2010 ARC Energy RFP: Planning and Implementation of Community-Based Energy Projects

Open Date: May 10, 2010
Close Date: August 31, 2010
Announcement Date: Fall, 2010

$75,000 maximum per grant:

Topic I: Community Energy Plan Development—$20,000 maximum
Topic II: Energy Project Implementation—$55,000 maximum

ARC anticipates providing seven to fifteen grant awards under this program. Applicants may apply for just Topic I—Community Energy Plan development, or both Topic I and Topic II—Energy Project Implementation activities. Please note that Topic II activities will only be funded for projects that have received support for Community Energy Plan development under this RFP solicitation.

The goal of these activities is to develop a community infrastructure which builds local demand and grows markets for clean energy enterprises, generating new energy jobs in Appalachia.

Community Energy Plan (CEP) Development

Up to $20,000 may be provided to underwrite costs of developing and implementing a Community Energy Plan. CEPs offer a systematic approach to developing policies that integrate energy efficient structures, renewable energy, fuel efficiency, and conservation into a local regulatory and energy policy framework. CEPs could focus on developing local markets for biofuels, setting energy efficiency standards or targets for facilities construction or renovation, prioritizing the development of distributed generation of electric power from wind or solar sources, developing education and training programs for 'green jobs', etc.

The applicant should describe the planning process to be employed to develop the CEP. An implementation strategy should also be provided, which could include adoption of new energy policies by local jurisdictions, such as county government, school boards, city government, or other jurisdictions.

Technical Assistance providers may be placed under contract to provide assistance in developing and implementing the Community Energy Plan. A listing of resources and qualified technical assistance providers active in the Appalachian Region is provided below, on page 9.

Energy Project Implementation

Up to $55,000 may be provided to underwrite costs of implementing a demonstration energy-efficiency or renewable-energy project. These projects must support and provide best practice examples for the implementation of the Community Energy Plan, funded in Topic I.

A range of activities are eligible for funding, including but not limited to: biodiesel purchase (and production) for use by local school bus fleets, municipal wind generation for local power use, energy efficient building improvements or construction with community education components, solar photovoltaic installation on a college campus for energy generation and instructional use, and geothermal installation at a health facility that reduces costs and improves patient care.

Examples – Community Energy Plans, Energy Project Implementation

Wyoming County, West Virginia—Energy Efficient Schools

The Wyoming County Schools energy management program has proven to be a national leader in utilizing energy efficiency in their operations. Since the energy management program was established in 2003, the program has reduced energy costs in the County's schools by 24%, for $1.5 million in operational savings. In the three years that Wyoming County Schools has participated in the ENERGY STAR® program, the school system has reduced its energy costs by an average of 30%. These savings have resulted from a variety of energy efficient building technologies, including the use of HVAC and electrical equipment control systems, and energy-efficient lighting upgrades. Currently, eight of the thirteen schools in the County have been certified as ENERGY STAR® compliant, and the remaining schools are anticipated to be recognized for this achievement in 2010.

Hoover, Alabama—Alternative Fuels Vehicles

Hoover, Alabama, is the sixth largest city in the state, with a population of 65,000. The City operates over 350 flex-fuel and alternative fuel vehicles, using B20—a blend of 20% biodiesel and 80% petroleum diesel—and E85 (which is used by Hoover's police force). Hoover is also testing the use of B20 in its fire trucks. In addition, the City of Hoover manufactures its own B100 using waste vegetable oil collected from local restaurants—perhaps the first municipality in the nation to manufacture its own biofuel. This program and related investments were initiated by the Mayor and approved by City Council, who have made this commitment to clean fuel for several reasons, including: 1) it addresses the issue of national energy security, 2) it is cost effective, and 3) it creates local jobs.

Madison County, North Carolina—Wind for Schools

The vision for the Madison County Wind for Schools project came from Mountain Valleys Resource Conservation & Development, which enlisted the support of the Madison County School System, the French Broad Electric Membership Corporation (an electric co-op) and Progress Energy (an investor owned utility). Wind turbines have been installed at three local schools and the county Cooperative Extension office, and both the French Broad EMC and Progress Energy receive the electricity generated by the systems. Appalachian State University has adapted an educational curriculum which is included in elementary, middle, and high school grade levels, which focuses on the basics of wind energy as well as the science and application of the technology. While the main purpose of the project is to serve as a functioning educational demonstration program for the county school system, the Wind for Schools project helped establish a protocol for the deployment of community wind systems in Madison County. In addition, concurrently, the Madison County Commissioners have approved a County Energy Plan which sets energy conservation goals and prioritizes improvements through technology implementation and employee training.

Background—ARC Energy Activities

Appalachia and energy have been closely linked throughout the history of the nation, from the first discovery and production of oil, to the mining of coal to fuel our industrial growth, to the development of hydropower to bring prosperity and progress to remote rural communities. By using its full range of energy resources and staying at the forefront of emerging energy technologies and practices, the Region has the potential to increase the supply of locally produced clean energy, and create and retain jobs. This approach will help the Region find new ways to satisfy domestic energy demand, minimize environmental impact, and attract service and supply side industries and businesses that rely on energy resources to grow and sustain jobs. Developing Appalachia's energy potential will provide clean, safe, locally produced energy to customers, create and retain jobs, help companies stay competitive, and keep the Region economically strong.

In 2006, the Commission released *Energizing Appalachia: A Regional Blueprint for Economic and Energy Development*, to provide a strategic framework for the promotion of new energy-related job opportunities throughout the Appalachian Region. Approved by the governors of the 13 Appalachian states and the ARC Federal Co-Chair, the blueprint was developed in response to the changing energy supply, policy, and use environment.

In developing the blueprint, the Commission created an energy advisory council made up of one energy expert from each of the 13 Appalachian states, local development district representatives, and two federal representatives. Members of this group used their expertise, ideas, and experience, as well as the information gathered by ARC, to develop regional energy strategies and identify opportunities for ARC and its member states to address the changing energy market environment. The blueprint also draws on the input of over 100 industry experts, educators, government officials, and entrepreneurs in assessing the Appalachian Region's broad energy picture.

The three strategic objectives articulated in the Energy Blueprint are:

- Promote energy efficiency in Appalachia to enhance the Region's economic competitiveness.
- Increase the use of renewable energy resources to produce alternative transportation fuels, electricity, and heat.
- Support the development of conventional energy resources, especially advanced clean coal.

For a copy of the Blueprint visit www.arc.gov/energy.

Renewable Energy and Energy Efficiency

Significant renewable energy opportunities can be found in the development of energy from biomass, biofuels, wind, solar power, and hydropower. Energy from biomass converts specially grown crops, sawmill wood residue, agricultural wastes, and other organic matter into new energy sources and fuels. The total annual biomass resources for the Appalachian states are estimated to be over 108 million tons. Biofuel potential is estimated to be 500 million gallons annually, based on converting 2005 output for corn and soybean production to ethanol and

biodiesel fuels. Additional potential is available from the commercialization of new cellulose-based biofuel technologies, which are currently being developed.

Wind power is significantly underdeveloped in the Region, and has the greatest potential for development along the ridge lines of the Appalachian Mountains. There are over 1,400 megawatts of installed wind power capacity in the Appalachian states, over 1,500 megawatts of planned capacity, with the potential for over 10,000 megawatts of additional capacity.

Solar power's best potential in the eastern United States, including Appalachia, is likely to be for both residential and commercial application. In the Appalachian Region, production of residential and commercial photovoltaic (PV) power is currently viable in southern Appalachia, and several PV manufacturing plants are located throughout northern Appalachia. Passive solar installations such as day-lighting, solar ventilation air preheating, hot water heaters, and pool heating may also provide an effective return on investment in solar technology.

Small and low-impact hydroelectric capability is another largely undeveloped energy resource in Appalachia. The Region is traversed by several major rivers and watersheds that create numerous opportunities for small-scale and low-flow hydropower installations. This category of hydroelectric generation is based on damless technology. Total hydropower potential could be as high as 5,700 megawatts of average available capacity.

The nation has also managed to address some of its rising energy needs through improved energy efficiency, which can be measured in two different ways: energy use per dollar of gross domestic product (GDP) and energy use per capita. The amount of energy used for every dollar of GDP produced by the economy has fallen steadily since 1980. The Energy Information Administration (EIA) of the U.S. Department of Energy forecasts that this trend will continue, based on existing policies of the federal and state government and on private sector investment trends. Economic restructuring also plays a part in explaining the fall in energy use per dollar of GDP, because it caused a shift in economic activity away from manufacturing and energy-intensive uses and toward the relatively less energy-intensive service sectors. The combined effect of energy-efficiency measures and economic restructuring has been that the total amount of energy used by each person in the economy has remained relatively steady.

Despite these gains from efficiency investments and shifting economic activity, there are some countervailing trends that are increasing energy use per capita, including increased travel demand and the rising intensity of energy demands by residential users and the service sector. The growth of computing and telecommunications applications, due to the expansion of the Internet, has led to an increased demand for electricity by residential and commercial users. This trend is so widespread that the EIA has forecast that energy use per capita will begin to rise and will continue to escalate slowly for the next two decades. This means that total U.S. energy consumption will grow slightly faster than it has in the past.

For information on ARC funded activities in this program area, visit www.arc.gov/energy.

ARC Background

The Appalachian Regional Commission is a federal-state partnership established in 1965 by the Appalachian Regional Development Act to promote economic and community development of the Appalachian Region. The Act, as amended in 2008, defines the Region as 420 counties comprising all of West Virginia and parts of Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia—an area of 200,000 square miles and about 22.9 million people. To promote local planning and implementation of ARC initiatives, the Commission established 73 Local Development Districts (LDDs) comprising groups of counties within each of the 13 states. The Commission has 14 members: the governors of the 13 Appalachian states and a Federal Co-Chair, who is appointed by the President.

For almost 30 years, the Commission has assisted a wide range of programs in the Region, including highway corridors; community water and sewer facilities, telecommunication, and other physical infrastructure; health, education, and human resource development; economic development programs, local capacity building and leadership development.

Goals/Outcomes

The goal of these activities is to develop a community infrastructure which builds local demand and grows markets for clean energy enterprises, generating new energy jobs in Appalachia.

Projects must focus on developing and implementing Community Energy Plans, and/or implementing renewable energy and energy efficiency projects. Proposed activities should result in:

- Preparation of a Community Energy Plan.
- Adoption of a Community Energy Plan by a local government jurisdiction.
- Implementation of a renewable energy or energy efficiency project such as:
    - Production and/or use of renewable energy, including biofuels, biomass, solar, or wind energy, to include local siting of production facilities.
    - Distribution of renewable energy, to include customer purchasing commitments.
    - Expansion or start-up of ‘clean energy’ businesses, including support for business incubation programs or targeted business financing programs.
    - New construction or facilities renovations that follow ‘green building’ and LEED certified guidelines.
    - Installation of energy efficiency equipment in public or non-profit facilities.

Note: Support for energy audits will not be provided unless the proposed project includes implementation of energy efficiency improvements.

Application Format

Please submit your application in the following format:

1. Cover Page—Complete the Cover Page, attached.
2. Application Narrative—6 pages maximum in 12 point font. Please address the following items:
3. Project Summary—one paragraph, 200 word limit.

4. Description of proposed activity, including anticipated outcomes. A description of the process for developing and implementing the Community Energy Plan should be provided, and proposed Energy Project Implementation (if applicable) should be clearly defined and community benefits articulated.
5. If applicable, detailed information and specifications should be provided for: equipment to be purchased; facilities to be upgraded or developed; and curriculum to be purchased, licensed, or used.
6. Identification of assets that will be leveraged by the proposed project. This could include educational institutions, local business partners, utility partners, windy or sunny location, or other assets.
7. Capability of applicant and community partners. ARC believes that successful development takes place when schools, business, government, nonprofit organizations, and community groups mobilize resources towards a common goal. Describe the involvement of relevant community partners. As appropriate, address the development of new, or the capability of existing, partners in the planning and implementation of the proposed activity.
8. Outreach activities for disseminating or promoting the program.
9. Plans for sustainability. How will the activities continue at the end of the grant period. Describe current or proposed revenue generating activities, financial partners, donors, etc.

Attachments—please include the following attachments:

- Project Budget—Complete the Line Item Budget form, attached, listing project expenses by funding source. Also, include a budget narrative describing the elements of each expense line item. (Matching support: Grantees are required to provide matching funds at a ratio of $1 of support for each ARC grant dollar. This match may be provided as 'in-kind' from non-cash sources. Matching support may be provided from private sources, both for profit and non-profit, local and state government, philanthropies, educational institutions, federal agencies, and other partners.)
- Staff background—include resume of project leader and brief bios for key staff and contractors. Note estimated hours per week (FTE's) to be allocated to project activities for each staff member, contractor, and project leader.
- Timeline. Note key project milestones and outcomes. Activities supported by these grants are expected to be completed within 18 months of the award date.
- Map. Include a state map indicating the location of the proposed activities. Simple maps generated through internet providers (such as Yahoo, Google …) are acceptable. Project activities must occur within the ARC service region.

Note: Additional materials will be discarded.

For consideration, ten hardcopies of the response must be received at ARC offices by August 31, 2010. Please note, submitted materials will not be returned.

Submissions
Submit ten (10) hard copies of your proposal to:
Elaine Jackson, Program Operations Division
Appalachian Regional Commission
1666 Connecticut Ave, NW
Washington, DC 20009

ejackson@arc.gov
202/884-7750
Fax: 202/884-7691

One additional copy of the application should be sent to the appropriate ARC State Program Manager (address available at: www.arc.gov/about/StateProgramManagers.asp).

ARC Eligible Costs

ARC funding may be used for:

- Contractual costs for technical assistance for Community Energy Plan development and related activities.
- Purchase / licensing and implementation of renewable energy and energy efficiency curriculum and educational programming.
- Purchase and installation of renewable energy and energy efficiency equipment.
- Construction related costs. (Please note that ARC funded construction projects are subject to Davis-Bacon guidelines).
- Associated program costs, including: personnel, training and certification, travel, supplies and materials, and meeting expenses.

Who is eligible to apply?

Local government, economic development organizations, local and regional development districts, regional commissions, state government, nonprofit organizations, and public and non-profit educational institutions. Private for-profit organizations are not eligible to apply.

Selection Criteria:

An independent review panel will be convened to evaluate submissions. This panel will include leading energy efficiency and renewable energy organizations, federal, state and local partners. The review panel will forward recommendations to ARC for final approval.

Applications will be evaluated on several criteria, including:

- Feasibility of proposal: likelihood of achieving proposed outcomes within the grant period, including adoption and implementation of the Community Energy Plan. If Energy Project Implementation funding is requested, specific information regarding the proposed project is required. Applicants that propose to develop an Energy Implementation project subsequent to the adoption of the Community Energy Plan may not receive positive evaluations by the review panel.
- Capability of applicant: expertise in relevant program areas and in grants management. If consulting support is to be engaged, information regarding the relevant background of

selected consultants is requested. Applicants that propose to undertake a selection process to identify consultative support may not receive positive evaluations by the review panel.

- Level of community support, including support from local elected officials, senior planning and development staff, the business community, utilities, and local educational institutions. Overall level of match, including match from the private sector and government. A minimum match of 1:1 will be required and may be provided as 'in-kind' from non-cash sources.
- Articulation of clear, measurable outcomes, such as: the creation of new businesses, new jobs, renewable energy produced, energy conserved, anticipated number of teachers or students that will participate.
- Outreach activities focusing on disseminating or promoting the program.
- Sustainability of effort; ability to continue the activity upon conclusion of grant period.
- Distressed Counties and Areas, At Risk Counties. Additional consideration will be provided for projects focusing on ARC designated Distressed Counties and Areas, and At Risk Counties. Please visit: www.arc.gov/research/MapsofAppalachia.asp?MAP_ID=53, for a map of ARC Distressed and At Risk Counties.
- Collaboration. Additional consideration will be provided for projects that target two or more jurisdictions; municipalities, counties, etc.

Resources for Energy Programs and Planning.
These resources may be beneficial for the development of Community Energy Plans and related programs.

- US Department of Energy, Energy Efficiency and Renewable Energy
  The Solution Center
  www1.eere.energy.gov/wip/solutioncenter
  www.eere.energy.gov
- Community Energy Planning Tool
  Oregon Department of Energy
  www.oregon.gov/ENERGY/GBLWRM/docs/CommunityEnergyPlanningTool.pdf
- Energy Aware Planning Guide
  California Energy Commission
  www.energy.ca.gov/energy_aware_guide/index.html
- Climate Smart Communities: A Guide for Local Officials
  New York State Energy Research and Development Authority (NYSERDA)
  www.dec.ny.gov/docs/administration_pdf/cscguide.pdf
- A Renewable Energy Community: Key Elements
  U.S. Department of Energy, National Renewable Energy Lab
  www.nrel.gov/applying_technologies/pdfs/re_community.pdf
- Clean States Energy Alliance
  www.cleanenergystates.org/index.html

Technical Assistance Providers for Community Energy Plan Development
ARC recommends applicants contact their State Energy Office for local sources of technical support. Additional technical assistance providers active in the ARC region include:

- ICLEI—Local Governments for Sustainability. Cyrus Bhedwar, cyrus.bhedwar@iclei.org (works in southeastern U.S.)
- Southface Institute, Atlanta, GA. Robert Reed, Sustainable Communities Design Director, rreed@southface.org (works in southeastern U.S.)
- MACED, Mountain Association for Community Economic Development, Berea, KY. Elizabeth Graves, egraves@maced.org.
- NYSERDA, New York State Energy Office, www.nyserda.org
- Land of Sky Regional Council, Ashville, NC. Ron Townley, ron@landofsky.org
- Energy Services Program, Voinovich School, Ohio University, Athens, OH. Scott Miller, millers1@ohio.edu
- Pennsylvania Energy Partnership (contact Southern Alleghenies Planning Development Commission for local programs in your area. Brandon Carson, bcarson@sapdc.org, SAPDC, Altoona, PA)
- Southern Alliance for Clean Energy (SACE), Knoxville, TN. John Wilson wilson@cleanenergy.org, Sam Gomberg sam@cleanenergy.org (works in southeastern U.S.)

More information and resources on Energy Efficiency and Renewable Energy is available at:
www.arc.gov/program_areas/EnergyResources.asp

Appalachian Regional Commission
Community-Based Energy Projects: Planning and Implementation
2010

Cover Page

Project Title: _____

_____

Organization/Applicant: _____

Primary Contact: _____

Address: _____

_____

Email: _____

Phone: _____

Fax: _____

County (ies) served: _____

Grant Request: $_____

Appalachian Regional Commission
Community-Based Energy Projects: Planning and Implementation
2010

Project Budget
Line Item Budget

Expense	$ ARC Costs	$ Matching Costs*	$ Total
Personnel	_____	_____	_____
Benefits	_____	_____	_____
Travel	_____	_____	_____
Equipment	_____	_____	_____
Supplies	_____	_____	_____
Contractual	_____	_____	_____
Other	_____	_____	_____
Sub total	_____	_____	_____
Indirect	_____	_____	_____
Total	_____	_____	_____

* Sources of Matching Costs:

Source	$ Amount	Type (Cash, In-kind)
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

Total Matching Costs: _____

Please attach a budget narrative describing each expense line item, above.