this program.

Respectfully submitted,



Amy L. Ignatius
Chairman

Attachments:
Cooperative Project Agreement
Bidding Information

ATTACHMENT A - GRANT REVIEW PROCESS

The PUC issued a Request for Proposals (RFP) on February 1, 2012 for thermal or electric renewable energy projects in the commercial and industrial sectors¹. The RFP was developed with input from members of the state's Energy Efficiency and Sustainable Energy Board, other state agencies, and stakeholders in the renewable energy sector. The RFP is funded with monies from the Renewable Energy Fund pursuant to RSA 362-F:10 and issued pursuant to legislation passed in 2010, HB 1270, stating that the PUC shall issue, on an annual basis no later than March 1 of each year, an RFP for projects in the commercial and industrial sectors.

The RFP was circulated electronically to the twenty-five members of the Energy Efficiency and Sustainable Energy Board (EESB Board) as well as other stakeholders known to have an interest in energy policy and programs. The RFP was posted on the PUC website for the full submission period, and advertised in the New Hampshire Union Leader from February 6 to February 8, 2012. Twenty-six proposals requesting a total of \$6.93 million in funds were received in response to the RFP. All responses were due by March 1, 2012.

The PUC employed a two-tier grant review process to evaluate the proposals. The initial review team consisted of four members including Rebecca Ohler (Air Resources Division, DES), Eric Steltzer (Office of Energy and Planning), and Jack Ruderman and Kate Epsen (Sustainable Energy Division, PUC). The second tier review team consisted of the three-member Commission, Chairman Amy Ignatius, and Commissioners Robert Scott and Michael Harrington.

The initial review team evaluated all proposals using criteria set forth in NH Code of Administrative Rules Puc 2507.03. Following an initial round of screening, the team interviewed ten applicants. The team scored all proposals using a pre-published publically available scoring sheet ranging in possible points from 0-100, and provided written comments highlighting the pros and cons of each proposal. The evaluations also provided a recommendation to the Commission as to whether each program should receive funding.

The initial review team met with the Commissioners to brief them on the committee's recommendations. The Commissioners were provided with copies of the written evaluation forms and had an opportunity to ask questions of members of the initial review team. Subsequently, the Commissioners met to deliberate on the review team's recommendations and their own assessment of the proposals. The Commission subsequently chose to award grant funds for eight renewable energy projects totaling \$997,750.

¹ The commercial and industrial sectors include those facilities that are non-residential, such as municipal buildings, schools, non-profit institutions, hospitals, universities, etc.

SUMMARY OF SCORING RESULTS AND RANKING OF PROPOSALS SUBMITTED IN RESPONSE TO THE FEBRUARY 1, 2012 REQUEST FOR PROPOSALS FOR "GRANTS FOR RENEWABLE ENERGY GENERATION PROJECTS IN THE COMMERCIAL AND INDUSTRIAL (NON-RESIDENTIAL) SECTOR"

	Increase Renewable Energy Capacity	Cost-Effectiveness	Market Transformation	Peak Load Reduce	Econ. Dev.	Env. Benefits	Fuel Diversity	Capacity to Complete	Significance of Grant Assistance	TOTAL	Rank
Maximum Score	25	10	5	5	10	10	5	20	10	100	
1 Windham High School	10	3	3	2	3	5	3	18	5	52	12
2 Plymouth Village Sewer	10	2	3	2	3	3	3	18	5	49	14
3 Burndy, LLC				WITHDRAWN							
4 Colby Sawyer College	19	7	5	4	6	5	5	20	9	80	2
5 Claremont Fire Station	13	6	5	0	6	5	5	20	10	70	6
6 Cartographic, Inc	10	7	3	0	6	5	5	20	5	61	8
7 Dover Wastewater	18	1	5	4	8	2	5	18	9	70	7
8 Durham Wastewater				INELIGIBLE							
9 Merrimack High School ORC				DISQUALIFIED-INCOMPLETE							
10 Enriched Learning Center	12	8	5	0	6	2	5	10	6	54	11
11 First Place	12	2	2	3	3	3	3	18	5	51	13
12 Mascoma River Hydro	7	6	3	2	4	10	4	5	1	42	16
13 Merrimack Valley Middle School				DISQUALIFIED-INCOMPLETE							
14 Newmarket Acadia Building				DISQUALIFIED-LATE							
15 Nashua Hydro	7	5	2	3	4	4	3	10	3	41	17
16 North Country Energy Park	5	4	2	1	4	5	3	5	1	30	19
17 Pennichuck Waterworks	8	4	3	5	6	6	3	10	2	47	15
18 Pittsfield Mill Hydro				WITHDRAWN							
19 Russell Elementary School	16	9	5	0	8	6	4	16	9	73	5
20 Salmon Falls Hydro	7	5	3	2	4	8	4	3	1	37	18
21 Sullivan County CHP	23	9	5	0	9	10	5	20	5	86	1
22 TDS Center at Keene State	12	3	3	4	4	5	4	20	5	60	9
23 The Balsams	21	10	3	0	9	6	5	17	8	79	3
24 Town of Jaffrey	5	4	2	0	2	3	3	2	5	26	20
25 Town of Peterborough	14	3	3	4	5	5	5	18	1	58	10
26 UNH Kingsbury Hall	20	10	5	0	4	6	5	20	6	76	4

COOPERATIVE PROJECT AGREEMENT

between the

STATE OF NEW HAMPSHIRE, Public Utilities Commisson

and the

University of New Hampshire of the UNIVERSITY SYSTEM OF NEW HAMPSHIRE

- A. This Cooperative Project Agreement (hereinafter "Project Agreement") is entered into by the State of New Hampshire, **Public Utilities Commisson**, (hereinafter "State"), and the University System of New Hampshire, acting through **University of New Hampshire**, (hereinafter "Campus"), for the purpose of undertaking a project of mutual interest. This Cooperative Project shall be carried out under the terms and conditions of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002, except as may be modified herein.
- B. This Project Agreement and all obligations of the parties hereunder shall become effective on the date the Governor and Executive Council of the State of New Hampshire approve this Project Agreement ("Effective date") and shall end on **12/31/12**. If the provision of services by Campus precedes the Effective date, all services performed by Campus shall be performed at the sole risk of Campus and in the event that this Project Agreement does not become effective, State shall be under no obligation to pay Campus for costs incurred or services performed; however, if this Project Agreement becomes effective, all costs incurred prior to the Effective date that would otherwise be allowable shall be paid under the terms of this Project Agreement.
- C. The work to be performed under the terms of this Project Agreement is described in the proposal identified below and attached to this document as Exhibit A, the content of which is incorporated herein as a part of this Project Agreement.

Project Title: Kingsbury Hall Solar Heated Air System

- D. The Following Individuals are designated as Project Administrators. These Project Administrators shall be responsible for the business aspects of this Project Agreement and all invoices, payments, project amendments and related correspondence shall be directed to the individuals so designated.

State Project Administrator

Name: Michelle A. Caraway
Address: N.H. Public Utilities Commission
21 S. Fruit St., Suite 10
Concord, NH 03301-2429

Phone: 603-271-2435

Campus Project Administrator

Name: Dianne Hall
Address: University of New Hampshire
Sponsored Programs Administration
51 College Rd. Rm 116
Durham, NH 03824

Phone: 603-862-1942

- E. The Following Individuals are designated as Project Directors. These Project Directors shall be responsible for the technical leadership and conduct of the project. All progress reports, completion reports and related correspondence shall be directed to the individuals so designated.

State Project Director

Name: Jack Ruderman
Address: N.H. Public Utilities Commission
21 S. Fruit St., Suite 10
Concord, NH 03301-2429

Phone: 603-271-6012

Campus Project Director

Name: Matthew O'Keefe
Address: University of New Hampshire
Figment Hall
Durham, NH 03824

Phone: 603-862-1276

Campus Authorized Official KJ
Date 7/11/12

F. Total State funds in the amount of \$59,750 have been allotted and are available for payment of allowable costs incurred under this Project Agreement. State will not reimburse Campus for costs exceeding the amount specified in this paragraph.

Check if applicable

Campus will cost-share _____ % of total costs during the term of this Project Agreement.

Federal funds paid to Campus under this Project Agreement are from Grant/Contract/Cooperative Agreement No. _____ from _____ under CFDA# _____. Federal regulations required to be passed through to Campus as part of this Project Agreement, and in accordance with the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002, are attached to this document as Exhibit B, the content of which is incorporated herein as a part of this Project Agreement.

G. Check if applicable

Article(s) _____ of the Master Agreement for Cooperative Projects between the State of New Hampshire and the University System of New Hampshire dated November 13, 2002 is/are hereby amended to read:

H. State has chosen **not to take** possession of equipment purchased under this Project Agreement.
 State has chosen **to take** possession of equipment purchased under this Project Agreement and will issue instructions for the disposition of such equipment within 90 days of the Project Agreement's end-date. Any expenses incurred by Campus in carrying out State's requested disposition will be fully reimbursed by State.

This Project Agreement and the Master Agreement constitute the entire agreement between State and Campus regarding this Cooperative Project, and supersede and replace any previously existing arrangements, oral or written; all changes herein must be made by written amendment and executed for the parties by their authorized officials.

IN WITNESS WHEREOF, the University System of New Hampshire, acting through the University of New Hampshire and the State of New Hampshire, Public Utilities Commission have executed this Project Agreement.

By An Authorized Official of:
University of New Hampshire
Name: Karen M. Jensen
Title: Manager, Sponsored Programs Administration
Signature and Date: [Signature] 7/11/12

By An Authorized Official of:
Public Utilities Commission
Name: Amy L. Ignatius
Title: Chairman
Signature and Date: [Signature] 7/19/2012

By An Authorized Official of: the New Hampshire Office of the Attorney General
Name: Lisa M. English
Title: Assistant At. General Counsel
Signature and Date: [Signature] 7/24/12

By An Authorized Official of: the New Hampshire Governor & Executive Council
Name: _____
Title: _____
Signature and Date: _____

Campus Authorized Official [Signature]
Date 7/11/12

EXHIBIT A

- A. Project Title:** Kingsbury Hall Solar Heated Air System
- B. Project Period:** June 1, 2012 - December 31, 2012
- C. Objectives:** See Scope of Work
- D. Scope of Work:** The project will involve the installation of an approximate 3,000sf solar heated air system using Lubi™ Perforated Glazing Technology by Enerconcept Technologies, Inc. The system will be installed over the south facing wall of the rooftop penthouse, and will be connected to the existing fresh air intake louvers of at least one air handling unit (AHU).

When the AHU's draw significant volumes of fresh air into the building during winter, the fresh air will pass through the Lubi™ wall system where it will be heated by the sun as it travels through the wall cavity. This increase in temperatures will significantly reduce the amount of energy required by the AHU's to heat the air to the supply temperatures.

Although simple in concept, the system will have no moving parts other than a bypass/cooling damper which will open in the summer months or as needed when temperatures from the Lubi™ wall system are higher than what the building needs. The wall system therefore becomes like a custom wall mounted 'glasshouse' with a continually re-occurring volume of warm air.

- E. Deliverables Schedule:** Campus agrees to prepare and submit progress reports to the State, in a form and manner prescribed by the State. The first report will cover activities related to project design, development and construction up through December 31, 2012, with the report due February 1, 2013. The second report will cover the period from January 1, 2013 through June 30, 2013 with the report due August 1, 2013. The third report will cover the period from July 1, 2013 through December 31, 2013 with the report due February 1, 2014. All reports thereafter will be due on February 1st after the end of the preceding calendar year continuing throughout the life of the project, or at minimum ten (10) years. Any activities or benefits that occurred as a result of the grant not included in the scope of services should also be noted. All reports submitted after the installation of the solar heated air system will provide data on the amount of thermal energy produced (MMBtu's).
- F. Budget and Invoicing Instructions:** Campus will submit invoices to State on regular Campus invoice forms no more frequently than monthly and no less frequently than quarterly. Invoices will be based on actual project expenses incurred during the invoicing period, and shall show current and cumulative expenses by major cost categories. State will pay Campus within 30 days of receipt of each conforming invoice. Campus will submit its final invoice not later than 60 days after the Project Period end date. Invoices will be submitted to: Business Office, N.H. Public Utilities Commission, 21 S. Fruit St., Suite 10, Concord, NH 03301-2429.

Lubi™ System Materials	\$51,000
HVAC Louvers & Equipment	8,750
Total	\$59,750

