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## Investments in Clean Energy, Biofuels Boost Energy Independence, Open Markets for Emerging Technologies

HARRISBURG (Jan. 29) – New investments in innovative clean energy and biofuels projects announced today by Governor Edward G. Rendell will accelerate Pennsylvania’s drive toward energy independence, expand markets for emerging technologies, and ultimately make them more affordable for families and businesses.

The Governor said the state’s support for 49 projects will leverage nearly four times as much in private investment, create jobs, clean the environment, and save consumers tens of millions of dollars a year in energy costs.

He added that making these kinds of investments is critical to helping Pennsylvania weather a challenging national economic downturn.

“These are difficult times for businesses to raise the capital needed to develop new products and processes, even for the renewable energy and biofuels industries that had been among the fastest growing globally just a few months ago,” said Governor Rendell. “And even though energy prices have subsided recently, we’ve seen how volatile these markets can be and how high energy prices can hurt an economy.

“We want to be sure Pennsylvania is doing everything it can to encourage energy conservation and efficiency, as well as the increased use of alternatives and renewables. Making this kind of investment today is even more crucial now if we’re to continue developing clean energy resources and growing the Keystone State’s green energy manufacturing industry. That way, we’re positioned to capitalize on increased demand once the economy improves.”

The grants announced today, which include \$7.2 million through the Energy Harvest program and \$6.5 million through the Alternative Fuels Incentive Grant program, will support projects in at least 25 counties and will leverage more than \$53.1 million in private investments. The projects are also expected to create at least 77 jobs.

Combined, the projects will reduce consumers’ energy costs by nearly \$46 million each year by saving:

- 25.1 million kilowatt hours of electricity or generating it from clean technologies, which is enough to power more than 2,500 homes in Pennsylvania;
- 250.1 million gallons of diesel or #2 heating oil; and
- 37,564 million British thermal units of natural gas.

The projects will also improve air quality by eliminating 239 tons of sulfur dioxide and

24,000 tons of nitrogen oxides—both precursors of smog and ground-level ozone—and reducing the greenhouse gas carbon dioxide emissions by 2.5 million tons.

“Developing homegrown sources of clean energy is essential to providing clean air so our most vulnerable citizens can breathe easier, to reducing the impacts of climate change, and to providing a competitive business environment that attracts entrepreneurs and jobs to our state,” said Environmental Protection acting Secretary John Hanger.

AFIG grants help support energy security by investing in companies that produce and market homegrown alternative fuels and biofuels, related infrastructure, as well as assisting consumers that purchase hybrid vehicles. Since Governor Rendell expanded the AFIG program in 2004, it has awarded almost \$24.3 million to 78 projects and leveraged \$173.3 million in investment commitments by public and private fleet operators, fuel providers and the federal government.

Energy Harvest promotes awareness and builds markets for cleaner or renewable energy technologies. Since Governor Rendell originated the program in 2003, Energy Harvest has invested nearly \$33.5 million and leveraged \$109.7 million in private investment commitments.

The programs are an integral part of Governor Rendell’s strategy to pursue Pennsylvania’s energy independence. Last year, the commonwealth built on its commitment to developing advanced energy resources and using energy more efficiently by enacting many parts of the Governor’s Energy Independence Strategy, including the \$650 million Alternative Energy Investment Fund, a biofuel mandate and incentive program that will help add 1 billion gallons of home grown alternative fuels to the state’s transportation supply, one of the most ambitious energy conservation mandates in the country, and a plan to mitigate the impacts of climate change.

These investments will spur as much as \$3.5 billion in new, private economic development projects from alternative energy companies and will create at least 10,000 good-paying jobs.

Despite this progress, Governor Rendell cautioned that more must be done to protect families and businesses from potentially devastating price spikes once electricity rate caps are lifted statewide beginning in 2011. He has repeatedly urged the General Assembly to make rate mitigation a priority in the current legislative session.

For more information, visit [www.depweb.state.pa.us](http://www.depweb.state.pa.us), keywords: Energy Harvest and Alternative Fuels Incentive Grant Program.

*EDITOR’S NOTE: The following is a list of Energy Harvest and Alternative Fuels Incentive Grants by county.*

## **ENERGY HARVEST**

### **Bedford County**

Community Foundation for the Alleghenies -- \$199,191 for the renovation of the Whispering Creek Renewable Energy Center environmental education facility to demonstrate the benefits of renewable energy generation and energy-efficient upgrades to an existing structure. The learning center will provide a location for hands-on demonstrations of wind, solar, biodiesel and geothermal technologies. It will also generate 5 permanent full-time jobs.

### **Berks County**

Berks County Community Foundation -- \$500,000 to incorporate energy-efficient technologies into the county's first LEED (Leadership in Energy and Environmental Design)-certified meeting facility. The project includes a rainwater collection cistern, radiant cooling and heating, an energy-saving elevator, natural roof covering, solar shading, bio-based insulation, insulated precast foundation walls and insulated wall and roof panels. The project will also be constructed on a redeveloped section of a blighted area. The project will create two full-time and two part-time jobs.

### **Blair County**

Southern Alleghenies Conservancy Inc. -- \$480,479 on behalf of Pleasant View Farms, for an anaerobic digester and electricity generation system. The system is expected to replace all of the farm's current annual electricity consumption and generate more than \$86,000 per year from the sale of excess electricity.

### **Cambria County**

Glendale School District -- \$350,000 for a biomass-fired boiler system that will be part of an expanded, system-wide set of improvements through energy service performance contracting. The made-in-Pennsylvania boiler will displace 45,800 gallons of #2 fuel oil per year, saving the district \$123,000 annually.

### **Carbon County**

Carbon County Redevelopment Authority -- \$500,000 for a 10-megawatt solar energy system on 100 acres of blighted land to be developed by Green Energy Capital Partners LLC. The project will create three permanent jobs and 65 temporary jobs. The array will offset more than 5,000 tons of carbon dioxide emissions per year from fossil-fueled power plants.

### **Chester County**

West Chester University -- \$252,840 to provide additional geothermal wells to an existing heating efficiency upgrade at West Chester State University. The project is anticipated to save 203,541 kilowatt hours of electricity and 16,008 million cubic feet of natural gas per year, saving \$210,850 and avoiding emissions of 1,170 tons of carbon dioxide.

### **Delaware County**

Township of Springfield -- \$97,500 for a 25.2 kilowatt, grid-tied solar energy system on the township building and library. The project is projected to generate 30,905 kilowatt hours per year, saving \$3,325 in electric costs and avoiding air pollution associated with smog and climate change.

**Erie County**

School District of the City of Erie -- \$112,778 for a 10-kilowatt solar energy system. The project will save \$1,086 annually and avoid air pollution associated with smog and climate change.

Edinboro University Foundation -- \$500,000 for a geothermal heating and cooling system in a student housing project. The housing unit is designed to achieve LEED certification and is expected to save more than 1.2 million kilowatt hours per year at a cost savings of more than \$100,000. Carbon dioxide emissions will be reduced by more than 785 tons annually and almost 2 million gallons of water will be diverted each year by not using cooling tower technologies.

**Indiana County**

Indiana County Conservation District -- \$46,950 to increase the generation capacity of the Brookside Dairy anaerobic digester from 80 kilowatts to 107 kW. The existing engine will be turbocharged to increase generation capacity by 30 percent and utilize the excess biogas produced.

**Lackawanna County**

Lackawanna River Basin Sewer Authority -- \$397,961 for two 65 kilowatt microturbines to generate electricity from unused anaerobic digester gas at a wastewater treatment plant. The microturbines are expected to generate more than 1 million kilowatt hours of electricity per year and save the authority \$130,497 per year in electricity and natural gas costs.

**Lancaster County**

Lancaster Family YMCA -- \$500,000 for the costs of designing and constructing a new facility to achieve LEED certification at the silver level. It is estimated that incorporating LEED design elements will lower electricity consumption by 450,000 kilowatt hours per year and save 2 million cubic feet of natural gas annually.

Lancaster County Career Technology Center -- \$91,100 for installation of energy efficient and renewable energy systems in a green home built by high school students with oversight and instruction of the faculty. The home's energy generation and conservation is expected to save \$1,800 per year and reduce air pollution.

Susquehanna Fire & Rescue Co. No. 4 -- \$226,310 for a solar energy system that is expected to generate 37,481 kilowatt hours of electricity per year and avoid air emissions associated with smog and climate change.

**Luzerne County**

Housing Authority of Luzerne County -- \$119,020 for a solar water heating system for an independent living facility for low-income senior residents. The project will save the facility \$3,600 annually and replace the equivalent of 35,922 kilowatt hours of electricity and conserve 174,300 gallons of water annually.

Citizens for Pennsylvania's Future -- \$300,000 to supplement a previous grant for the design and installation of a single 600 kW wind turbine at the Hazleton Authority Water

Department. This would be the first community-scale wind project deployed in Pennsylvania. The project is expected to produce more than 1.2 million kilowatt hours of electricity annually, and displace air and water pollution, including 960 tons per year of carbon dioxide. The system will be purchased and operated by Iberdrola Renewables, and will save the water authority \$393,585 over 20 years by providing them with a highly favorable cost of power.

### **Lycoming County**

East Lycoming School District -- \$338,230 for an automatic temperature control system, lighting retrofits, a 2.2 kilowatt solar energy system and two small wind turbines on various school buildings. The energy conservation and renewable energy generation is expected to save \$13,701 per year and avoid air emissions associated with smog and climate change.

### **Monroe County**

Northampton Community College -- \$500,000 to incorporate a geothermal heating system, wind turbine and solar energy equipment for the buildings at a new branch campus. The project will educate students, faculty and visitors to the benefits of energy efficiency and distributed power via digital information systems in each of the buildings. Project is expected to save 214,000 kilowatt hours of electricity and 59,000 gallons of heating oil annually at a savings of \$174,000. The project will avoid 588 tons of carbon dioxide and conserve 900,000 gallons of water annually.

### **Snyder County**

Snyder County Conservation District -- \$61,356 on behalf of Windview Farm for a manure combustion hot water boiler to heat poultry barns. The project will reduce the amount of manure that is land-applied by approximately 500 tons annually, resulting in better nutrient management and reduction of phosphorous into the Chesapeake Bay watershed by 17.85 tons annually. The project will save the farm approximately \$30,000 in annual fuel costs.

### **Tioga County**

Babb Creek Watershed Association, Inc. -- \$428,710 for a 53 kilowatt microhydro turbine on the discharge side of the Antrim acid mine drainage treatment plant. Expected generation is 460,000 kilowatt hours per year. The Antrim treatment plant will receive a large portion of the power, saving it \$9,400 annually, with excess to be sold, generating \$17,300 annually. The plant treats 1,800 gallons per minute of acidic mine drainage, one of the state's most difficult environmental challenges.

### **Washington County**

Pennsylvania Trolley Museum Inc. -- \$271,391 to install 36 kilowatt solar energy system. The system is expected to produce 44,150 kilowatt hours of electricity annually, avoid air pollution associated with smog and climate change, and conserve approximately 214,200 gallons of water.

### **Westmoreland County**

Municipal Authority of Westmoreland County -- \$232,500 for a 30 kilowatt hydro turbine and generator at the Beaver Run release. The project will save approximately 262,800 kilowatt hours of electricity, saving \$32,800 annually and reducing air emissions associated with

smog and climate change.

Loyalhanna Watershed Association Inc. -- \$128,266 for a microhydro turbine and generator to power an acid mine drainage treatment system and lighting at the Latrobe wastewater treatment plant. It will enable a pilot treatment plant to remove 10-15 tons of iron oxide sludge per year and save more than 16,000 kilowatt hours of electricity annually.

### **York County**

York City School District -- \$500,000 for the renovation of Ferguson Elementary School to achieve LEED certification at the gold level. Innovative technologies include geexchange systems, day lighting and water-saving features. The project will save \$162,934 in electricity costs annually and avoid 1,775 tons of carbon dioxide.

### **Multiple counties**

SmartPower -- \$56,250 to support marketing of SmartPower's "Pennsylvania Clean Energy Communities Campaign." The campaign provides solar systems as an incentive to communities who commit to purchasing 20 percent green power by 2010 and who sign up a minimum number of citizens to become clean energy customers. The grant will provide five additional 1 kW solar photovoltaic systems.

## **ALTERNATIVE FUELS INCENTIVE GRANTS**

### **Allegheny County**

Thar Process Inc. -- \$588,000 for a demonstration project to produce ethanol without distillation. The process uses pressurized propane to extract ethanol, potentially cutting production costs by one-third.

Advance Materials Corp. -- \$171,772 to develop high-efficiency motors and controllers for electric vehicles.

Pittsburgh Region Clean Cities -- \$166,695 for biofuels storage and dispensation infrastructure to serve regional fleets.

### **Berks County**

East Penn Manufacturing Co. Inc. -- \$176,900 to retrofit a 40-vehicle fleet with auxiliary idle reduction systems. The project will save over \$234,960 in fuel costs annually and more than 52,000 gallons of diesel fuel.

### **Centre County**

Matson and Associates Inc. -- \$120,000 to demonstrate the effectiveness of several catalysts in processing of alternative, lower-cost biodiesel feedstocks.

Penn State University -- \$160,959 for students to develop a production-quality hybrid vehicle to compete in the national Advanced Vehicle Technology Competition. The PSU team will re-engineer a vehicle to increase fuel economy and reduce greenhouse gas emissions while retaining the vehicle's performance and consumer appeal.

**Chester County**

Tredyffrin-Easttown School District -- \$56,979 to buy-down the incremental costs of biodiesel blended fuel and to clean a storage tank for holding and dispensing the biofuel. The project will displace the use of 73,000 gallons of petrodiesel.

Great Valley School District -- \$36,166 to buy-down the incremental costs of biodiesel blended fuel. The project will displace the use of 52,000 gallons of petrodiesel.

Owen J. Roberts School District -- \$36,400 to buy-down the incremental costs of biodiesel blended fuel. The project will displace the use of 52,000 gallons of petrodiesel.

West Chester University -- \$4,800 to buy-down the incremental costs of biodiesel blended fuel. The project will displace the use of 19,000 gallons of petrodiesel.

**Dauphin County**

Middletown Biofuels LLC -- \$654,845 to demonstrate pretreatment of alternative biodiesel feedstocks using controlled flow cavitation technology. This will potentially lower production costs and improve grantee's competitive position relative to out-of-state producers. The project will generate almost 4.6 million gallons of biodiesel annually, reducing greenhouse gas emissions by up to 9,950 tons per year.

**Delaware County**

Radnor Township School District -- \$12,788 to buy-down the incremental costs of biodiesel blended fuel.

**Erie County**

Erie Regional Airport Authority -- \$45,750 for preconditioned air units at the Erie International Airport. The PCAs will replace present auxiliary power units that avoid use of aircraft engines to supply heated or cooled air and electric power for parked planes. The PCAs will save 15,000 gallons of jet fuel and reduce emissions in an ozone non-attainment area.

**Lawrence County**

Axion Power Battery Manufacturing Inc. -- \$799,932 to demonstrate the application of cost-effective, advanced lead acid batteries in hybrid electric vehicles, plug-in hybrid electric vehicles and battery electric vehicles for use in commuter, delivery and other vehicle applications.

**Montgomery County**

Montgomery County Intermediate Unit #23 -- \$42,132 to buy-down the incremental costs of biodiesel blended fuel. The project will displace the use of 381,489 gallons of petrodiesel.

**Philadelphia County**

US Airways Inc. -- \$321,680 to convert ground support equipment fleet at Philadelphia International Airport to run on electricity rather than fossil fuels. The project will save more than 91,000 gallons of fuel annually and avoid emissions almost 40,000 pounds of nitrogen oxide and 1,000 tons of carbon dioxide.

City of Philadelphia -- \$296,650 for rechargers for the electric ground support fleet at Philadelphia International Airport, in coordination with the US Airways project.

Temple University -- \$255,443 to develop an improved electric hybrid/ fuel cell vehicle capable of extended range and load.

City of Philadelphia, Office of Fleet Management -- \$150,000 for 15 compressed natural gas-powered trash trucks to replace standard diesel trucks. The project will displace 190,000 gallons of petrodiesel fuel a year.

City of Philadelphia, Office of Fleet Management -- \$131,100 to buy down the incremental cost of biodiesel blended fuel. The project will displace the use of 500,000 gallons of petrodiesel.

Philadelphia Academies, Inc. -- \$267,100 for students of the West Philadelphia High School's Academy of Automotive and Mechanical Engineering to participate in the Automotive X Prize Competition. The goals are to develop cost-effective designs that appreciably improve fuel efficiency while demonstrating the commercial production viability of alternative vehicles.

### **York County**

Ettline Foods Corp. -- \$812,610 to retrofit two collection tank trucks to run on straight vegetable oil and for two storage tanks. The tankers will collect waste vegetable oil from 750 of Ettline's customers and deliver it to a processor for conversion to SVO. The project will save more than 700,000 gallons of diesel fuel annually and avoid more than 495 tons of carbon dioxide emissions.

### **Multiple counties**

Alloy Surfaces Co. Inc. -- \$993,654 for development of a hydrogen plant module that is capable of producing fuel onboard a vehicle. The project is a collaboration between Alloy Surfaces Company, Inc. and Penn State University. The project includes a comprehensive analysis of the energy and emissions impact of the HPM and vehicle.

Energy Cooperative Association of Pennsylvania -- \$170,850 to buy down the incremental cost of 240,000 gallons biodiesel blended fuel for use by six municipalities and school districts.