Appendix H – Request for Proposals

Sustainable Energy Parks in Appalachia
A Feasibility Plan

Request for Applications

APPLICATION GUIDANCE

A program of the

Northern West Virginia Brownfields Assistance Center

In cooperation with the
West Virginia Water Research Institute at West Virginia University

Funded by the

United States Environmental Protection Agency

General Instructions

- **This document serves as guidance for submitting an application.**

- **Please read application materials prior to completing the application.**

- **Applications are due January 31, 2012. Late or incomplete applications will not be considered. Completed applications may be sent through U.S. Postal Service, commercial delivery service, or electronically.**

  HARD COPY SUBMISSIONS

  Applications sent through the U.S. Postal Service or commercial delivery service must be received by January 31, 2012. Mail one (1) complete application to:

  Attn: Patrick Kirby
  Sustainable Energy Parks
  Northern WV Brownfields Assistance Center
  385 Evansdale Drive, Suite 202 (*for commercial delivery service*)
  PO Box 6064 (*for U.S. Postal Service*)
  Morgantown, WV 26506-6064
  Telephone: 304-293-6984 *(for commercial delivery service)*

  ELECTRONIC SUBMISSIONS

  Applications submitted via email must be submitted to:
  sustainableenergyparks@mail.wvu.edu no later than 11:59 p.m. Eastern Time on January 31, 2012. In the subject line, please include both applicant and site names. (Example Subject Line: John Smith ABC Mine.)
  Please accept all risks attendant to email submission, including server delays and transmission difficulties.

- **For program and/or application questions, please contact:**

  Patrick Kirby, *Director*
  Northern WV Brownfields Assistance Center
  304-293-6984
  Patrick.Kirby@mail.wvu.edu

- **FAXED APPLICATIONS WILL NOT BE ACCEPTED.**

Sustainable Energy Parks Feasibility Plan Application
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A. *Program Guide*

Executive Summary

This solicitation seeks to identify former surface mine lands in Appalachia suitable for redevelopment into Sustainable Energy Park sites that have the potential to put acres of former mine lands into reuse, generate economic growth, add jobs, promote and contribute to the national sustainable and renewable energy resource base, decrease or offset greenhouse gases through carbon sequestration, and reduce sediment and mine drainage due to substantial root system of biofuels.

The Northern West Virginia Brownfields Assistance Center (NBAC) is soliciting applications from eligible government entities on behalf of West Virginia communities within close proximity to former surface mined lands to be considered to participate in the development of a ***Sustainable Energy Park Feasibility Plan***. One community will be selected with the project activities occurring between February 10, 2012 and August 31, 2012. (See page 10 for a list of eligible government entities who can apply to this announcement.)

For the purpose of this announcement, the concept of ***Sustainable Energy Parks (SEPs)*** constitutes *a place with sufficient space, physical characteristics, infrastructure, and stakeholder support to accommodate the production of renewable energy products.* SEPs have the potential to generate local economic growth, promote the development of renewable energy technologies, and decrease or offset greenhouse gases through terrestrial carbon sequestration. Former surface mine lands are of particular interest for SEPs due to their large scale acreage, remaining infrastructure (roads, water lines, electricity, etc.), and potential for post-mining land use.

The Sustainable Energy Park Feasibility Plan, or the "Plan," will be part of a framework that can be transferred to other communities throughout Appalachia facing the challenges posed by post surface mine land redevelopment. The Plan will include a detailed site assessment, development plan, business plan, and marketing plan; all of which are described in more detail on pages 7-8.

The Plan will serve as a model for future consideration of SEPs in the selected community and elsewhere. The *Plan* and subsequent outreach *Showcase* event will provide an opportunity for the selected community to position itself to take the next step towards implementing a SEP in their community leading to economic growth, jobs, sustainable energy, and possibly tax credits. At the state and regional levels, the abundance of large tracts of post surface mine lands and their proximity to communities may provide numerous opportunities for economic incentives throughout Appalachia.

Specifically, the selected applicant (community) will receive the following:

- Sustainable Energy Park Feasibility Plan for a site within their community.
- Spotlight on the potential of a SEP site in the community to attract the attention of developers, investors, employers, and others.
- Potential for economic incentives and jobs.
- Technical assistance from experts in biofuels growth, harvesting, and processing; wind energy; solar energy; geo-thermal energy; land use planning; business development; and marketing.

- Detailed information on the selected former mine site.
- Increased awareness of alternative uses for former mine lands.
- Increased interest from a network of business professionals (investors, bankers, developers, land owners, manufacturers, regional development authorities, and others).
- Promotion of potential SEP through a *Showcase* outreach event. (Detailed information on the Showcase event can be found on page 10.)

The successful applicant will not receive actual monies through applying to this solicitation.

Program Description

Background

The Northern West Virginia Brownfields Assistance Center (NBAC), a program of the West Virginia Water Research Institute (WVWRI) at West Virginia University (WVU) received a Training, Research, and Technical Assistance Grant from the U.S. Environmental Protection Agency (USEPA) to construct a framework for developing Sustainable Energy Parks (SEPs) on former surface mine land in Appalachia. Part of this framework includes the development of a Sustainable Energy Park (SEP) Feasibility Plan for a former surface-mine site in West Virginia.

Former surface mine sites are by definition "brownfields." The USEPA's definition of a brownfield is as follows:

> *"A brownfield is an abandoned or underutilized property whose redevelopment or reuse is hindered by real or perceived presence of a hazardous substance, pollutant, or contaminant. Brownfields include mine scarred land, and sites used for the production of controlled substances."*

Former surface mine sites are ideal candidates for SEPs and associated alternative energy production. SEPs within Appalachia will benefit the economies of the local communities by restoring degraded lands, boosting the region's economy through jobs and resource needs, mitigating several environmental issues, and reusing underutilized mine lands. The alternative energy sources to be considered for the SEPs include biofuels, solar, wind, and geothermal power. Generally, sufficient distance exists between the potential SEP sites and population centers providing a buffer to nearby communities. Habitat destruction is also minimized because the vegetation has already been cleared from the former surface mine sites. In addition, the sites are often linked by roads, railroads, and electric transmission lines. These infrastructure links provide existing site access for local workforce commutes, initial and future construction transportation and development, supply deliveries and immediate proximity to communities to utilize the energy outputs.

Objective

The primary objective of the Sustainable Energy Park initiative is to develop a framework for developing opportunities for SEPs on mined land in Appalachia that can be transferred to other communities facing the challenges posed by post-mining land redevelopment. The SEP initiative provides a catalyst to foster a companion "green" energy industry to coal in Appalachia. The intended result is a sustainable economic driver of a former mine site. A successful SEP will generate local economic growth, decrease or offset greenhouse gases through carbon sequestration, promote renewable energy technologies, and create a regional model for economic development in coalfield communities.

Site Inventory
An inventory of surface mine lands throughout West Virginia was created by a team of researchers at WVU (the *Team*) which, when blended with energy assessment data and economic considerations, produced a portfolio of lands that are positioned as viable production areas for biofuels and other alternative energies. Using weighted criteria (including slope, property size, land owner considerations, population, transportation and utility infrastructure networks, etc.) to determine which of these lands are suitable for SEPs, a prioritization tool was developed to classify sites and to determine which alternative energy or energies should be included on each site for their potential to be successful SEPs. Community support for the development of SEPs is one of the criteria for selecting sites for additional site investigation, environmental assessment, and economic feasibility studies.

Explanation of Alternative Energy Sources

Biomass
Biomass, which is just one type of biofuel, is generated from organic sources, which include wood, woody plants, food crops, grassy plants, residues from agriculture and or forestry, and organic components of municipal and industrial waste. Biomass can be burned as a solid fuel, or converted into liquid or gaseous forms, for the production of electric power, heat, chemicals or fuels.

Switchgrass
One type of biomass, switchgrass, is a sensible choice for production on former surface mine lands in West Virginia for these reasons:

- Proximity to major markets
- Abundant water supplies for ethanol processing
- Proper weather environment with abundant rainfall and a long, warm growing season
- Large contiguous fields, which former mine lands provide, are more efficient and are also attractive with local processors
- Produces high yields and nutrient use efficiency
- It is perennial, supports multiple harvest schedules every year, and can be grown in virtually every state east of the Rocky Mountains with no irrigation required
- It captures carbon from the air and sequesters it into the soil as its deep root systems grow
- It can be pelletized and burned directly, or converted to ethanol, which returns 5.5 times more energy than is input into the process
- It is established using conventional planting techniques and harvested with common farm equipment
- It produces more biomass than other grasses and enhances wildlife habitat for species such as deer, turkey, small mammals, and songbirds

Wind
Wind energy is captured by wind turbines with propeller-like blades mounted on a tower. The force of the wind causes the rotor to spin turning a shaft which powers a turbine to generate electricity. Wind technology is scalable. Based on site elevations, acreages, wind direction, and wind speed, turbine designs can be matched to meet desired electricity needs. Large-scale utility projects use large turbines at the megawatt (MW) or multi-MW scale on sites with the greatest wind resource and acreage availability. Electricity generated is typically exported to the electric infrastructure grid.

Solar
Solar power converts sunlight into electricity. Large-scale utility solar energy projects require access to large, open tracts of land. The size of many of the former surface mine lands in Appalachia would allow for large solar arrays to be developed at a single property.

Geo-thermal
Geothermal energy is the use of the earth's heat to produce heat and electricity. Geothermal is reliable, cost-effective, and generates power 24 hours a day 7 days a week. Technological advances continue to expand the feasibility of using geo-thermal, increasing the potential for a wider range of usage. Recent estimates have greatly increased the geothermal generation potential in West Virginia.

Development of a Sustainable Energy Park Feasibility Plan

Technical Assistance
A Technical Assistance Team made up of researchers at WVU (the *Team*) will assist the selected community and key stakeholders with decision-making to determine which combination of biomass, solar, wind, and/or geothermal energy would be best suited for use on the identified property. Former surface-mine land in West Virginia has significant reuse potential to economically revitalize the surrounding communities by providing jobs, increasing revenues and tax bases, providing local energy use or export, mitigating and improving environmental concerns, removing the need to develop, clear, and grade new property, and providing the catalyst to assess and cleanup these unused or underused properties. A Sustainable Energy Park Feasibility Plan developed by the Team will allow the selected community to move forward with implementation of a practical opportunity.

Detailed Site Assessment
A professional engineering firm selected in accordance with USEPA guidelines will perform a site assessment of the selected site. The detailed site assessment will include a property survey, access agreement, soil analysis, and a description of the regional biomass production area(s) and associated transportation and utility infrastructure. Location, size, anticipated biomass production rates, solar, wind, and geo-thermal energy capacity, cost of development, potential revenue streams including returns and markets will also be included.

Development Plan
The development plan will illustrate the intended site design, site layout, and alternative energy uses of the selected site. Specifically, information on the following factors may be addressed in the plan: accessibility, parking, landscaping, buffers, architectural features, structure location, adjacent land use impacts, and other elements related to the community health, safety, and general welfare. A community review of the site development plan will allow local municipalities to analyze the project with respect to potential impacts on local growth and the need for facilities and services.

Business Plan
The business plan created for the site will provide a strategy for producing and processing renewable energy. The plan will include the end product (i.e., pure biomass, pellets or enthanol) that is anticipated from the processes along with a plan of the potential customer base and the method of distribution to customers. Plans for marketing, financial management, operations, and management of the SEP will also be addressed within the business plan. Above all, it is a marketing document that helps to attract investors to a SEP at this site through the

management, strategy, and potential for significant return on investment in renewable energy on former mine lands using a local Appalachian workforce. A formal statement of business goals, justification of the attainability of the goals, and the plan for reaching those goals will be included in this plan. The business plan will answer the following core questions:

i. What service(s) or product(s) do(does) the business provide and what needs does it fill?
ii. Who are the potential customers for the product and why will they purchase it from this particular source?
iii. How will potential customers be reached?
iv. Where will financial resources for business start-up come from?
v. Who will staff the workforce needed?
vi. What financial values are expected from the SEP?

Plans for marketing, financial management, operations and management of the SEP will also be addressed.

Marketing Plan

The marketing plan for the SEP will be used to strategically target the distribution of the business plan to investors, land owners, renewable energy developers, and others in the public and private sectors. The plan will include strategies for market penetration, growth, product distribution, and communication.

Upon Selection

Description of Project Support

One community will be selected. The project activities will occur between February 10, 2012 and August 31, 2012. The project activities and reporting will be completed through support provided by the Sustainable Energy Park Technical Assistance Team (including personnel with the West Virginia Water Research Institute and Northern West Virginia Brownfields Assistance Center and their contractors). All reporting will be completed by the Sustainable Energy Park Technical Assistance Team. No funding will be disbursed to the selected applicant through this solicitation.

What the Successful Applicant Receives

The selected community will receive the following:

- Sustainable Energy Park Feasibility Plan for a site within their community.
- Spotlight on the potential of a SEP site in the community that attracts the attention of potential developers, investors, employers, and others.
- Potential for economic incentives and jobs.
- Technical assistance from experts in biofuels growth, harvesting, and processing; wind energy; solar energy; land use planning; business development; and marketing.
- Detailed information on the selected former mine site.
- Increased awareness of alternative uses for former mine lands.
- Increased interest from a network of business professionals (investors, bankers, developers, land owners, manufacturers, regional development authorities, and others).

Showcase Pilot Sustainable Energy Park Project

The selected community and the Sustainable Energy Park Feasibility Plan will be highlighted during a Sustainable Energy Park Showcase Event in September of 2012. The Showcase event will bring together energy companies, energy investors, researchers, academics, economic developers, government officials (local, state, and federal), Appalachian Regional Commission, private foundations and community members to discuss the real opportunity of implementing the development plans created for a Sustainable Energy Park. The framework for how the Sustainable Energy Park model may be applied in other areas in Appalachia will also be presented. Most significantly, the Showcase will allow the selected community to highlight the many attributes of the community and region to a wide range of stakeholders for future investment.

Selected Former Mine Site

Members of the Technical Assistance Team and contractors will need site access to view the site and perform an environmental site assessment. It is anticipated this will require 2-4 visits by 2-4 personnel. No physical alterations will be done to the site during the course of this project. This project is a feasibility assessment only.

B. *Administrative Guidelines*

Applicant Eligibility

Eligible applicants include the following:

- Units of local government within the state of West Virginia
- Land clearance authority or other quasi-governmental entity that operates under the supervision and control of, or as an agent of, a unit of local West Virginia government
- West Virginia government entity created by the State Legislature
- Regional council or group of general purpose units of local West Virginia government
- Redevelopment agency that is chartered or otherwise sanctioned by the state of West Virginia

Capacity for Implementation

Applicants must demonstrate their capacity to properly participate in the SEP Program. Applicants should have successful experience in leadership, economic development, community development and outreach, and/or capacity-building initiatives. Successful applicants must also have the time and resources to commit to the project, including the ability to gain site access, participate in community outreach and education events, and to complete project activities by **August 31, 2012**.

Applicant Obligations

The selected applicant is expected to:

- Interact with SEP Technical Assistance Team on an on-going basis (telephone calls and meetings in selected community locations) between February 10, 2012 and August 31, 2012.
- Assist the Team with stakeholder solicitation (identification of potential investors, developers, land owners, etc.)
- Develop 1-2 page Stakeholder Outreach Activity Summary by August 31, 2012.
- Attend the SEP Project Showcase Event in September, 2012.

Deliverables

Stakeholder Outreach Activity Summary

Stakeholder input and involvement are significant components of this project. The selected applicant must submit a Stakeholder Outreach Activity Summary (1-2 pages) that documents efforts, events, and methods utilized during the project for soliciting input from project stakeholders, community members, land owners, potential investors, etc. The Stakeholder Outreach Activity Summary also should include steps for identifying, notifying and engaging stakeholders of future project updates and initiatives. This Outreach Summary should be completed by **August 31, 2012** and shared with the Team prior to the Showcase event in September, 2012.

Sustainable Energy Park Showcase Event

The grantee is required to send a minimum of one (1) representative to participate in the Brownfields Showcase Event in **September 2012.** The selected applicant will set up a display and present their project successes and Sustainable Energy Park Feasibility Plan for their community. The selected applicant should make every effort to garner participation of primary

project stakeholders to attend this event. Stakeholders may include land owner(s), potential investor(s), etc. Travel costs for up to four people to attend and participate in this event will be paid to those attendees on a reimbursable basis from the Sustainable Energy Park grant. In addition, at least one member of the Sustainable Energy Park Team will assist the selected applicant and participating stakeholders with the display, attend the event, and help answer questions from event attendees. It is anticipated that a representative from the USEPA will attend the event and evaluate the success of the project.

Timeline

November 10, 2011	Release of Request for Applications
Between November 10, 2011 and January 30, 2012	Program training WebEx conference calls; Team member meetings with Regional Development Authorities and communities.
January 31, 2012	Applications due
February 10, 2012	Decisions made, applicants notified
February 2012	Public meeting and project announcement in the selected community
February 10, 2012 – August 31, 2012	Project tasks implemented
July 31, 2012	Draft Sustainable Energy Park Feasibility Plan completed
August 1-31, 2012	USEPA and stakeholder reviews/comment period of the draft Plan
August 31, 2012	Final Sustainable Energy Park Feasibility Plan completed Stakeholder Outreach Activity Summary submitted by applicant
September 2012	Showcase Event

Evaluation Criteria

Threshold

- Applicant community is in a West Virginia “region” impacted by a former surface mine.
- Applicant meets eligibility requirements per administrative guidelines.
- Application is complete, timely, and follows application guidelines.

Ranking
Criteria that will be considered when reviewing and evaluating applications include the following:

Community Description

- Identification of the community as having areas impacted by surface mining
- Description of proposed site for a Sustainable Energy Park (including proximity of proposed site to existing infrastructure (e.g., electric power grid, rail, highways, water, sewer)
- Explanation of the community's interest in a Sustainable Energy Park
- Articulation of community's vision for their involvement in the project
- How proposed involvement connects with other community initiatives

Capacity for Project Implementation

- Applicant's ability to fulfill the project tasks
- Identification of supporting stakeholders
- How project momentum will be sustained after proposed activities are completed
- How proposed activities increase the community's capacity to redevelop brownfields sites in the future
- Applicant's level of experiences in leadership, economic development, community development and outreach, and/or capacity-building initiatives
- Applicant's resources, including the ability to gain site access, participate in community outreach and education events, participate in and complete project activities by August 31, 2012

Site Characteristics

- Aggregated acreage with a slope conducive for switchgrass production
- Potential biofuels stockpiling/processing areas
- Existing infrastructure (including electric power lines, rail, highways, and water)
- Proximity to potential markets
- Accessibility to proposed site to perform detailed site assessment
- Potential for viable wind energy
- Potential for viable solar energy
- Potential for viable geo-thermal energy

C. *Application*

Sustainable Energy Park Feasibility Plan

Application Due Date: January 31, 2012

LATE OR INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED

Instructions for Submission

Completed applications may be submitted on or before January 31, 2012 through the U.S. Postal Service, commercial delivery service, or electronically.

HARD COPY SUBMISSIONS

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ELECTRONIC SUBMISSIONS

Applications submitted via email must be submitted to: sustainableenergyparks@mail.wvu.edu no later than 11:59 p.m. Eastern Time on January 31, 2012. In the subject line, please include both applicant and site names. (Example Subject Line: John Smith ABC Mine.)
Please accept all risks attendant to email submission, including server delays and transmission difficulties.

FAXED APPLICATIONS WILL NOT BE ACCEPTED.

Format

Please use the following format in preparing your application; provide your application package in the order the sections are listed.

Please use standard 12 point font; 8-1/2" x 11" paper; and 1 inch margins. Do not bind application or place in a folder. Staple it at the upper left corner only. One (1) original application must be received by January 31, 2012 or submitted electronically no later than 11:59 p.m. EST January 31, 2012.

ALL PROJECTS MUST INCLUDE THE FOLLOWING COMPONENTS:

1. **APPLICANT/PROJECT INFORMATION & SUMMARY**
   a. Formatted Application Cover Sheet (Form "A")
   b. Signature Page for Certifying Official (Form "B")

2. **PROJECT DESCRIPTION (4 pages maximum)**
   a. Description of the Community
      i. Location and community name
      ii. Current community situation
      iii. List of project stakeholders identified by name, organization, and contact information
      iv. Level of stakeholder involvement and other support for Sustainable Energy Park

   b. Project Involvement
      i. Significance of the site redevelopment to the community

   c. Capacity for Project Implementation
      i. Provide a description of applicant's ability to gain site access and work with landowners
      ii. Provide a description of applicant's ability to garner interest of potential investors in biofuels, wind, solar, and geothermal (growers, manufacturers, transporters, processors, etc.)
      iii. Provide plan for outreach and community wide education
      iv. Identify how the community will be involved in the project

3. **SIGNED LETTERS OF SUPPORT (Optional)**

FORM A
SUSTAINABLE ENERGY PARK FEASIBILITY PLAN APPLICATION

Section I: APPLICANT/PROJECT INFORMATION

A. General Information:

Applicant: _____

Check box that most closely matches applicant eligibility

- ☐ Local government
- ☐ Quasi-government
- ☐ State Legislative created
- ☐ General purpose regional council
- ☐ Chartered redevelopment agency
- ☐ Other: _____

Certifying Official: Name: _____ Title: _____

Contact Person: Name: _____ Title: _____

Address: _____

City, State, Zip: _____

Telephone: _____ Fax: _____

E-mail: _____

B. Site Information:

Name of former Surface mine site: _____

Nearest Community: _____ County: _____

Location (e.g., Lat/Long; address): _____

Estimated size (acres):_____

Name of most recent Owners, if known: (coal company, land owners) _____

_____

Provide the following infrastructure information related to the proposed site:

Infrastructure Component	Name/Identifier (e.g., Route 50, C&X Railroad)	Distance from site to infrastructure component	Other relevant information (e.g., is the rail active?)
Highway			
Airport			
Rail			
Transmission line			
Water			
Sewer			
Buildings/structures			
Other			

Current Site Use: (Check all boxes that apply.)

- ☐ Commercial
- ☐ Industrial
- ☐ Public
- ☐ Agricultural
- ☐ Other: _____

C. Stakeholder Support

Please list stakeholder information related to the former mine site:

Stakeholder	**Name**	**Company**	**Established relationship Y/N**
Landowner			
Mining Company			
Investor (e.g., banker, developer)			
Other			
Other			

FORM B
SIGNATURE PAGE FOR CERTIFYING OFFICIALS

The selected applicant and community representative will be expected to (a) interact with Sustainable Energy Park Technical Assistance Team Members on an on-going basis between February 10, 2012 and August 31, 2012; (b) assist Team members with stakeholder solicitation; (c) develop a 1-2 page Stakeholder Outreach Plan; and (d) attend a mandatory Sustainable Energy Park Showcase Event (September 2012 – specific date to be determined).

I certify that all statements in this application and the attached documents are true and correct to the best of my knowledge. Furthermore, I am authorized by my organization to apply for the Sustainable Energy Park Showcase. I also agree to participate in the project and Sustainable Energy Park Showcase components of the program.

Signature of Certifying Official/Applicant	Date
Written Name of Certifying Official/Applicant	Title
Signature of Community Representative	Date
Written Name of Community Representative	Title