

**APPENDIX C:**

**AGENCY COORDINATION**

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**AGENCY COORDINATION**

Attachment C-1:IDNR Response

Attachment C-2:IHPA Response

Attachment C-3:FAA Determination of No Hazard 2009



## Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271  
<http://dnr.state.il.us>

Pat Quinn, Governor  
Marc Miller, Director

March 19, 2010

Alyson Grady  
Illinois Department of Commerce and Economic Opportunity  
620 East Adams  
Springfield, IL 62701

**Re: Heartland Community College Wind Turbine ARRA Comm REP**  
Project Number(s): 1006000  
County: McLean

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 and 1090 is terminated.

Consultation for Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Consultation for Part 1090 (Interagency Wetland Policy Act) is valid for three years.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database and the Illinois Wetlands Inventory at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Michael Branham  
Division of Ecosystems and Environment  
217-785-5500

**Applicant:** Illinois Department of Commerce and Economic Opportunity

**IDNR Project #:** 1006000

**Contact:** Alyson Grady  
**Address:** 620 East Adams  
Springfield, IL 62701

**Date:** 02/08/2010

**Project:** Heartland Community College ARRA Comm REP  
**Address:** 1500 Raab Road, Normal

**Description:** The project will construct an approx. 1.5 MW wind turbine, approx. 60 to 80 meters in height on the campus to provide renewable energy for the campus and to serve for a hands-on classroom for the college.

### Natural Resource Review Results

#### Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. Therefore, consultation under part 1075 is terminated.

#### Wetland Review (Part 1090)

The National Wetlands Inventory does not show wetlands within 250 feet of the project location. Therefore, the wetland review under Part 1090 is terminated.

This review is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, Natural Areas, or wetlands are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

#### Location

The applicant is responsible for the accuracy of the location submitted for the project.

**County:** McLean

**Township, Range, Section:**  
24N, 2E, 17



**IL Department of Natural Resources Contact**  
Michael Branham  
217-785-5500  
Division of Ecosystems & Environment

**Local or State Government Jurisdiction**  
IL Department of Commerce and Economic Opportunity  
Alyson Grady  
620 East Adams  
Springfield, Illinois 62701



Illinois Historic  
Preservation Agency

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • [www.illinois-history.gov](http://www.illinois-history.gov)

McLean County  
Normal  
1500 West Raab Road  
New Construction of Wind Turbine

PLEASE REFER TO: IHPA LOG #027032910

April 6, 2010

James E. Hubbard  
Heartland Community College  
1500 W. Raab Road  
Normal, IL 61761

Dear Mr. Hubbard:

We have reviewed the documentation submitted for the referenced project(s) in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties are affected. We, therefore, have no objection to the undertaking proceeding as planned.

Please retain this letter in your files as evidence of compliance with section 106 of the National Historic Preservation Act of 1966, as amended. This clearance remains in effect for two (2) years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Skeletal Remains Protection Act (20 ILCS 3440).

If you are an applicant, please submit a copy of this letter to the state or federal agency from which you obtain any permit, license, grant, or other assistance.

Sincerely,

*Anne E. Haaker*  
Anne E. Haaker  
Deputy State Historic  
Preservation Officer

AEH

**RECEIVED**

**APR 14 2010**

**HCC FACILITIES**



March 26, 2010

Ms. Anne E. Haaker  
Deputy State Historic Preservation Officer  
Preservation Services Division  
Illinois Historic Preservation Agency  
1 Old State Capitol Plaza  
Springfield, IL 62701-1507

RE: Request Consultation for Wind Turbine Project

Ms. Haaker,

We at Heartland Community College request a consultation from your agency for a wind turbine project we are pursuing. In accordance with the Community Renewable Energy Program grant requirements, which are funded through the United States Department of Energy, consultation with your agency is a mandate.

To assist with the processing of our request, certain documentation is required. For starters, Heartland Community College is located in Normal, Illinois. Our campus was originally constructed in the year 2000, with consultation with your agency in the year 1995. Please reference IHPA Log item #980309018PML for further information. In addition, you will find a summary page providing some of the documentation requirements, while a copy of our actual grant request will provide all other requested information for performing the consultation.

Thank you for accepting this request and we look forward to your comments. If further information is required to process our request, please contact me at (309) 268-8453 or [jim.hubbard@heartland.edu](mailto:jim.hubbard@heartland.edu).

Sincerely,

James E. Hubbard, EIT  
Director of Facilities Division

3 Atchs

1. Summary Information
2. Project Grant Request
3. Area Location/Campus Plan

CC: HCC Business Services, Institutional Advancement  
IL DCEO/Mr. Wayne Hartel

1500 W. Raab Rd.  
Normal, IL 61761  
(309) 268-8000  
TDD (309) 268-8030  
[www.hcc.cc.il.us](http://www.hcc.cc.il.us)

## SUMMARY INFORMATION

1. Funding: Department of Energy (ARRA); Consultation and Permitting: See Attachment 2, Grant Request.
2. See Attachment 2, Grant Request for complete description of project.
3. IHPA Log # 980309018PML for original campus consultation.
4. See Attachment 2 and 3, Grant Request and Area Plans for maps.
5. See Attachment 2, Grant Request for site plan; no construction specifications are done, yet.
6. Project address will be to our home address: 1500 West Raab Road, Normal, IL 61761.

### No Structures; therefore:

1. Existing site conditions are that of a vacant grassy prairie. Agriculture was happening on this project site until year 2008, at which time we stopped the farming in anticipation of subject project.
2. Total acres involved with the project are less than five, but more than one.
3. There is no evidence of any prior non-agricultural disturbance at the project site.

**APPENDIX A**  
**Renewable Energy Production Program**  
**Application Cover Page**

**Applicant Information:**

Heartland Community College	37-1271517	781283338
Applicant name 1500 Raab Road, Normal, IL, 61761-9921	FEIN	DUNS number* McLean
Applicant address (include 9 digit zip code)		County
Project address (if different from above) (309)268-8453		County (309)268-7998
Telephone number James Hubbard		Fax Number Division Director of Facilities
Applicant project manager Jim.Hubbard@heartland.edu		Title www.heartland.edu
E-mail address Ameren IP		Website address
Electric Utility (Delivery Service Provider)		Natural Gas Utility
Proposed Start Date: 16 May 2011		Planned Completion Date 12 August 2011

**Project Summary:**

**Project Type:**

- |                                             |                                                 |
|---------------------------------------------|-------------------------------------------------|
| <input type="checkbox"/> Solar Photovoltaic | <input type="checkbox"/> Biomass co-firing      |
| <input type="checkbox"/> Biomass to Energy  | <input checked="" type="checkbox"/> Wind Energy |
| <input type="checkbox"/> Biogas to Energy   | <input type="checkbox"/> Other Specify:         |

**Organization Legal Status:**

- |                                                  |                                                |                                                                          |
|--------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------------|
| <input type="checkbox"/> Individual              | <input type="checkbox"/> Not For Profit Corp.  | <input type="checkbox"/> Nonresident Alien                               |
| <input type="checkbox"/> Sole Proprietor         | <input checked="" type="checkbox"/> Tax Exempt | <input type="checkbox"/> Medical Corporation                             |
| <input type="checkbox"/> Partnership/Legal Corp. | <input type="checkbox"/> Governmental          | <input type="checkbox"/> Pharmacy-Noncorporate                           |
| <input type="checkbox"/> Corporation             | <input type="checkbox"/> Estate or Trust       | <input type="checkbox"/> Pharmacy/Funeral Home/<br>Cemetery/ Corporation |

**Public Entity Type:**

- |                                           |                                                       |                                         |
|-------------------------------------------|-------------------------------------------------------|-----------------------------------------|
| <input type="checkbox"/> Local Government | <input checked="" type="checkbox"/> Community College | <input type="checkbox"/> State Agency   |
| <input type="checkbox"/> K-12 School      | <input type="checkbox"/> Public University            | <input type="checkbox"/> Federal Agency |

**Is your business a Female- or Minority-owned business?**

- |                                       |                                         |
|---------------------------------------|-----------------------------------------|
| <input type="checkbox"/> Female-owned | <input type="checkbox"/> Minority-owned |
|---------------------------------------|-----------------------------------------|

\*To obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, see [http://www.dnb.com/US/duns\\_update/](http://www.dnb.com/US/duns_update/). A DUNS number is optional at time of application. However, the applicant must have a DUNS number in order to register with the Central Contractor Registration (CCR). All applicants selected for award under this RFA will be required to register with the CCR prior to grant award. To register with the CCR, see <http://www.ccr.gov>. Applicants who are not currently registered with CCR should note that the registration process can take at least 10 days to complete.

Attachment 2

DCEO ARRA Renewable Energy Production Program

**APPENDIX A: (cont.)**

**Financial Information:**

	Dollar Amount	Percent
Total grant request	\$500,000	13%
Applicant & partner investment (minimum 25%)	\$3,446,000	87%
Sum of other public funds (received or applied for)*	0	0
Total project cost	\$3,946,000	100%

\* Such as State Energy Program, Energy Efficiency and Conservation Block Grant, Illinois Clean Energy Community Foundation, and Federal Business Energy Investment Tax Credits or other ARRA grants.

**Job Creation/Retention (in FTE):**

Categories	Jobs Created	Jobs Retained
< 1 year	8	0
1-2 years	0	0
2-5 years	0	0
> 5 years	1	0
<b>TOTAL JOBS</b>	<b>9</b>	<b>0</b>

\*Note: Jobs should be expressed as "full time equivalents" (FTEs), calculated as total hours worked divided by the number of hours in a full-time schedule as defined by the applicant. The FTE jobs should be placed in the categories above to reflect whether they are temporary or long-term jobs. A job "created" is a new position created and filled, or an existing position that is filled as a result of the Recovery Act. A job "retained" is an existing position that would not have been continued in the absence of ARRA funding.

**Energy Produced or Saved and Greenhouse Gas Emission Reductions:**

Fuel	Energy Saved	Million Btu	CO <sub>2</sub>
Electricity (kWh)	3,810,600	39,401	2751
Natural Gas (therms)			
Liquid Petroleum (LP)-(gallons)	--		
Coal (tons)			
Oil #2 (gallons)			
Oil #6 (gallons)			
<b>TOTAL</b>	<b>3,810,600</b>	<b>39,401</b>	<b>2751</b>

1 kWh = 0.00341210.33 = 0.01034 MMBtu  
 1 therm = 0.1 MMBtu  
 1 gallon LP = 0.0955 MMBtu  
 1 ton coal = 20.169 MMBtu (U.S. avg., use actual)  
 1 gal #2 oil = 0.138874 MMBtu  
 1 gal #6 oil = 0.149793 MMBtu

1 kWh = 0.000722 Metric Tons CO<sub>2</sub>  
 1 therm = 0.00529 Metric Tons CO<sub>2</sub>  
 1 gallon LP = 0.005807 Metric Tons CO<sub>2</sub>  
 1 ton coal = 1.747 Metric Tons CO<sub>2</sub>  
 1 gal #2 oil = 0.01015 Metric Tons CO<sub>2</sub>  
 1 gal #6 oil = 0.01181 Metric Tons CO<sub>2</sub>

**Renewable Energy Capacity:**

kW Capacity: 1500

EMC-  
EF1  
  
(2/06/02)

**U.S. DEPARTMENT OF ENERGY**  
**EERE PROJECT MANAGEMENT CENTER**  
**ENVIRONMENTAL CHECKLIST**  
**(To Be Completed by Potential Recipient)**



**PART I: General Information**

DOE Project Officer: Doug Seiter

Date: 10/26/2009

Project Title: Heartland Community College Wind Project

ST: IL

Organization Name: Heartland Community College

Solicitation Number:

Award No:

1. Please describe the intended use of DOE funding in your proposed project. For example, would the funding be applied to the entire project or only support a phase of the project? Describe the activity as specifically as possible, i.e. planning, feasibility study, design, data analysis, education or outreach activities, construction, capital purchase and/or equipment installation or modification. If the project involves construction, also describe the operation of the completed facility/equipment.  
Funding to be used for overall project expenses to include design, comprehensive study, and construction.

2. Does any part of your project require review and/or permitting by any other federal, state, regional, local, environmental, or regulatory agency?  Yes  No

3. Has any review (e.g., NEPA documentation, permits, agency consultations) been completed?  
 Yes  No If yes, is a finding or report available and how can a copy be obtained?

4. Is the proposed project part of a larger scope of work?  Yes  No If yes, please describe.

Do you anticipate requesting additional federal funding for subsequent phases of this project?  
 Yes  No If yes, please describe.

5. Does the scope of your project only involve one or more of the following:  
 Information gathering such as literature surveys, inventories, audits,  
 Data analysis including computer modeling,  
 Document preparation such as design, feasibility studies, analytical energy supply and demand studies, or  
 Information dissemination, including document mailings, publication, distribution, training, conferences, and informational programs.

Preparer:  
James E Hubbard  
Business Contact  
James E Hubbard

Phone:  
309-268-8453  
Phone:  
309-268-8453

Email:  
[jim.hubbard@heartland.edu](mailto:jim.hubbard@heartland.edu)  
Email:  
[jim.hubbard@heartland.edu](mailto:jim.hubbard@heartland.edu)

**PART II: Environmental Considerations**

**Section A** Conditions or special areas are present, required, or could be affected by your project:

**4. Pre-Existing Contamination**

Pre-Existing Contamination: Land was previously agricultural, and has been changed to prairie land in the past two years.

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**9. Navigable Air Space**

Navigable Air Space: Central Illinois Regional Airport outside five miles, but within ten miles of site.

---

**13. Threatened/Endangered**

Threatened/Endangered Species and/or Critical Habitat: Consultation will be required; unlikely anything will be found.

---

**14. Other Protected Species**

Other Protected Species: Migratory birds will be studied, since detention pond is within one mile of proposed site.

---

**20. Public Issues or Concerns**

Public Issues or Concerns: Local public sensitivity to large commercial wind farms to the north is note worthy.

---

**23. Aesthetics**

Aesthetics: Minimal effect; area has college buildings, interstate highway system, cell phone towers and toll/mad lights nearby.

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**Section B. Would your project use, disturb, or produce any chemicals or biological substances? (i.e., pesticides, industrial process, fuels, lubricants, bacteria)**

**3. Chemical Storage, Use, and Disposal**

Permit Required Quantity: limited Permit Type:

Specific nature of use:

Project will use lubricants and solvents during construction and operation of the wind turbine generator.

---

**5. Hazardous, Toxic, or Criteria Pollutant Air Emissions**

Permit Required Quantity: temporary Permit Type:

Specific nature of use:

Criteria pollutants may be released during the construction of this project and transport of the equipment.

---

**6. Liquid Effluent**

Permit Required Quantity: temporary Permit Type: General NPDES

Specific nature of use:

Stormwater general NPDES permit will be sought and GMP applied throughout the period of construction.

---

**8. Hazardous Waste**

Permit Required Quantity: limited Permit Type:

Specific nature of use:

Potential exist for generating HW, primarily in the areas of lubricants and solvents.

---

**Section C. Would your project require or produce any radiological materials?**

[Update](#) [Print Form](#) [Return to Main Menu](#)

DCEO ARRA Renewable Energy Production Program

**APPENDIX A (cont.)**

Applicant hereby certifies that:

- All authorizations required to perform the project, described in its application, have either been obtained or will be obtained no later than 90 days following the grant beginning date set forth in the Notice of Grant Award Issued by the Department.
- It understands that it will have to enter into and comply with the terms of a grant agreement.
- The project complies with all applicable state, federal, and local laws, ordinances, and regulations and that all required licenses, permits, etc., have either been obtained or will be obtained no later than 90 days following an award by DCEO.
- It is not in violation of the prohibitions against bribery of any officer or employee of the State of Illinois as set forth in 30 ILCS 505/10.1.
- It has not been barred from contracting with a unit of state or local government as a result of a violation of Section 33E-3 or 33E-4 of the Criminal Code of 1961 (720 ILCS 5/33 E-3 and 5/33 E-4).
- It is not in violation of the Educational Loan Default Act (5 ILCS 385/3).
- It understands that the State Finance Act, 30 ILCS 105/30 may apply and that payments under this grant Program are contingent upon the existence of a valid appropriation, and that no officer, institution, department, board or commission shall contract any indebtedness on behalf of the State, or assume to bind the State in an amount in excess of the money appropriated, unless expressly authorized by law.
- It understands that the Illinois Prevailing Wage Act (820 ILCS 130/0.01) may apply and that grantees are responsible for determining if their projects will trigger compliance.
- It will comply with all applicable terms and conditions of the American Recovery and Reinvestment Act.
- As of the submittal date, the information provided in its application is accurate, and the individual signing below is authorized to submit this application and to sign all financial documents related to an agreement.

	(309)268-8106
Authorized Official (signature*)	Telephone
Rob Widmer	(309) 268-7999
Typed/Printed Name	Fax
Vice President of Business Services	10/26/09
Title	Date
371271517	Heartland Community College
FEIN Number (9 digits, Federal Employment Id Number, does not start with "E")	Applicant
1500 W. Raab Road	
Authorized Signature Address	
Normal, 61761-9921	
Authorized Signature City, 9-digit Zip (find 9-digit zip at <a href="http://zip4.usps.com/zip4/welcome.jsp">http://zip4.usps.com/zip4/welcome.jsp</a> )	
Rob.Widmer@heartland.edu	
Authorized Signature E-mail Address	

\*Electronic signatures not acceptable. Please supply Certifications (this page) with original signature via mail, fax or electronically (scanned document)

**APPENDIX B**

**State of Illinois  
Department of Commerce and Economic Opportunity  
ARRA Community Renewable Energy Program  
Heartland Community College Wind Project**



**October 26, 2009  
by: Heartland Community College**

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## Section 1 Profile of applicant organization and key partners

The wind project proposed by Heartland Community College is a single turbine 1.5 megawatt (MW) wind project in McLean County. The proposed project is a "Wind Facility" that will generate electricity for use in deferring fossil fuel energy consumption by Heartland Community College (HCC).

Founded in 1991, Heartland Community College is an open admissions two-year college located in the central Illinois community of Normal, Illinois. It serves approximately 5,000 students seeking credit courses resulting in either degrees or certificates and an additional 6,000 in non credit classes for professional or personal growth. Enrollment has increased at the college above national rates for the past five years and has grown over 20 percent since 2000. The demand for the college continues to rise based on local trends of both local high schools student populations in the district as well as the local business community's needs for new technology training and qualifications. The College is governed by a locally elected Board of Trustees.

Heartland has community support from many local community partners including State Farm Insurance, COUNTRY Financial, Caterpillar, Mitsubishi Motors of North America and Verizon. Their support of the college and Foundation, when combined with others in the area has resulted in over \$2.5 million invested in educational and organizational goals at the college since 2000.

Heartland's mission is "to provide access to higher education and excellence in teaching and learning." In support of this mission, the college employs over 400 staff and faculty to serve student needs. This commitment leads to a 19:1 student to teacher ratio average for credit classes. One third of all students attending the school receive some form of financial aid. In 2008, the average age of a Heartland Community College student was 25, with two thirds of the student population being under that age. Significant growth exists in the "traditional" college student age, with that population growing 30 percent in the past four years. In 2007 alone, one out of every five district high school graduates enrolled at Heartland. More than half of the student population are the first in their immediate family to attend college.

Heartland is home to the Workforce Development Center, which is the first state-funded, LEED certified (Leadership in Energy and Environmental Design) building, which earned a LEED silver rating. Heartland's planned campus expansion will increase the size of the campus by 50 percent by the year 2011, and HCC is committed to adopting principles of sustainable design into all new construction projects. Various community leaders including State Farm Insurance, COUNTRY Insurance and Financial Services, Caterpillar, and Mitsubishi Motors Manufacturing support this initiative both in principal and financially.

Primary partner organizations that were selected and have agreed to participate in the proposed project include Alternate Energy Solutions, Inc. of Eastpointe, Michigan, Farnsworth Group, Bloomington, IL, Wes Engineering, Madison, WI, BRiC Partnerships, Belleville, IL, and an ESCO yet to be determined. The primary role of each partner was/is initial data gathering and assessment, foundation design, feasibility and comprehensive study, ESCO evaluation and recommendation, and financial development and life cycle monitoring.

## Section 2 Expertise/qualifications of applicant organization and key partners

There are several professionals assisting the project development. These professionals include the following:

Heartland Community College Project Manager – Lieutenant Colonel James Hubbard, EIT, Lt Col (USAF – Ret), Division Director of Facilities at Heartland Community College. Colonel Hubbard completed a 24-year career in the United States Air Force in the Civil Engineering field. He is experienced in construction, energy and environmental management, as well as physical plant and civil works operations. He has been with Heartland Community College since August 2006, and has been at the ground level of this project since inception. His duties will encompass overall management of the project including design, purchasing, permits, waivers, zoning variances, utility agreements, financial development, and any other implementation elements.

Mr. John Wolar - Alternate Energy Solutions was incorporated in February 2003 as a Michigan Corporation. The company was formed by technical educators for the purpose of assisting educational and municipal institutions in evaluating potential utilization of renewable energy for the reduction of energy expenditures and to facilitate project development on behalf of clients that choose to pursue renewable energy systems integration. The company has been working on wind energy with clients in Indiana, Illinois, Michigan, Montana, and the province of Ontario, Canada.

The Farnsworth Group is a full-service engineering firm with the ability to complete any project. Services provided by their municipal engineers range from small studies to long-term improvements such as wind turbine foundations. For large or specialized projects, Farnsworth Group combines the talents of its entire staff – i.e. civil, environmental, transportation, mechanical, electrical, structural, landscape architecture, and surveying – to ensure project needs are met.

Individual ESCOs are yet to be selected, but will have the requisite experience for developing such a wind turbine project. Likely candidates include Honeywell, CTS,

Johnson Controls, Siemens, as well as any other ESCO responding to an energy savings performance contract Request for Proposal.

Mr. Wes Slaymaker, P.E. of WES Engineering LLC is a Professional Engineer, provides technical assistance to the project including wind and energy analysis, project design and permitting support. WES Engineering brings significant experience to the project derived from work on numerous wind projects in the Midwest, many now operating for several years. Mr. Slaymaker has 9 years of experience working in the wind turbine business. He has worked for three wind developers in the Midwest (Navitas, enXco, and EcoEnergy), and assisted in all aspects of the development of wind turbine projects ranging from a single 35 kW turbine in rural Minnesota, to a 100 MW wind turbine project in Northern Illinois. Mr. Slaymaker's duties included the installation and monitoring of wind measurement equipment, project design, turbine layout, permitting, electrical interconnection, and wind and energy analysis.

BRiC Partnership, LLC, located in Belleville, Illinois, was formed in 1985. BRiC engineers are highly knowledgeable specialists in mechanical, electrical, plumbing, fire protection and system technology disciplines. Markets serviced by BRiC include secondary and higher education, health care, corrections, industry, and government. BRiC has an engineering staff of 34 professionals. The company's eight professional engineers are licensed in the States of Illinois, Missouri, Arkansas, Georgia, Indiana, Kansas, Kentucky, North Carolina, and Wisconsin. Duties will primarily be initial ESCO proposal evaluation and selection consultation as well as project commissioning agent.

### Section 3 Project description

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**Project Overview** – The Heartland Community College Wind Project, is a project in Central Illinois McLean County owned by Heartland Community College and located on its main campus in Normal. The planned project consists of one large wind turbine installed on a 60-80 meter tower. The turbine will offset roughly 53 percent of the current day electrical usage of the College as well as provide a hands-on classroom for the Heartland Community College Applied Maintenance Renewable Energy Technician program.

**Project Goals / Objectives**- The College is interested in both reducing its carbon footprint with a visible renewable energy project, and providing a hands-on training facility for renewable energy technicians. Central Illinois is populated by no less than three major wind farm developments by Horizon, Invenergy, and Navistar with a total of several hundred turbines. Future graduates of Heartland Community College will be the technicians responsible for maintaining and operating these turbines.

**Project Location** – The project is located on the main campus of Heartland Community College on the northwest edge of the Town of Normal, McLean County, Illinois. The project site is located in the northwest corner of the 160-acre campus, just south and east

of the Interstate Highway I-55 and I-74 interchange. Wind data measurements were collected at north 40 degrees 32 minutes 17 seconds, and west 89 degrees, 0 minutes and 58 seconds, at 856 ft ASL. The site is surrounded to the north and west by the interstate and agricultural fields, and to the south by an apartment complex nearly one-half mile away. Small trees line the property to the north and west separating the College property from the agricultural fields.

**Interconnection** – The project proposes to interconnect to a College transformer and automatic switch gear bank via underground cabling. The automatic switchgear bank will be aligned through a paralleling agreement with the local electric utility, Ameren IP.

**Project Design** – A final turbine selection has not been made, but several choices such as GE and Vestas are being considered given the local installation of such equipment by wind farm developers in Central Illinois. The project will consist of one large wind turbine in a size near 1.5 MW as was recommended in the preliminary wind analysis. The equipment will be installed at 60-80 meters, and will be interconnected via underground cables into the College electrical system.

**Project Output** - The forecasted production for this project is approximately 3,810,600 kWh per year.

**Project Schedule** - The current schedule for completion of development activities, facility construction, and commercial operations of the project is shown in the following table. This schedule is subject to certain key external variables such as the timely execution of project transaction documents, including the utility paralleling agreement, and potential county zoning variances.

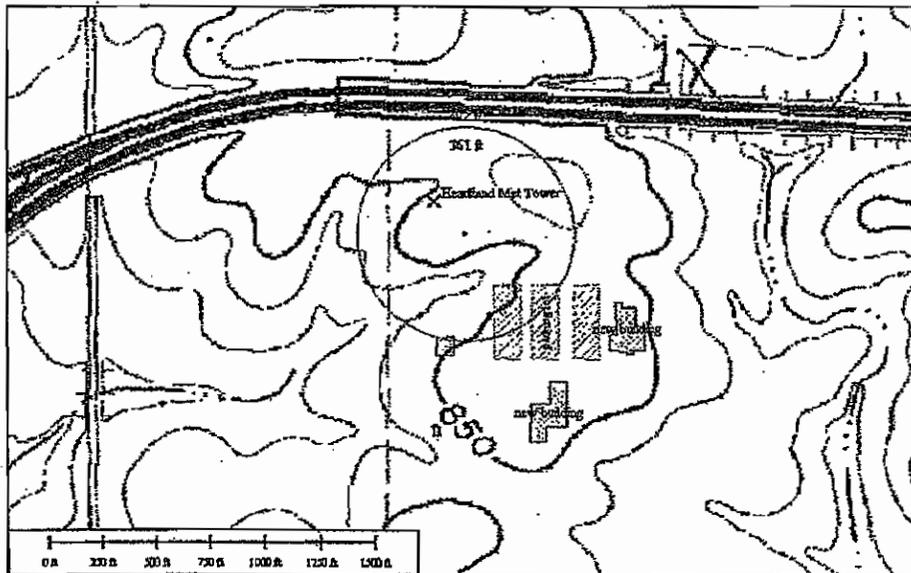
Schedule of Milestone Events	
Milestone Event	Anticipated Completion
Project Design	May 2010
Licensing/Permitting	August 2010
Complete Project Financing	February 2011
Commence Construction	May 2011
Start-up Testing	August 2011
Commercial Operations Date	September 2011

**Technology** – Technology selection will be based on several factors, including potential site limitations which may limit height, and the Central Illinois wind farm developer turbine selections which take priority. Obvious selection criteria will also include availability, price and quality.

**Permits** - The project will require a county and potentially municipal Special Use Permit. The Project will comply with McLean County's conditions for setbacks and anticipate these and other conditions applied will be reasonable for this project. Considerations include setbacks from occupied residences of 1.5 times the structure height, and a minimum setback from roads of 1.1 times the tower height. Attachment 3 contains a table of permits required and the schedule to obtain them. Aviation issues have been reviewed and no effect to navigable airspace appears to exist in this area for a wind turbine of approximately 389' in height.

**Project Description**

**Location of Project and Site Description** - The project is located in McLean County, Illinois. See illustration below for overview location.



**Figure 1 - Project Area- Topographical map**



**Figure 2 - Project Map- Aerial photo (Yellow ring - 1.1X, green ring - 1.5X)**

**Energy Analysis** - The energy analysis for this project was prepared using wind speed data obtained from a wind measurement tower on site at the same general location as planned for the turbine. This 50 meter tower was installed in July 2008 and continues to operate to this day. The project engineer used various software tools to create the attached set of analysis and estimated energy output from the project (Attachment 1).

**System Installer / Contractor** - The specifics of the turbine manufacturer, project details, and contractor for installation will be determined in the coming months as the project is fully developed.

## Section 4 Project Benefits

The wind project will provide several quantifiable benefits to the community including temporary construction and long term operations and maintenance jobs, controlled carbon fuels usage growth through increased renewable energy reliance, enhanced management of the district taxing growth, and increased numbers of available maintenance technicians.

The job creation impact of the project is calculated using the results of an extensive report entitled "Economic Impact, Wind Energy Development in Illinois, June 2009" produced by the Center for Renewable Energy at Illinois State University. In that report, the average construction jobs created per installed megawatt (MW) is 5.38 and 0.26 for

permanent jobs. Smaller projects, such as the Heartland Community College project is, will have nearly double that effect due to a similar amount of work required for a project but fewer MWs over which to spread the impact. Using double the average impact, yields jobs creation impact of eight during construction and one during the operational phase of the turbine facility life. Faculty and administrative staff to employ the Applied Maintenance Renewable Energy Associate Degree are already employed by the College for application of the technical hands-on training. Number of jobs created after project completion will be the measure of verification.

Energy usage will continue to increase as the campus grows over the coming years. This project will assist in slowing the increase in carbon fuels usage by relying more on renewable energy produced by this project. Heartland Community College main campus currently uses over 7,000,000 kilowatt hours per year. The projected wind turbine production is 3,810,600 kilowatt hours per year. Thus, the College will effectively reduce its carbon fuels usage for electricity by roughly 53 percent in the first year of production and carbon dioxide reduction will reach 2,751 metric tons. However as the College continues to grow, the percent of carbon fuel offset by renewable energy will reduce. At that time the College will consider additional alternative energy saving projects. Carbon fuels kilowatt hours used per square footage served is the unit of measure for verification.

Heartland Community College is one of 39 public community college districts in Illinois. As a public taxing body, the College has been able to maintain a relatively low tax rate during the first 19 years of existence. During this time, energy costs have continued to rise for the College both as a function of total usage and cost per kilowatt. This project will help curb the cost growth of energy for the District by avoiding the purchase of 3,810,600 kilowatt hours of electricity in the first year of turbine production. The College budgeted roughly \$1.25 million dollars in fiscal year 2011 for energy needs; electricity is over half of the cost. Cost of carbon fuels used per square footage served is the unit of measure for verification.

Currently there is no wind turbine training facility within the Central Illinois region served by Heartland Community College. The College began a Renewable Energy Associate Degree in Applied Maintenance in the fall of 2009. This program was developed in response to current and future local market demand for workers trained in renewable energy systems, such as wind turbines. Completion of this program will make residents marketable for a successful career in the local wind energy industry. The number of graduates working in industry will be the measure for verification.

## Section 5 Project Budget

The total cost of the project is estimated at approximately \$3.95 million dollars. The following table presents the basis of the cost estimate. Most of the equipment and construction costs listed have been obtained from similar projects in the area which were

bids from qualified contractors/suppliers in the Spring and Summer of calendar year 2009. Financing costs were obtained from firms that have been used in past for project bond finance. The cost of the project will be funded primarily through a performance contract which may require third-party financing and a payback less than 20 years. The balance of the project will be funded by other sources including grants, institutional reserves, or funding bonds.

Schedule of Project Costs

Classification	Item	Cost
Equipment	Turbine, towers, blades, transformers	\$2,550,000
Construction	Electrical, foundation and civil	\$1,036,000
Development	Permitting, project management, legal	\$65,000
Contingency	Five percent for variances in conditions or pricing	\$200,000
Engineering	Foundations, Electrical, Civil design	\$95,000
Financing	Financing Costs	\$100,000

Eligible costs include the equipment and construction categories above.

## Attachment 1- Wind and energy estimates

### 1. Executive Summary

Alternate Energy Solutions, Inc. ("AESI") was engaged by the administration of Heartland Community College ("Heartland") to purchase, assemble, erect and maintain one 50m XHD meteorological tower manufactured by NRG Systems, Inc.; for the purpose of monitoring, recording and evaluating collected wind data. Wind data collection activities are for the purpose of investigating the viability and practicality of the local wind regime for possible future integration of a wind turbine generator (WTG) to generate electrical energy and offset a portion of the base electric load of the college. Our evaluation finds that the local wind regime is suitable for wind power development, provided, turbines designed for medium wind velocities are used and the initial capital cost (ICC) for the project is carefully controlled through thorough pre-engineering design and prudent project work-scope definition and bidding.

One site was selected on campus for wind meteorological tower monitoring and is identified as HCC-1. Construction of the meteorological tower began during the month of June 2008. Data recording began July 4, 2008 and continues to the present day. One calendar year of data was collected prior to the writing of this report. Data was validated against local meteorological sources believed to be accurate. The average annual 50 m level wind velocity recorded at HCC-1 was 6.30 m/s (14.1 mph) yielding an approximated wind power density of 267  $w/m^2$  for the time period studied.

Wind power density at HCC-1 would be traditionally categorized as a Class II wind regime. The reader of this report should be mindful that technological improvements in wind turbine generator design and rotor efficiency give Class II wind regimes improved stature as viable wind resources. As the price of electrical energy tends to increase, low wind regimes become more viable and acceptable resources for wind generating assets and infrastructure. Additional considerations should include the present and future cost of electrical energy, measured wind velocities compared to historical wind velocities, financial impact of federal and state carbon emission regulations, improved operating efficiencies of new wind turbine technologies with higher rotor hub-heights, and stewardship to our environment.

Four years of historical wind data was compiled using NCDC data from Normal, IL and compared against the recorded wind velocities from HCC-1, beginning with February 2005 through August 2009. Because of the limited local dataset, the data from WBAN FAA/AWSS Station No. 54831, located at Central Illinois Regional Airport -- Bloomington Normal (KBMI), was used to identify local events such as icing. Due to the limited dataset from KBMI, a 20 year dataset from WBAN FAA/AWSS Station No. 93822, located at Springfield Capitol Airport (KSPT), was acquired for intermediate-term correlation of wind velocities with HCC-1.

Using the compiled data, an initial list of wind turbine generators in the 1.5 MW (1,500 kW) nameplate rated class was compiled for evaluation using the actual tower data. The International Electro-technical Commission Wind Turbine Survival Standard (IEC Standard 61400) was the reference used against compilation process.

For this study, the wind turbines are presumed to be placed on 80 m (262.4 ft.) towers. The Federal Aviation Association (FAA) and local airport authority (having zoning jurisdiction and ordinance interpretation for Central Illinois Regional Airport) may influence the ultimate location for the project and invoke regulation on tower obstruction lighting.

Computations infer that the average annual wind velocity for the recording period fell into the range of 6.95 m/s (15.5 mph) to 7.24 m/s (16.2 mph) for 80 m hub-heights; based on extrapolation of the data recorded data from the HCC-1 meteorological tower. Correlated intermediate-term data suggests that at 80m projected P<sub>50</sub> wind velocities could range from 6.36 m/s (14.2 mph) (pessimistic) to 6.79 m/s (15.2 mph) (optimistic). For this executive summary, projected P<sub>50</sub> wind velocities were applied to wind turbine manufacturers' power curves and yielded gross energy capture estimates ranging from 3,877 MW-h to 4,415 MW-h, for a typical 1.5 MW wind turbine generator. This equates to gross capacity factors ranging from 29.4% to 33.5%. The capacity factors given in this report are derived from gross generation calculations using an AAER A-1500-77 wind turbine. Wind velocities, power curves, hub-height and other factors will affect a wind turbines gross and net energy capture.

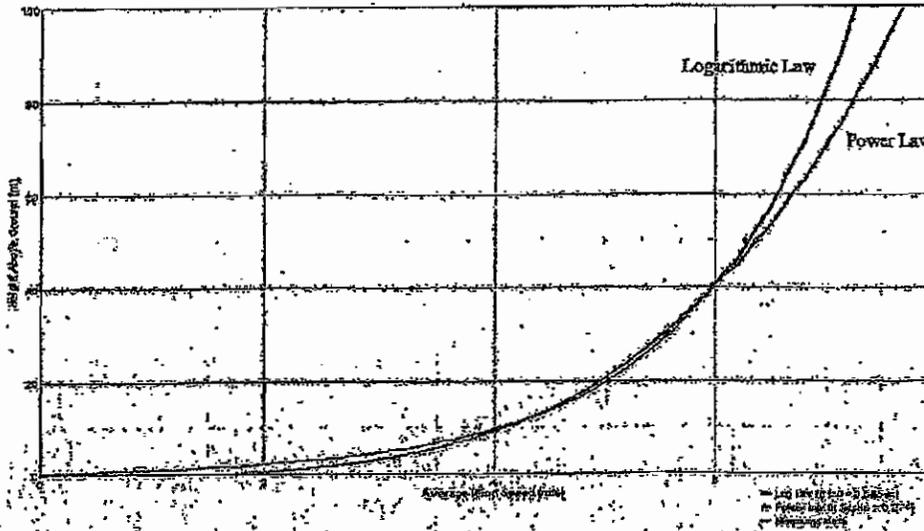
It is important to note that the P<sub>50</sub> velocities fall marginally below of those wind velocities expressed on wind maps commissioned by Illinois Clean Energy and AWS Truewinds. For example, AWS Truewinds estimates the wind velocity to be 7.21 m/s at 80m in the study region. Excluded from the gross capacity factor computations are potential losses that could occur due to blade soiling, icing of rotor, transmission and distribution line loss, and maintenance (both scheduled and unscheduled). Net Operating Losses generally fall in the range of 5% to 13%. Potential losses are dependent on factors outside the scope of this study.

As part of this study, we were directed to place emphasis on availability of wind turbines for a possible commissioning date in the fall of 2010. The matter of initial capital cost (ICC) expenditures for manufactured wind turbines, project infrastructure and construction, and other ancillary costs, were estimated and based on our knowledge of other projects. The ICC estimates were used to determine the

unit cost of energy (UCE) for a proposed single turbine facility. Extensive cost estimating tasks were not undertaken in the composition of this document; and, are generally a part of a formal project pro forma.

We estimate the installed cost of a single 1.5 MW wind turbine installation with an 80 m hub-height at \$3,206,638.00 or \$2,1138/kW for prudently designed and bid projects; projects bid as ECP contracts will typically command an additional project risk premiums of 8% to 15%. Unit cost of energy is estimated at \$0.04036/kW-h to \$0.04538/kW-h, using P<sub>75</sub> wind velocities, with the cost of maintenance included and estimated at \$0.005/kW-h. The cost of maintenance will be determined by the manufacturer and Heartland and will reflect the scope of service and coverage to be provided.

Vertical Wind Shear Projections HCC-1



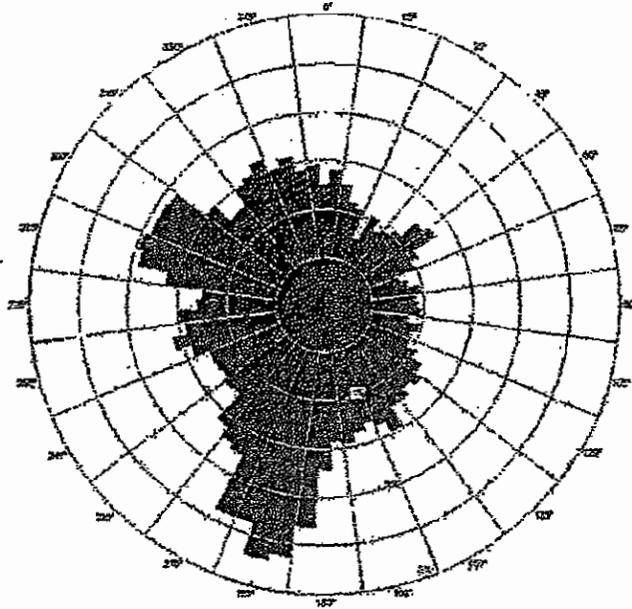
Elevation	Logarithmic Law	Power Law
80m	6.95 m/s (15.5 mph)	7.24 m/s (16.2 mph)
100m	7.26 m/s (16.2 mph)	7.69 m/s (17.2 mph)

Tabular Representations

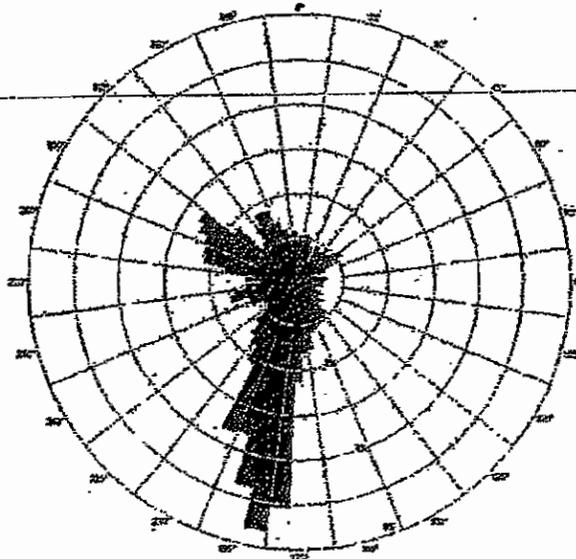
Meteor Level	50m	40m	30m	20m	10m	
Mean Wind Speed (m/s)	6.23	6.38	5.97	5.57	5.07	4.15
Mean Wind Speed (mph)	13.94	14.09	13.15	12.31	11.26	9.16
Minimum Wind Speed (m/s)	0.30	0.30	0.30	0.30	0.28	0.23
Maximum Wind Speed (m/s)	26.20	26.20	25.40	24.80	23.10	17.70
Mean Power Density (W/m <sup>2</sup> )	260	272	233	198	154	90
Mean Energy Content (kWh/m <sup>2</sup> /yr)	2,274	2,387	2,046	1,734	1,345	790
Weibull K	2.231	2.226	2.170	2.081	1.964	1.773
Weibull c (m/s)	7.06	7.17	6.74	6.30	5.67	4.56
Record Samples <sup>(1)</sup>	54,246	54,246	54,246	54,246	54,246	54,246

Note (1): A total of 54,246 data records were collected for the 50m, 40m, 30m, 20m and 10m anemometers at HCC-1 and are given in the table above, representing 100% of data for time period. Minor icing caused anemometers and wind vane to lose data during the recording period. Data for these time periods was replaced with a synthesizing algorithm.

Frequency by Direction 50mA Data



Wind Power Density by Direction (50mA Data)



### Comparison of Power Curves and Energy Capture Projections

The turbines selected for review were confined to units having 1.1MW to 1.65 MW power ratings on their nameplate. Not all units in this nameplate category were evaluated, some units were screened out due to availability issues and others because of limited operating history of the underlying technologies utilized in the manufacture of the wind turbine product line. The power curves for the selected units were used to calculate gross energy capture against collected wind data from HCC-1. These WTGS units are listed:

<u>Manufacturer</u>	<u>Model/Rotor</u>	<u>Nameplate Rating</u>	<u>Hub-Height</u>
AAER/ Fuhrlander	A-1500 77	1500 kW (1.5 MW)	80 m
AAER	A-1650 77	1500 kW (1.5 MW)	80 m
General Electric	1.5slc	1500 kW (1.5 MW)	80 m
Nordex	N60	1300 kW (1.3 MW)	85 m
Suzlon	S66	1250 kW (1.25 MW)	74 m
Vestas	V82	1650 kW (1.65 MW)	80 m

Gross energy capture was estimated for each of the units given above at an average hub-height velocity of approximately 6.70 m/s. Time increment calculations of output power, with wind shear profile recalculated for each time step, were made against the HCC-1 dataset so that reasonable comparison could be rendered. The following table holds the results for these computations.

<u>Manufacturer</u>	<u>Model</u>	<u>Power Rating (kW)</u>	<u>Time at Rated Power (%)</u>	<u>Average Gross Power Output (kW)</u>	<u>Average Gross Energy Output (kW-h/yr)</u>	<u>Average Gross Capacity Factor (%)</u>
AAER/Fuhrlander	A-1500 77	1500	6.10	472	4,134,516	31.5
AAER	A-1650 77	1650	6.10	516	4,515,984	31.2
General Electric	1.5slc	1500	3.83	431	3,774,248	28.7
Nordex	N60	1300	1.02	303	2,650,543	23.3
Suzlon	S66	1250	2.34	348	3,047,545	27.8
Vestas	V82	1650	3.79	513	4,495,955	31.1

Note: This table does not include energy loss that is inherent with system operation; factors contributing to operating losses e.g., blade icing, blade soiling, preventative and curative maintenance, copper loss, and structure wake from buildings and other man-made or natural features contributing to wind flow diversion (de-grading) or convergence (additive).

Attachment 2- Project Permits and Approvals

Agency	Permit	Regulatory Citation	Regulated Activity	Required Project Phase	Expected Review Time
<b>FEDERAL</b>					
USFWS	Endangered Species Act Compliance	50 CFR 17	Turbine sites - Confirmation of no impacts to threatened and endangered species.	Development	3 months
FAA	Notice of Proposed Construction or Alteration	14 CFR 77	Towers - Construction of an object which has the potential to affect navigable airspace (height in excess of 200' or within 20,000' of an airport).	Development	3 months
<b>STATE</b>					
Water Division of the Illinois Department of Natural resources	NPDES General Permit (Storm Water) for Construction Activities		Discharge of storm waters from construction impacting 5 acres or more.	Construction	1 month
Illinois Department of Natural resources	Natural Heritage Inventory Review		Review of all endangered or sensitive species of concern in the project area	Development	2 months
State Historical Preservation Office	Archeological and Historical Review		Activities that could potentially affect archeological or historical resources.	Both	3 - 4 months
<b>LOCAL</b>					
McLean County	Special Use Permit		Special Use Permit for allowed uses in McLean County	Development	3 months
Building Department	Building Permits McLean County		Construction of facility.	Construction	2 month
Building Department	Certificate of Occupancy		Facility Operation	Operation	1 month
Fire Marshal	Fire Safety Approval			Construction	2 months

**APPENDIX C  
ARRA Renewable Energy Production Program  
Proposed Project Costs**

**Summary:**

	<b>Total Costs</b>	<b>Applicant Investment</b>	<b>Contributions From Other Public Sources</b>	<b>State Funding Requested</b>
<b>A. Purchase of Services:</b>	<b>\$1,193,000</b>	<b>\$1,193,000</b>		<b>\$0</b>
<b>B. Equipment/Materials:</b>	<b>\$2,753,000</b>	<b>\$2,753,000</b>		<b>\$500,000</b>
<b>Total:</b>	<b>\$3,946,000</b>	<b>\$3,446,000</b>		<b>\$500,000</b>
<b>Percent of Total:</b>	<b>100%</b>	<b>87%</b>		<b>13%</b>

**Purchase of Services:** For the installation of renewable energy generation equipment list all applicable costs for design, construction, repair, or maintenance, and fees for legal, financial, or artistic services. All subcontracts must be explained in detail, include the license number and address of the subcontractor, and be attached to the end of this section.

	<b>Total Costs</b>	<b>State Funding Requested</b>
<b>1. Balance of plant construction</b>	<b>\$933,000</b>	
<b>2. Engineering</b>	<b>\$95,000</b>	
<b>3. Project management and legal</b>	<b>\$65,000</b>	
<b>4.</b>		
<b>5.</b>		
<b>6. Contingency</b>	<b>\$100,000</b>	
<b>Subtotal</b>	<b>\$1,193,000</b>	<b>\$0</b>

**Equipment/Materials:** List all items of equipment to be purchased valued greater than \$100.

	<b>Total Costs</b>	<b>State Funding Requested</b>
<b>1. Turbines, blades, and tower</b>	<b>\$2,500,000</b>	<b>\$500,000</b>
<b>2. Pad mount transformer</b>	<b>\$50,000</b>	
<b>3. Underground cable</b>	<b>\$9,000</b>	
<b>4. Rock for access road and crane pad</b>	<b>\$24,000</b>	
<b>5. Foundation steel and concrete</b>	<b>\$70,000</b>	
<b>6. Contingency</b>	<b>\$100,000</b>	
<b>Subtotal</b>	<b>\$2,753,000</b>	<b>\$500,000</b>

**APPENDIX C: (cont.)**

**Financial Partners and All Other Sources of Investment, Including other public sources:** Specify in reasonable detail including phone number, contact person and address.

	<b>Total Investment</b>
1. _____	_____
2. _____	_____
3. _____	_____
<b>Subtotal</b>	_____
<b>Project Total</b>	_____
<b>State Funds Requested</b>	_____

Attach additional budget pages if necessary.

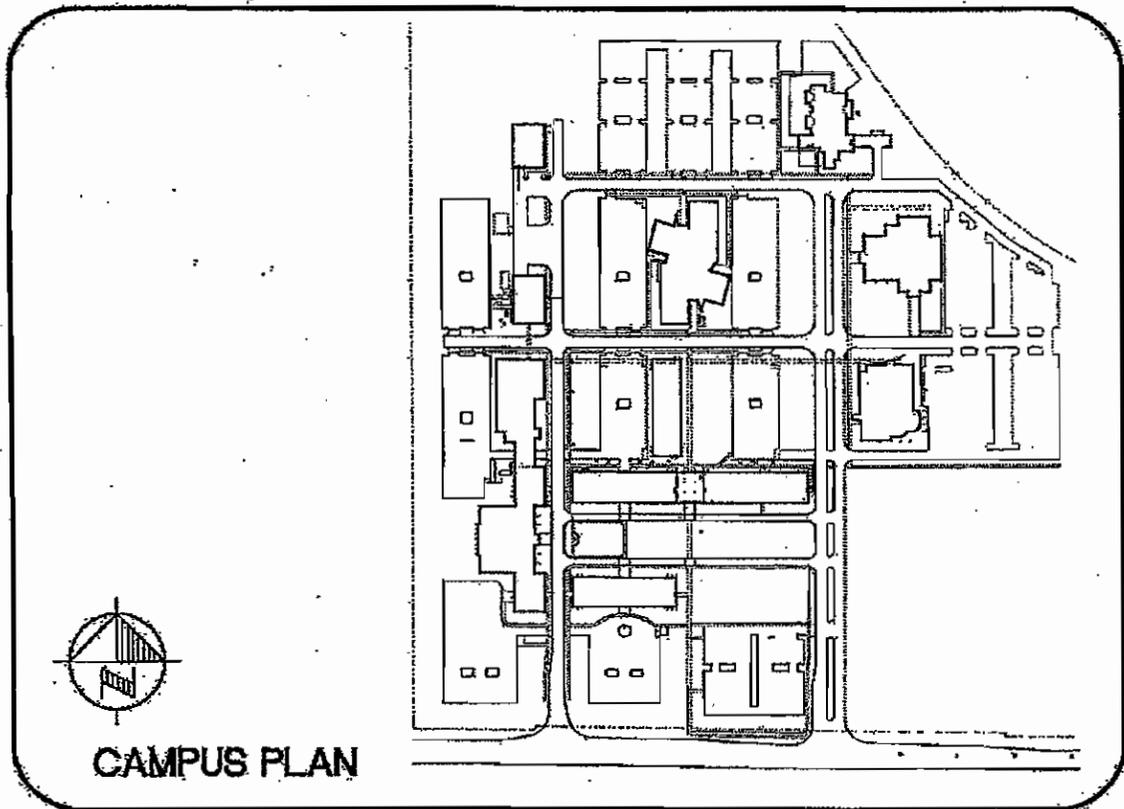
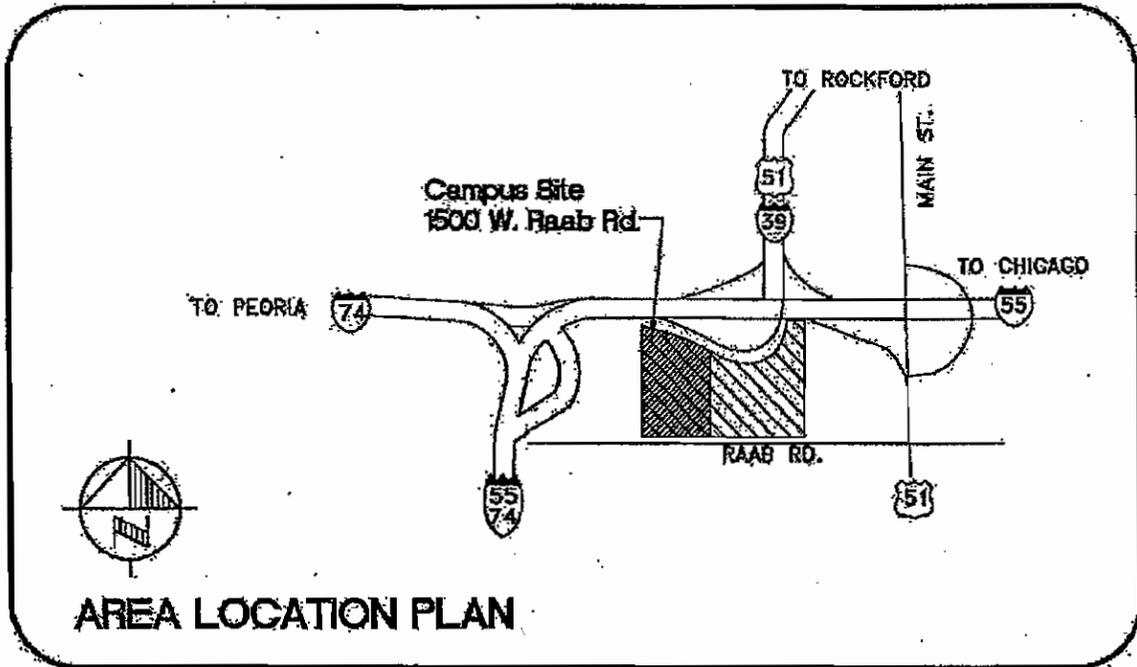
**Financial Partnerships and Other Investment Sources, Letter or Guidelines:**

Provide letters from each financial partner or funding entity indicating the amount of their support and the project commencement date expected for their partnership.

In the event of funding by private foundations or public sources, if such a letter is not yet available, indicate the anticipated source (USDA program name, etc.) and supporting documentation or guidelines for the anticipated source.

**Applicant Investment:**

Please describe the sources of the minimum 25% applicant investment, in addition to funds from any financial partners described above. Specifically identify whether funds are cash, in-kind, or other collateral. Businesses should provide annual financial statements for the last three years, or if in business less than three years, provide all available annual financial statements.





Federal Aviation Administration  
 Air Traffic Airspace Branch, ASW-520  
 2601 Meacham Blvd.  
 Fort Worth, TX 76137-0520

Aeronautical Study No.  
 2009-WTE-11499-OE

Issued Date: 11/16/2009

Wes Slaymaker  
 W.E.S. Engineering LLC  
 706 S. Orchard St.  
 Madison, WI 53715

**\*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\***

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Wind Turbine Heartland
Location:	Normal, IL
Latitude:	40-32-14.39N NAD 83
Longitude:	89-00-54.77W
Heights:	397 feet above ground level (AGL) 1242 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines)..

\* It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part I)  
 Within 5 days after the construction reaches its greatest height (7460-2, Part II)

This determination expires on 11/16/2011 unless:

- extended, revised or terminated by the issuing office.
- the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

**NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.**

**APPENDIX C:**

**AGENCY COORDINATION**

Attachment C-4:NTIA Notification

**Date:** 6/25/2010

**Type of Notification:** NEW

**Project:** Heartland Community College Wind Energy Project

**County:** McLean

**State:** Illinois

**Project Sponsor:** U.S Department of Energy: Energy Efficiency and Renewable Energy

**DOE NEPA Document Manager:**

John Jediny  
[John.Jediny@ee.doe.gov](mailto:John.Jediny@ee.doe.gov)  
Work- (202) 586-4790  
Mobile - (202) 465-0045

**DOE Support NEPA Document Manager:**

Jim Ferro  
[Jim.Ferro@ee.doe.gov](mailto:Jim.Ferro@ee.doe.gov)  
Work- (703) 218-2546  
Mobile- (703) 231-0501

**DOE Mailing Address:**

John Jediny (EE-3C)  
1000 Independence Ave., SW  
Washington, DC 20585  
Room: 5H-095

**Turbine Description:**

<b>Number of Turbines:</b>	1
<b>Turbine Size:</b>	1.5 MW
<b>Turbine Hub Height AGL (meters):</b>	60-80
<b>Turbine Blade Diameter (meters):</b>	50-65
<b>Maximum Blade Tip Height AGL (meters):</b>	85-112

**(X) :Turbine Locations:**

**GPS:** 40.537781, -89.015576 (Google Earth)

**Street Address:** 1500 Raab Road, Normal, IL 61761

Turbines	Latitude	Longitude
Turbine #1	40.537781	-89.015576
	40-32-14.39N	89-00-54.77W

--	--	--

**Not Applicable : Wind Farm Boundary Points:**

If the specific locations of the turbines have not been selected, identify the boundaries of an area that will contain the proposed facility. Using latitude/ longitude coordinates, complete a polygon that will enclose the potential turbine locations.

Potential Turbine Boundary	Latitude	Longitude

**Maps:** PLEASE SEE ATTACHED

**Submitted to:**

Edward Davison

Email: [edavison@ntia.doc.gov](mailto:edavison@ntia.doc.gov)

Work Phone: (202) 482-5526

National Telecommunications & Information Administration (NTIA)  
Domestic Spectrum Policies & IRAC Support Division (DSID)

&

Joyce C. Henry

Email: [jhenry@ntia.doc.gov](mailto:jhenry@ntia.doc.gov)

Work Phone: (202) 482-1850/51

National Telecommunications & Information Administration (NTIA)  
Office of Spectrum Management/HQ



Vermillion Way

Mackinaw Ct  
Kickapoo Ct

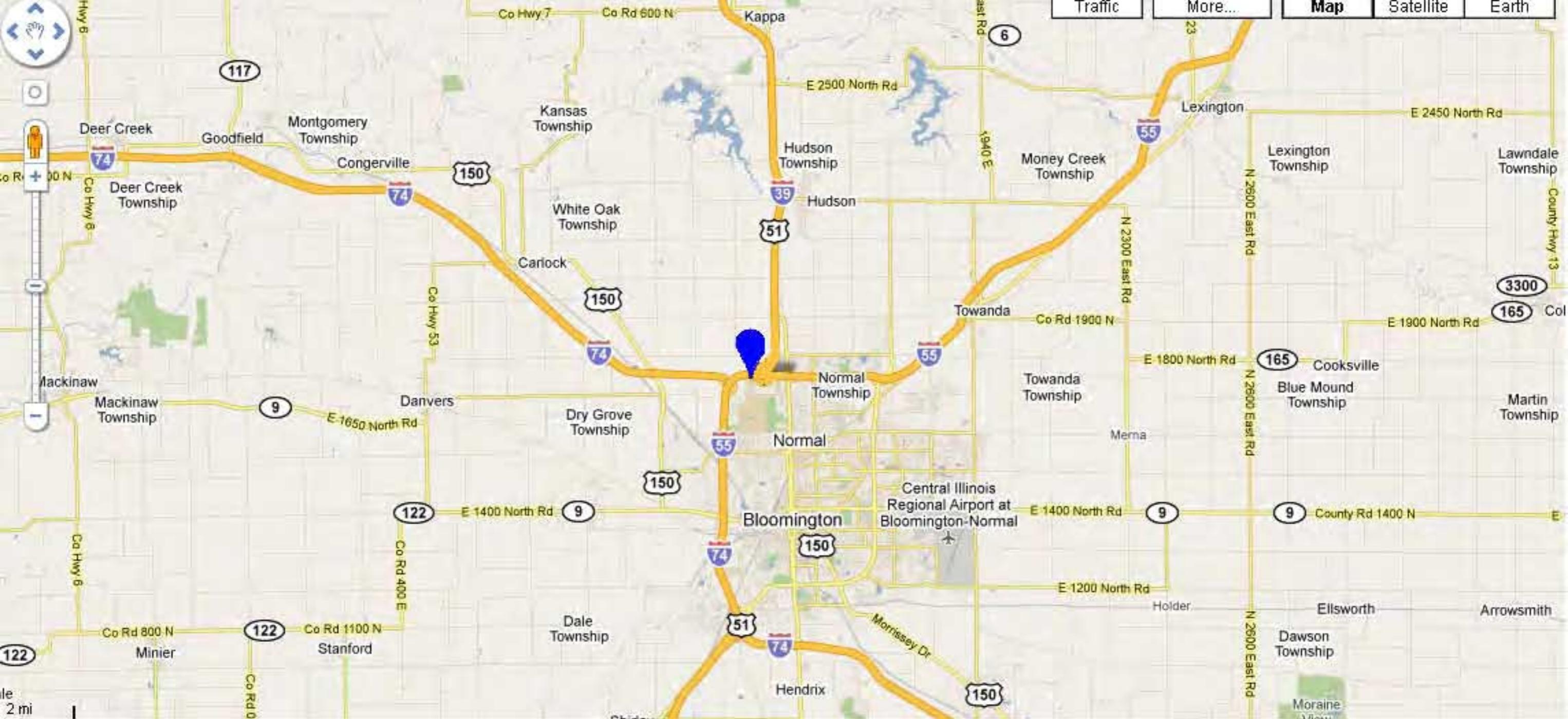
W Raab Rd

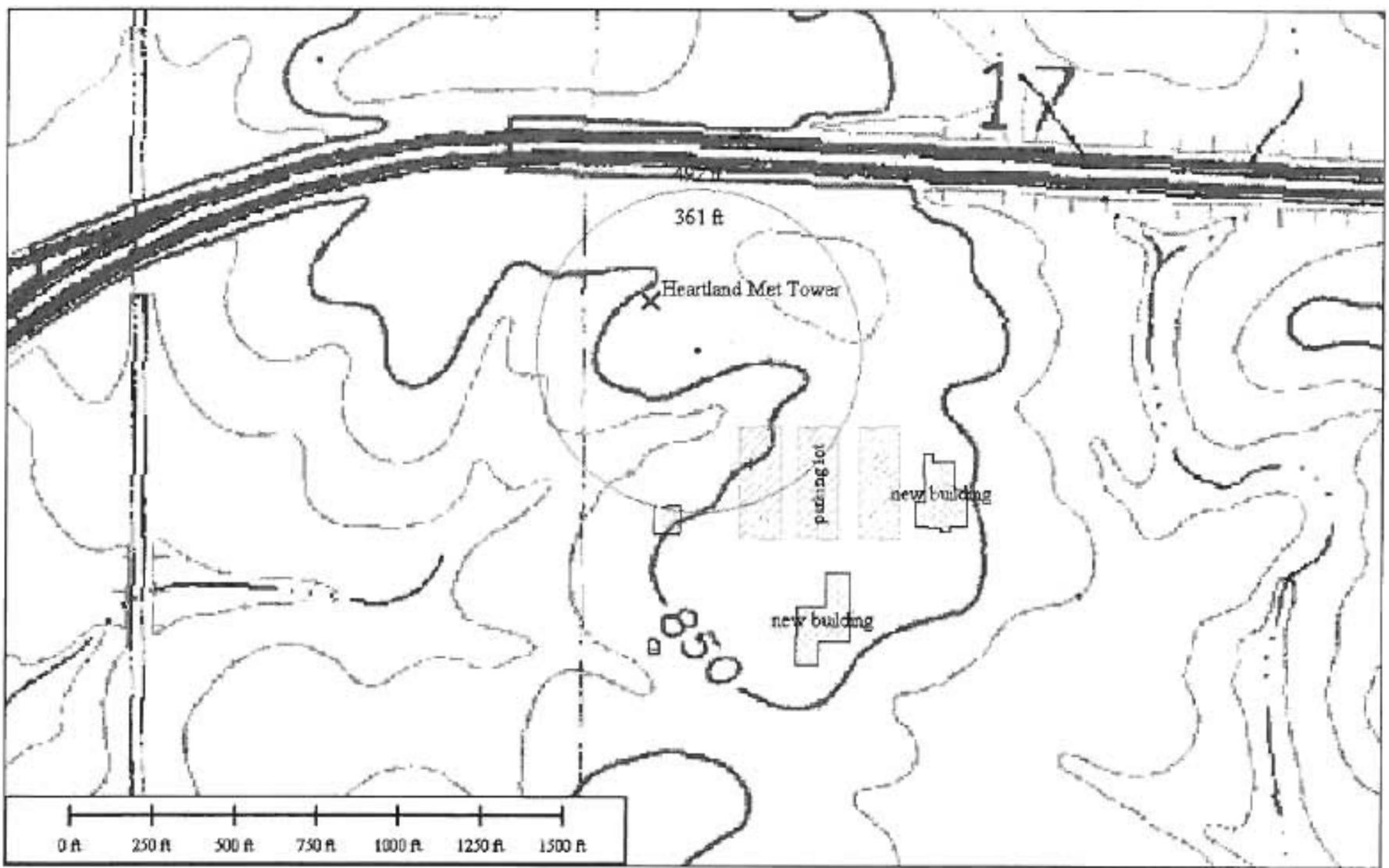
N Parkside Rd

C St  
7th St  
8th St  
5th St  
4th St  
3rd St  
2nd St  
1st St

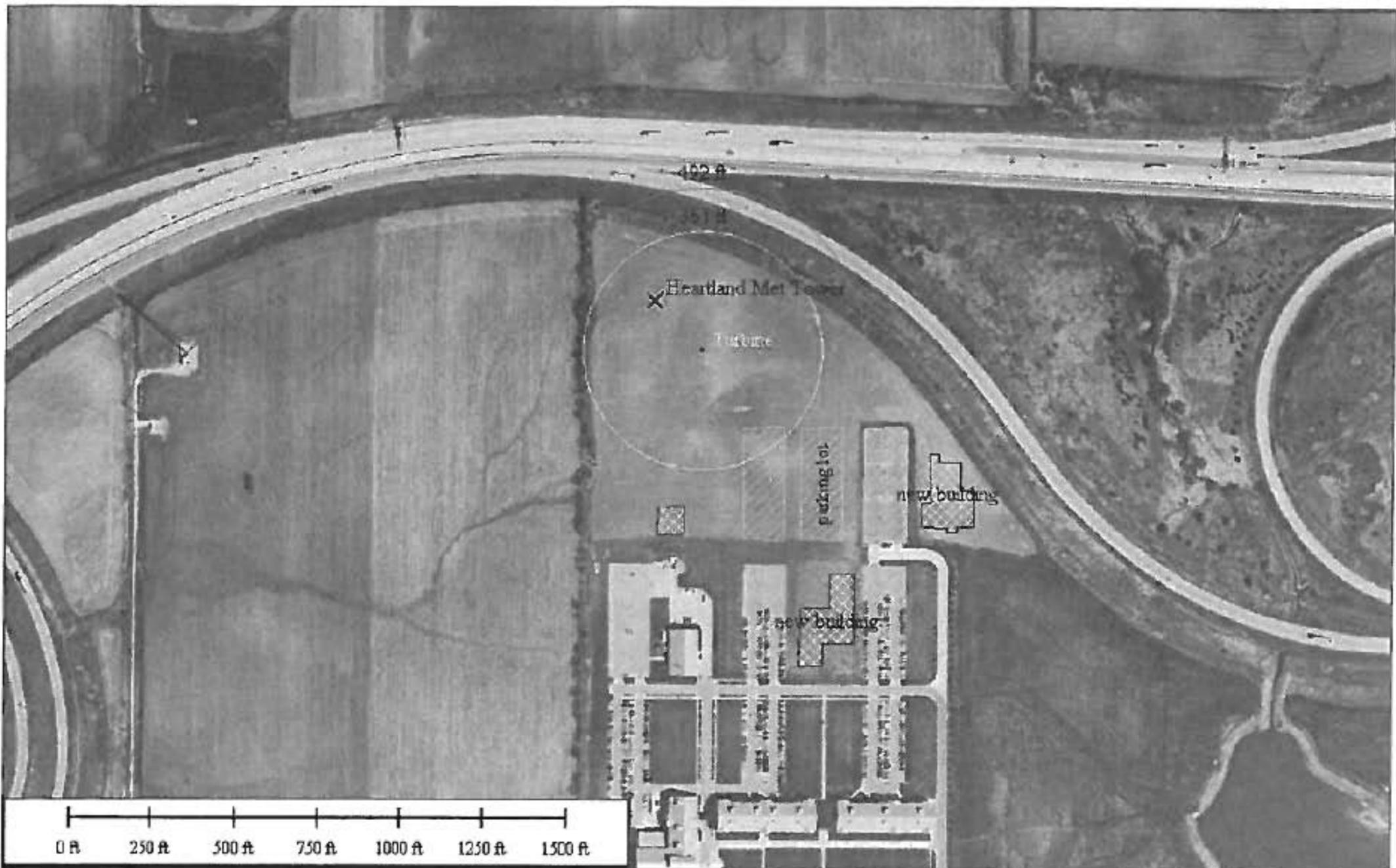
A St  
W Raab

500 yds





**Figure 1 - Project Area- Topographical map**



**Figure 2 - Project Map- Aerial photo (Yellow ring - 1.1X, green ring - 1.5X)**

**APPENDIX C:**

**AGENCY COORDINATION**

Attachment C-5: USFWS Consultation



September 7, 2010

Richard C. Nelson  
U.S. Fish and Wildlife Service  
Rock Island Field Office  
1511 47<sup>th</sup> Avenue  
Moline, IL 61265

Subject: Section 7 Endangered Species Consultation  
Heartland Community College's Wind Energy Project, McLean County, IL

Mr. Nelson,

The U.S. Department of Energy (DOE) is requesting concurrence from the U.S. Fish and Wildlife Service (FWS) that the proposed Heartland Community College's Wind Energy Project, McLean County, Illinois is *not likely to adversely affect* the endangered Indiana bat (*Myotis sodalis*) and will have *no effect* on the Eastern prairie fringed orchid (*Platanthaera leucophaea*). This request is being submitted after close consultation with Mr. Jeff Gosse in the FWS Midwest Region/Region 3 Office on the process for "Recovery Act" funded wind power projects.

DOE has reviewed the FWS Environmental Conservation Online System to determine that there is no known critical habitat present at the project site. DOE has also obtained the list of threatened, endangered, candidate species for McLean County from the FWS Midwest Region 3 Section 7(a)(2) Technical Assistance Website. From this list DOE has determined the following species have potential to occur in McLean County: the Indiana bat, federally-listed threatened, and the Eastern prairie fringed orchid, federally-listed Threatened. As further described below, the proposed project site is an actively landscaped grass lawn on a college campus, and thus is not suitable habitat for the Eastern prairie fringed orchid. DOE therefore concludes that this project would have no effect on the species.

The project consists of a proposed single 1.5 megawatt (MW) wind turbine along with an associated gravel access road and electrical transmission equipment. The turbine would be installed on the northern end of Heartland Community College, just south of Interstate 55 in Normal, IL (GPS: Lat. 40.537781, Long. - 89.015576). The elevation of the turbine site is 850 feet. The specific model of wind turbine to be installed has not been selected; however Heartland Community College has submitted their preferred total turbine height of 397 feet above ground level to the Federal Aviation Administration for their review.

A review of the *Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision (USFWS; April 2007)* indicates no summer records of the Indiana bat in McLean County, Illinois, and the nearest known hibernaculum and designated critical habitat is Black Ball Mines in LaSalle County, Illinois (Priority 2 hibernaculum), approximately 56 miles north of the proposed project area (Pecumsaugan Creek - Blackball Mines Nature Preserve). The proposed project site does not include suitable wintering habitat (hibernacula), and there is no known highly suitable foraging habitat for this species in the area. Mature trees and/or undisturbed habitats do not occur on the site and the surrounding area is predominantly agricultural. The nearest known summer (maternal roosting) habitat is at Middle Fork River County Forest Preserve, approximately 57 miles to the southeast of the proposed project location.



The Illinois Department of Natural Resources (DNR) was consulted regarding this project and their Ecological Compliance Assessment Tool (EcoCAT) was used to evaluate the proposed site. The EcoCAT system was used as part of the Department's *Consultation for Endangered Species and Natural Area Protection* (Part 1075). The EcoCAT system includes a proximity review for threatened or endangered species occurrences within the Project's vicinity. The Illinois DNR issued a letter to the project proponent indicating that, "The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated."

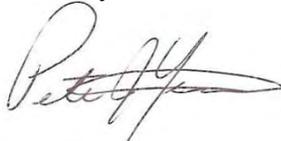
The proposed project site does not include suitable wintering (hibernacula), summer (maternal roosting habitat), or foraging habitat for this species and is unlikely to be within a major migratory pathway. Based on the lack of known occurrences of this species or suitable habitats (hibernacula or summer roosting habitat) at or near the proposed project site, the likelihood that this project will affect individuals of this species or suitable habitats is discountable. The risk to migrating individuals is more difficult to characterize because little is known of the migratory patterns of this species. Based on this uncertainty, it is appropriate to conclude that the proposed project may affect, but is not likely to adversely affect the Indiana bat due to discountable effects.

Pursuant to the requirements under Section 7(a) (2) of the Endangered Species Act and the FWS implementing regulations (50 CFR Part 402), DOE respectfully requests concurrence with the determination that the installation and operation of the Heartland Community College's Wind Energy project in McLean County is not likely to adversely affect the Indiana bat. It is DOE's opinion that review and concurrence on this project does not negate the comprehensive approach for evaluation of these types of projects as a group. DOE is respectfully requesting concurrence as expeditiously as possible for this DOE "Recovery Act" funded project. DOE appreciates the importance USFWS is placing on all of the reviews of the DOE "Recovery Act" funded projects as we understand the matter was discussed during the September 1, 2010 Region 3 – Field Office meeting.

DOE is preparing a Draft Environmental Assessment under the National Environmental Policy Act (NEPA 40 CFR 1500-1508) for this project, and will describe the potential impacts to biological resources, including eagles and other migratory birds in that document; DOE will notify your office of the availability of this document.

Please contact the DOE Document Manager Mr. John Jediny at 202-586-4790 or [John.Jediny@ee.doe.gov](mailto:John.Jediny@ee.doe.gov) or the NEPA Compliance Officer Mr. Pete Yerace at 513-218-4069 or [Pete.Yerace@emcbc.doe.gov](mailto:Pete.Yerace@emcbc.doe.gov) with any questions regarding this consultation.

Sincerely,



Pete Yerace  
NEPA Compliance Officer

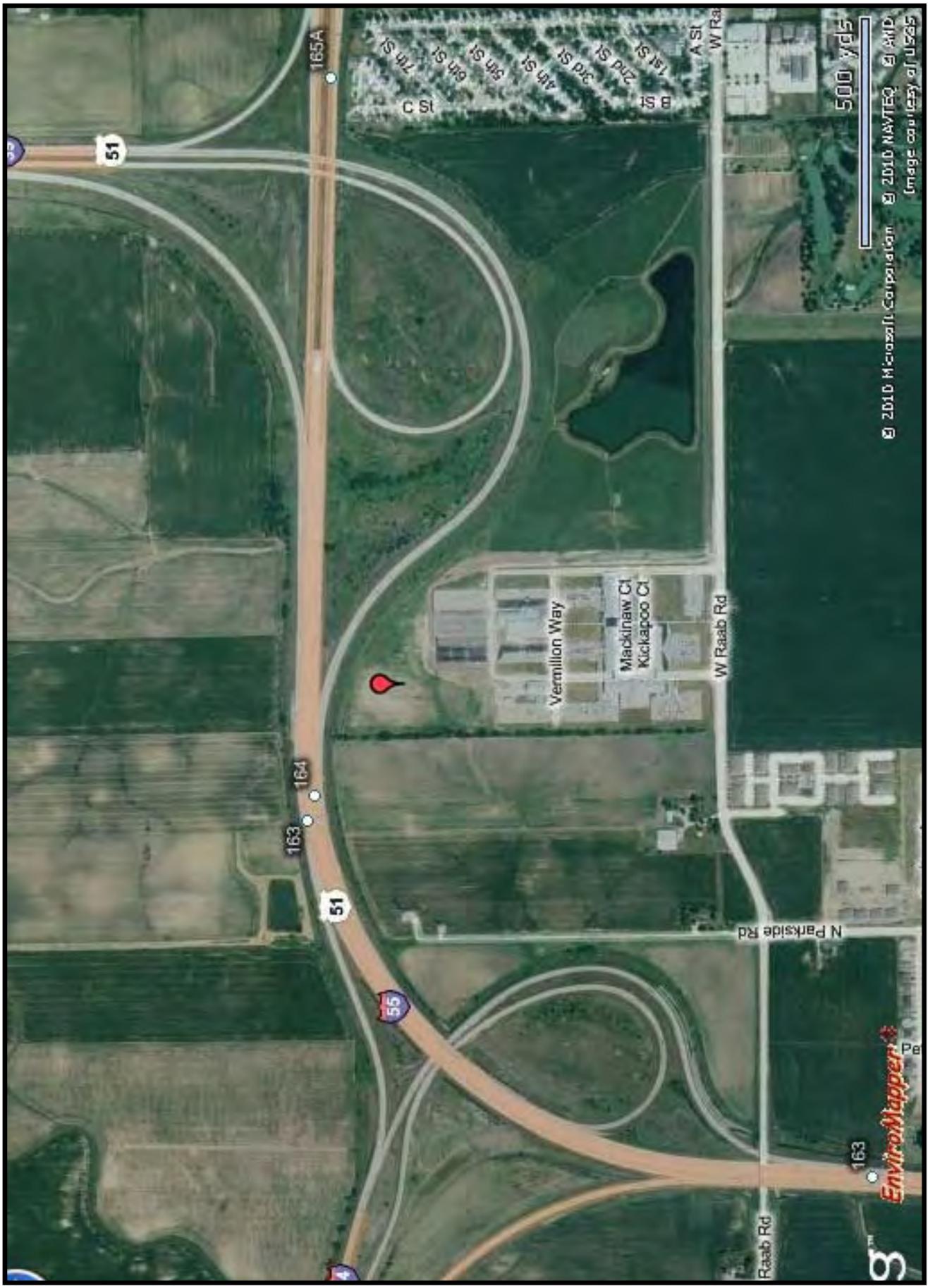
Enclosures:  
Figures 1, 2  
Aerial Maps

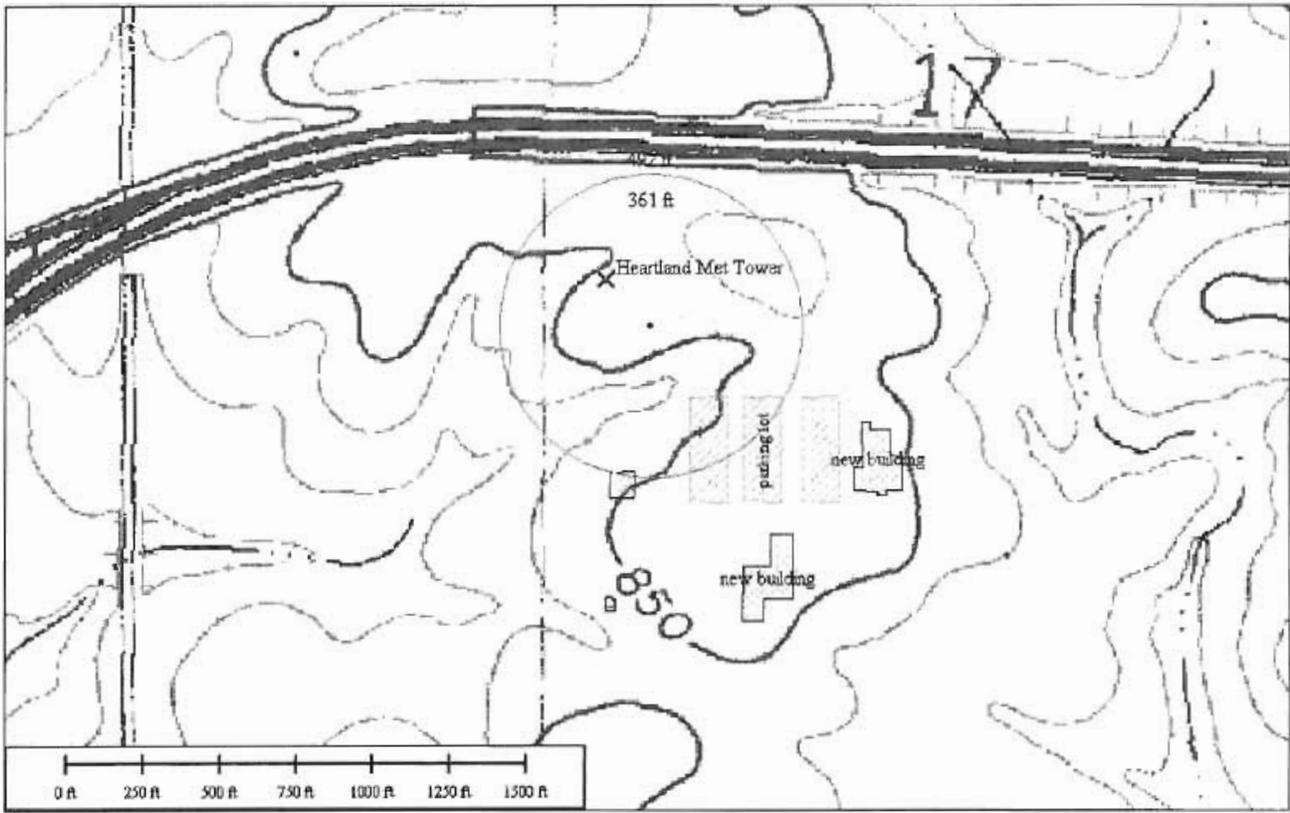
cc: Mr. Jeff Gosse, USFWS Region 3 (w/ attachments)  
Mr. Matthew Sailor, USFWS Region 3 (w/ attachments)  
Ms. Heidi Woeber, USFWS Region 3 (w/ attachments)

**Heartland Community College  
Wind Turbine Project Location  
McLean County, Illinois**

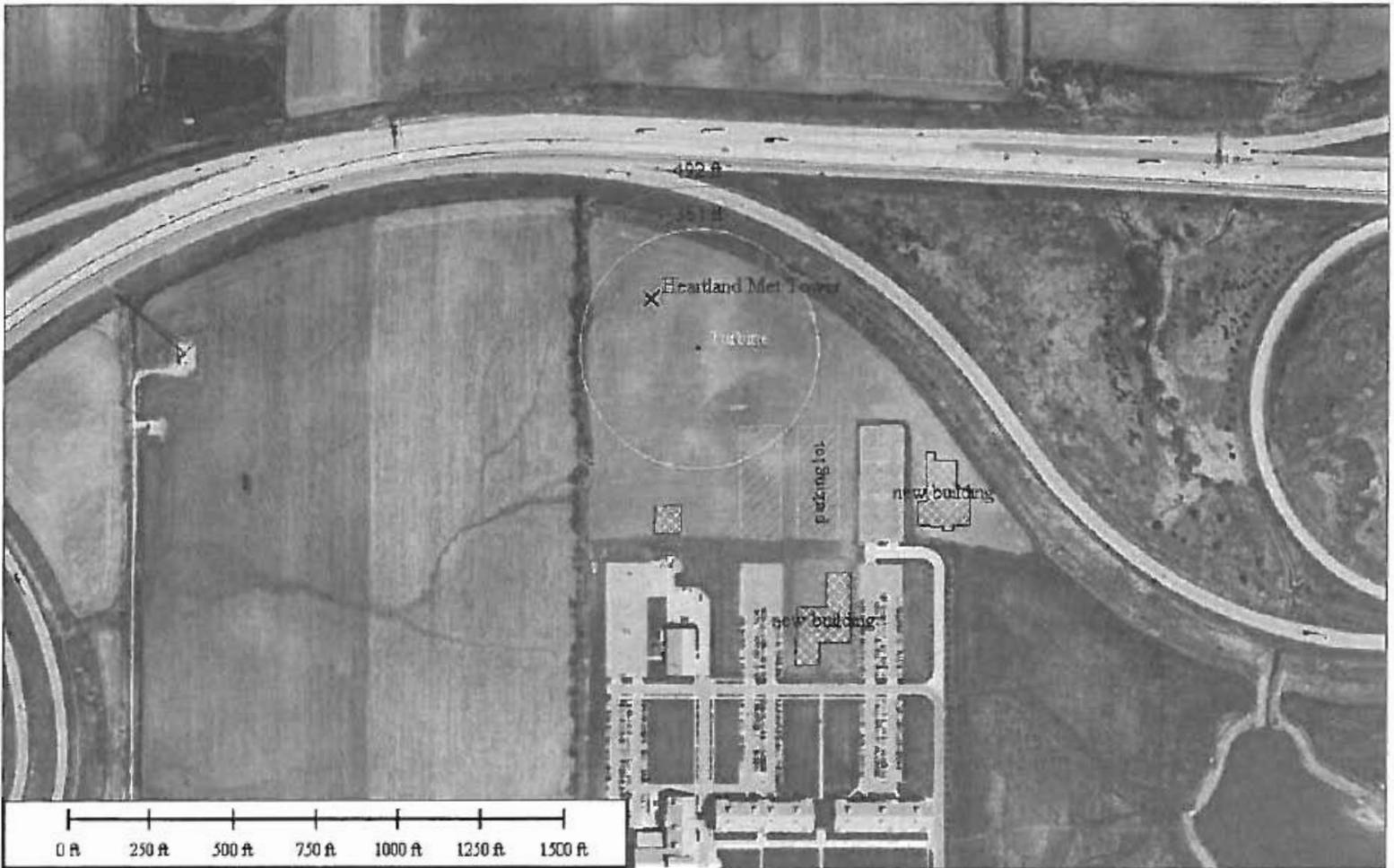


# Heartland Community College Wind Turbine Project Location McLean County, Illinois





**Figure 1 - Project Area- Topographical map**



**Figure 2 - Project Map- Aerial photo (Yellow ring - 1.1X, green ring - 1.5X)**



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Rock Island Field Office  
1511 47<sup>th</sup> Avenue  
Moline, Illinois 61265  
Phone: (309) 757-5800 Fax: (309) 757-5807

IN REPLY REFER  
TO:  
FWS/RIFO

September 10, 2010

Mr. Pete Yerace  
NEPA Compliance Officer  
Department of Energy  
Washington, DC 20585

Dear Mr. Yerace:

We have reviewed your letter dated September 3, 2010, regarding the Heartland Community College Wind Energy Project, McLean County, Illinois. Heartland Community College plans to install a single wind turbine at their college campus in Normal, Illinois. The 1.5 megawatt wind turbine will be 397 feet tall. The project will require a gravel access road, and underground electrical transmission equipment. Heartland Community College is applying to receive a grant through the United States Department of Energy (DOE) as part of the American Recovery and Reinvestment Act Community Renewable Energy Program. As the grantor, DOE is the Federal action agency. We have the following comments.

We understand from the letter that there is no suitable habitat in the project area for the federally listed eastern prairie fringed orchid (*Platanthera leucophaea*). The proposed Heartland Community College site is a landscaped grass lawn. We concur with your determination that the proposed project will have no effect on this species.

In regard to the federally listed endangered Indiana bat (*Myotis sodalis*), there are no summer records for the Indiana bat in McLean County, Illinois, and the nearest known hibernaculum and designated critical habitat area is Blackball Mine in LaSalle County, Illinois (Priority 2 hibernaculum), 56 miles north of the proposed project area. The proposed project site does not include suitable wintering habitat (hibernacula), and there is no known highly suitable foraging habitat for this species in the area. Mature trees and/or undisturbed habitats do not occur on the site and the surrounding area is predominantly agricultural. The nearest known summer (maternal roosting) habitat is at Middle Fork River County Forest Preserve, approximately 57 miles to the southeast of the proposed project location. The risk to migrating individuals is difficult to characterize because little is known of the migratory patterns of this species. Based on the site information, the small scale of the project (a single turbine), and the uncertainty of migratory patterns, you have concluded that the proposed project may affect, but is not likely to

Mr. Pete Yerace

2

adversely affect the Indiana bat, and that the likelihood for take is discountable. We concur with your determination.

We recommend that the DOE encourage "Renewable Energy Grant Funds" grant recipients to monitor wind turbines for impacts to birds and bats, and require notification to DOE and this office if operation of wind turbines results in mortality of these species. Should the project be modified or new information indicate endangered species may be affected, consultation should be initiated.

Thank you for the opportunity to provide comments. If you have any additional questions or concerns, please contact Heidi Woeber of my staff at 309-757-5800, extension 209.

Sincerely,



for  
Richard C. Nelson  
Field Supervisor

cc: USFWS/R3/ES (Gosse)  
ILDNR (Shank)

s:\office users\heidi\concur\laadoegrantsingleturbineheartlandcc.doc

**APPENDIX C:**

**AGENCY COORDINATION**

Attachment C-6: NRCS Notification



1144 W. Jefferson Street, Suite 300  
Shorewood, Illinois 60404  
p 815.744.6940 f 815.744.6965

[www.f-w.com](http://www.f-w.com) | [www.greennavigation.com](http://www.greennavigation.com)

July 28, 2010

United States Department of Agriculture  
Normal Service Center  
Attention: Mr. Kent Bohnhoff  
402 N. Kays Drive  
Normal, IL 61761

Subject: Request for Consultation  
Heartland Community College Wind Turbine Project

Dear Mr. Bohnhoff:

We request, on the behalf of Heartland Community College, a consultation from your agency for a wind turbine project. Heartland Community College is proposing to install a single 1.5 megawatt wind turbine along with an associated gravel access road and electrical transmission equipment on the northern end of the Heartland Community College's campus, and just south of Interstate 55 in Normal, IL (see enclosed map for approximate location of the proposed turbine). The proposed wind turbine would provide electricity directly to the college, enabling it to reduce the electrical demands of the institution and lower the carbon footprint associated with daily operations. The U.S. Department of Energy (DOE) is proposing to provide federal funding to the Illinois Department of Commerce and Economic Opportunity (DCEO) for the project.

Please respond in writing with your comments or concerns regarding the above referenced project. Thank you for your time and feel free to contact myself at 815.744.6940 with any questions.

Sincerely,

FARSNSWORTH GROUP, INC.

A handwritten signature in cursive script that reads "Danielle Wallin".

Danielle Wallin  
Professional Geologist

Enclosures

cc: Jim Hubbard, Heartland Community College