

**EmPOWERing Maryland**

**Clean Energy Programs**

**FY 2010**

**EXECUTIVE SUMMARY**

The Maryland Energy Administration (MEA) has developed a four-pronged approach to promote affordable, reliable and clean energy using monies from the federal American Recovery and Reinvestment Act (ARRA) and the state Strategic Energy Investment Fund (SEIF). Specifically, MEA will offer incentives and resources directly to Maryland consumers, businesses and communities to (1) expand energy efficiency, (2) promote renewable generation, (3) finance clean energy innovation; and (4) provide consumers energy information. As part of Governor’s O’Malley “Smart, Green and Growing” initiative, these programs will help reduce household bills, create new green collar jobs, address global climate change, and promote energy independence.

In total, by leveraging federal, state, and private investments, the investments made by MEA and its partners this fiscal year will save Maryland families and businesses over $370 million on energy costs over the life of the investments, create over 560 new green collar jobs, and reduce CO2 emissions by over 2,000,000 tons, which is equivalent to taking nearly 360,000 cars off the road.

During this fiscal year, for example, MEA announced plans to:

* provide energy retrofits for more than 2,750 low and moderate income families,
* issue renewable energy grants to an estimated 1,700 Marylanders for solar, wind and geothermal systems at their homes,
* initiate a new low interest loan program for home energy audits and makeovers for all residential and commercial customers,
* expand programs for green collar job training,
* create incentives for energy retrofits by commercial and industrial customers, as well as farmers; and
* spread Clean Energy Communities by providing millions in grants and loans to counties and municipalities for energy efficiency and renewable projects.

MEA also plans to launch or expand programs to lead Maryland by example by providing zero interest loans to state agencies for energy efficiency and renewable energy projects, encouraging the use of alternative transportation fuels, and promoting commercial scale renewable development. These investments will save each year an estimated 70,000 MWh of electricity, produce over 20,000 MWh of renewable energy and displace 2.4 million gallons of conventional gasoline.

**Goal 1 - Expand Energy Efficiency**

**A. Multi-Family Housing Retrofits for Low and Moderate Income Families**

**Budget:** $ 7.5 Million (ARRA)

$ 3.0 Million (SEIF)

$10.5 Million (Total)

A significant portion of low and moderate income families are renters, yet apartments and condominiums have not been included in the traditional weatherization programs. In coordination with the Department of Housing and Community Development (DHCD) and housing nonprofit organizations, MEA will conduct energy efficiency retrofits in approximately 2,750 apartment units to reduce energy bills for low and moderate income families.

**Beneficiaries**

Residential customers in multi-family buildings who are responsible for their utility bill, particularly low and moderate income Maryland residents.

**The Way it Works**

The program focuses primarily on apartment buildings undergoing significant rehabilitation efforts as well as properties needing energy efficiency upgrades. Some new construction projects may also be served. Recruitment of potential buildings will be conducted through DCHD and other existing state and local affordable housing agencies, utilities and building management associations. MEA will leverage funds with DHCD to pay a portion of incremental cost for energy efficiency measures for new or rehabilitated multifamily buildings already under going DHCD rehabilitation.

**FY 09 Accomplishments**

This is a new program to be launched in FY10

**Return on Investment**

The investment in this program will yield almost $1.75 million in direct energy savings to consumers. Energy savings from this project will typically range from 15 to 25 percent per housing unit or complex. In addition to reducing monthly energy bills for thousands of families, this program would help create an estimated 130 energy rehabilitation jobs.

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| **Program Goal** | **Projected Results** |
| Annual reduction in energy consumption | 12,000 MWh equivalent |
| Savings equivalent to the energy consumption of X number of MD homes per year | 700 homes |
| Direct energy cost savings | $1,750,000 per year |
| Carbon Dioxide Emissions Avoided | 11,000 Tons |
| Equivalent to cars off the road | 1,850 cars |

**B. Industrial/Commercial Loans and Grants**

**Budget:** $3.75 million ARRA($2.75 million in loans, $1 million in grants)

$1.35 million SEIF ($1.35 million in grants)

$5.1 million (Total)

The industrial/commercial sector represents approximately 30% of electricity consumption in Maryland. MEA will reach out to this market sector by providing financial assistance to help Maryland businesses and institutions implement energy efficiency upgrades.

**Beneficiaries**

Large commercial, industrial and institutional consumers that undertake upgrades to improve energy efficiency.

**The Way It Works**

**Loans:** Using the existing Jane Lawton Conservation loan program, MEA will offer a low interest rate revolving loan program to help finance the cost of energy efficiency projects. By operating this program as a revolving loan fund, MEA will ensure that financial assistance is available for commercial, industrial, and institutional energy efficiency projects in future years as well.

**Leading Edge Technology Grant Program:** MEA will offer a new grant program designed to encourage the deployment of proven technology, but in new or additional applications promising non-commercialized technologies to Maryland businesses and institutions. Through the EmPOWER Maryland initiative, the electric utilities are offering programs that incentivize the most cost effective energy efficiency measures for commercial, industrial, and institutional customers. MEA will use the Leading Edge Technology Program to evaluate the application of proven technologies for non-commercialized technologies (such as LED lighting for commercial applications) that are currently not receiving funding through the EmPOWER Maryland utility programs.

**Energy Assessments:** To complement the EmPOWER Maryland programs offered through electric utilities and cooperatives, MEA has designed the Commercial and Industrial Energy Assessment Program to meet to needs of commercial and industrial customers not being served through existing EmPOWER Maryland programs.  MEA will partner with the Maryland Technology Extension Service (MTES) to provide energy assessment services to these customers.  The energy assessment services will include a site visit by MTES to evaluate energy use at the commercial or industrial facility, identify opportunities for energy efficiency improvements, and report the assessment findings and recommendations. 

**FY 09 Accomplishments**

This is a new program to be launched in FY10

**Return on Investment**

MEA will utilize the authority in the Lawton Loan Program to offer commercial enterprises loans for energy efficiency programs. The grant program will utilize the expertise of an energy consulting or energy contractor to implement the Leading Edge Technology Program. The program will make energy efficiency projects economically attractive in comparison to other investments. Programs that incentivize the most cost effective energy efficiency measures for commercial, industrial, and institutional customers will see significant energy savings of almost 100,000 MMBTUs and will create almost 80 jobs in the industry.

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| **Program Goal** | **Projected Results** |
| Annual reduction in energy consumption | 8,000 MWh equivalent |
| Savings equivalent to the energy consumption of X number of MD homes per year | 450 homes |
| Direct energy cost savings | $1,000,000 per year |
| Carbon Dioxide Emissions Avoided | 7,000 Tons |
| Equivalent to cars off the road | 1,200 cars |

**C. State Agency Loan Program (SALP)**

**Budget:** $3.65 million (ARRA)

$1.25 million (Revolving SALP loan Applications)

$4.90 million

SALP is a revolving loan program administered by MEA. To assist the state in leading by example, MEA plans to expand SALP, which provides zero interest loans to state agencies for energy efficiency improvements.

**Beneficiaries**

State agencies implementing projects to reduce energy consumption

**The Way It Works**

MEA will continue to administer an expanded SALP program. The additional funding through ARRA will enable Maryland to initiate additional projects to further reduce state energy consumption during fiscal year 2010. State agencies pay zero percent interest on the loan and a one percent administration fee. The majority of funds will be linked with Energy Performance Contracts (EPCs) developed by state agencies in coordination with the Department of General Services and MEA. Up to 20% of the funds will be available through a MEA solicitation process for smaller energy projects for which the EPC process is not appropriate.

**FY 09 Accomplishments**

In FY 2009 MEA provided $1.8 million in new loans. Since 1991, the program has issued 61 loans totaling $16,535,262. The estimated annual savings of these loans to taxpayers is $2,757,000 thus far, with cumulative savings of $20,186,000.

**Return on Investment**

Funding in FY 10 will create more than 50 jobs and save almost 80,000 MMBTUs. The cumulative energy cost savings from loans made in FY 2010 is projected to be over $6.5 million and will save a combined estimate of 110,000 MWh of electricity.

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| **Program Goal** | **Projected Results** |
| Annual reduction in energy consumption | 7,000 MWh equivalent |
| Savings equivalent to the energy consumption of X number of MD homes per year | 400 homes |
| Direct energy cost savings | $875,000 per year |
| Carbon Dioxide Emissions Avoided | 6,000 tons |
| Equivalent to cars off the road | 1,000 cars |

**D. EmPOWERing Clean Energy Communities**

**Budget:** $9.59 million (EECBG, total for 3 years)

$0.40 million (SEP-ARRA for Renewables)

$3.4 million (SEIF funds for low and moderate income community grants)

$1.00 million (SEIF funds for non-profits community loans)

$1.75 million (FY10 revolving Lawton loan appropriations)

$16.14million (Total)

Through the Energy Efficiency and Conservation Block Grant program (EECBG), DOE is providing $9.5 million to MEA to act as the coordination and distribution agent within Maryland for these additional funds. These funds will go to smaller communities that are not receiving direct funding through the U.S. DOE.

**Beneficiaries**

Maryland jurisdictions, particularly those that did not receive direct funding from DOE.

**The Way it Works**

The EECBG funds will be distributed on a population based formula. MEA must distribute at least 60% of the funds to the counties and cities that did not receive the direct funding from DOE. MEA is working with MACO and MML to devise a population-based formula to distribute the EECBG funds to communities that did not otherwise receive DOE funds. MEA’s implementation strategy is due to US DOE in late June. In addition, MEA has hired a consultant to prepare a best practice guide to help communities implement energy efficiency and renewable energy initiatives and another to offer assistance to communities in program design and implementation.

**FY 09 Accomplishments**

EMPOWERing Clean Energy Communities is providing $8.2 million in grant and loans to local governments and non-profits. The majority of the grants through these entities provide funding to persons with low to moderate incomes to assist the financing of energy efficient measures. These entities are the best to serve their communities and best understand the needs specific to that community. Currently, $3.5 million is being awarded through a competitive grant process to these entities. The FY 09 grant of $3.5 million served nearly 20 local jurisdictions and nonprofits, saving almost 13 million kWh statewide.

**Return on Investment**

The funds will assist consumers in Maryland by providing additional grants for projects that would be cost-prohibitive without those funds. Based on the highly successful EmPOWERing Clean Energy Communities, MEA will also issue a request for proposals to local governments and nonprofits for renewable and energy efficiency projects using non-ARRA funds. Through this program almost 150 jobs will be created and over 230,000 MMBTU will be saved.

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| **Program Goal** | **Projected Results** |
| Annual reduction in energy consumption | 20,000 MWh equivalent |
| Savings equivalent to the energy consumption of X number of MD homes per year | 1,140 homes |
| Direct energy cost savings | $2,500,000 per year |
| Carbon Dioxide Emissions Avoided | 18,000 tons |
| Equivalent to cars off the road | More than 3,000 cars |

**E. Farm Energy Technical Assistance & Incentives**

**Budget:** $500,000 (SEIF)

Maryland’s 12,000 farms spent about $26 million on electricity in 2008. In 1997, the most recent year for which itemized data are available, Maryland farms spent about $33 million on petroleum products, gasoline, diesel fuel, natural gas, LP gas, kerosene, fuel oil, and other fuels. This statewide project will provide energy assessments to Maryland farms, and will offer cash rebates for the installation of qualifying farm energy efficiency measures. This project is the extension of the successful Maryland Farm Energy Site Assessment Program, Phases I and II, which were funded in part by MEA.

**Beneficiaries**

Rural Marylanders and all Maryland farms.

**The Way it Works**

This statewide program will have a two-tiered approach to capture energy savings for Maryland agricultural producers. Tier 1 will offer technical assistance and/or rebates on energy efficient equipment. Tier 2 will offer farm energy assessments to qualifying producers who have substantial potential energy savings, and/or rebates on energy efficient equipment. Services offered will include technical assistance, energy assessments, and rebates. All Maryland farms that use a minimum of 10,000 kWh per year will be eligible to receive technical assistance; all Maryland farms will be able to receive rebates provided their project meets a minimum energy savings threshold. Energy assessments will be reserved for farms that have higher energy use and/or higher energy savings potential, and are committed to installing measures as a result of the assessment.

**Program History and FY 09 Accomplishments**

The 2006 Maryland Farm Energy Site Assessment Program, Phase I, provided 25 energy assessment reports to producers on the Eastern Shore. These 25 farms were primarily poultry operations, and the scope was limited to farmers who had requested energy assessments through the Federal Conservation Security Program (CSP). The Phase I program identified energy savings and production benefits of 471,700 kWh and 46,000 gallons of propane. Together, these savings represent $115,000 in annual energy cost savings and $319,800 in annual production benefits.

Phase II of the Program began in April 2007 with a goal of 50 assessments to be completed in Western Maryland. $50,000 in incentive funds are available for Phase I and Phase II producers who implement measures as a result of the energy assessments. The program has delivered all 50 assessments to producers and is in the process of completing follow-up interviews with the producers. To date, Phase II has identified 1.5 million kWh and 17,000 gallons of propane savings. These two programs have developed a successful, partnership-based infrastructure to deliver energy efficiency to an often-overlooked sector of the economy. The statewide program will build upon the success of its predecessors to identify and deliver energy savings to Maryland agriculture.

**Return on Investment**

This program will address energy efficiency in all fuels, meaning these rural Marylanders will be able to reduce the energy uses that are most important to them. Since 2006, energy assessments have been provided for 75 Maryland farms. As of October 2008, several farms have installed the recommended measures, leading to actual energy savings. Together, Phases I and II have identified nearly 2 million kWh savings, and over 63,000 gallons of propane savings.

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| **Program Goal** | **Projected Results** |
| Annual reduction in energy consumption | 2,400 MWh equivalent |
| Savings equivalent to the energy consumption of X number of MD homes per year | 140 homes |
| Direct energy cost savings | $250,000 per year |
| Carbon Dioxide Emissions Avoided | 2,100 tons |
| Equivalent to cars off the road | 350 cars |

**Goal 2 - Promote Renewables**

**A. Residential Renewable Energy Grants**

**Budget:** $4.3 million (ARRA)

$1.5 million (SEIF)

$5.8 million (Total)

Maryland residents understand that residential solar, geothermal and wind can significantly reduce their energy bills and reduce the state’s carbon footprint. Soaring demand for MEA’s grant program has resulted in hundreds of Maryland households still remaining on the wait list for a solar, geothermal or residential wind grant. Using these funds, MEA will help over 1,600 households take control of their energy future by putting a renewable system on their home.

**Beneficiaries**

All Marylanders that can install a small renewable energy system on their home.

**The Way It Works**

MEA will use ARRA funds to supplement existing grant programs in order to serve the people currently on the waiting list and additional applications as they come forward. Contractors market the program heavily and demand for renewable grants is high.

**FY 09 Accomplishments**

MEA’s residential renewable energy grants program has proved extremely popular in FY 09 having received a combined 750 applications. In FY 09, MEA awarded over $2.7 million in renewable grants.

**Return on Investment**

This program will increase the supply of renewable energy products on Maryland homes. The grants will help create 65 jobs and save over 70,000 MMBTUs annually.

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| **Program Goal** | **Projected Results** |
| Annual reduction in energy consumption | 6,000 MWh |
| Savings equivalent to the energy consumption of X number of MD homes per year | 350 homes |
| Direct energy cost savings | $900,000 per year |
| Carbon Dioxide Emissions Avoided | 5,300 tons |
| Equivalent to cars off the road | 880 cars |

**B. Renewables on Commercial and Government Buildings**

**Budget:** $3.5 million (ARRA)

The grant program provides financial incentives for the installation of small renewable energy systems in Maryland businesses and government buildings.

**Beneficiaries**

All Maryland businesses and government entities that have the ability to install small renewable energy systems.

**The Way It Works**

MEA will provide support for midsize renewable energy installations (i.e. greater than 10kW up to 100 kW) at commercial and government buildings. For government buildings, for example, MEA will work with the Department of General Services (DGS) to install solar and other renewables on state buildings, perhaps by buying down the rate of a long term PPA. MEA is also considering a per kilowatt incentive program to promote commercial scale development.

**FY 09 Accomplishments**

This is a new program to be launched in FY10

**Return on Investment**

These renewable energy systems reduce the need to get electricity from the grid. They provide price stability, alleviate congestion on the grid, and are a reliable source of pollution-free energy. The program will create about 40 jobs and save over 150,000 MMBTUs

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| **Program Goal** | **Projected Results** |
| Annual reduction in energy consumption | 13,000 MWh equivalent |
| Savings equivalent to the energy consumption of X number of MD homes per year | 740 homes |
| Direct energy cost savings | $1,600,000 per year |
| Carbon Dioxide Emissions Avoided | 11,500 tons |
| Equivalent to cars off the road | 1,900 cars |

**C. Alternative Transportation Fuel and Infrastructure Grants:**

**Budget:** $0.9 million (SEIF)

$0.6 million (ARRA)

$0.012 million (Clean Cities-DOE)

$1.5 million (Total)

The transportation sector is responsible for 30 percent of Maryland’s greenhouse gas emissions. Existing and new technologies will help us meet our transportation needs while also reducing these emissions. Alternative fuels for use in transportation play a critical part in advancing Maryland’s sustainability and energy independence goals. MEA commissioned a study that identified fuels, electric hybrids, and consumer behavior programs as the three top areas with the greatest potential to reduce emissions from this sector in Maryland. MEA plans to expand the existing alternative fuel grant program by providing grants to local governments and businesses that are focusing on these three strategic areas.

**Beneficiaries**

Local governments, fuel providers, service station owners, project developers and other businesses.

**The Way It Works**

MEA plans to build upon its previous program, which provided grants to offset the costs of building 13 E85 stations, as well as two biodiesel terminals. MEA is seeking external expertise to provide specialized knowledge that will provide strategy options and associated interventions with the goal of achieving market transformational results. MEA will administer competitive grants to local governments, businesses and nonprofits. Projects will be selected based on greenhouse gas emissions reduction, petroleum and fossil fuel replacement potential and the project’s ability to support state goals and policies.

**FY 09 Accomplishments**

Eleven projects have been funded through this program in FY 09. Projects funded include the purchase of electric vehicles and hybrid trucks, the establishment of a fuel fund, installing two E85 and biodiesel fueling pumps, and the installation of biodiesel production and collection equipment. A total of $171,133 was disbursed for these eleven projects, displacing an estimated 1.6 million gallons of fossil fuel per year.

**Return on Investment**

The program will reduce greenhouse gas emissions and petroleum/fossil fuel consumption. It will also increase energy security and stimulate the economy. Almost 300,000 MMBTUs will be saved annually.

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| **Program Goal** | **Projected Results** |
| Gallons of conventional gasoline saved | 2,232,000 gallons |
| Savings equivalent to the energy consumption of X number of MD homes per year | 1,370 homes |
| Carbon Dioxide Emissions Avoided | 21,500 tons |
| Equivalent to cars off the road | More than 3,500 cars |

**D. Generating Clean Horizons**

The “Generating Clean Horizons” initiative will jump start commercial scale renewable generation in Maryland. This will be achieved through a long-term power purchase agreement for new generation in Maryland. Partners include MEA, DGS, the State of Maryland, the University System of Maryland, or interested County and local governments. Overall expenditure of state funds will be determined by scope and terms of contracts as well as any involvement of additional power purchasers.

**Beneficiaries**

Renewable energy generators, counterparties throughout the State of Maryland, including counties and local governments who require renewable energy, and students of the University Maryland System who have supported the use of renewable energy. Counterparties would benefit from the PPA by reducing their carbon footprint associated with electricity production, while state and local benefits could extend to improved electricity reliability and increased local commerce.

**The Way It Works**

The University System of Maryland (USM), through The University of Maryland, College Park is working jointly with the State of Maryland to solicit proposals from clean energy projects for a long-term, power purchase agreement (PPA.) A Request for Expressions of Interest (REOI) was issued, and there are a number of projects in Maryland and adjoining states that may be able to move forward with a long term PPA from credit worthy counterparties such as USM and state agencies, as well as Maryland counties, cities and municipalities and other institutions of higher education. Most renewable projects will require a minimum term of 15 years, with some as long as 20 years.

Following any awards by the state, it is expected that other entities including state counties, cities and municipalities as well institutions of higher education will participate in the contract. These entities will need to execute their own separate agreements, however this can be as simple as agreeing to all of the same terms and conditions as in the state contract, or entities may need to add an addendum with some additional terms and conditions outside of the state contract. Awarded projects will be asked to hold their pricing for 90 days up to a maximum project capacity. It is likely that other contracting entities may only want to award to one project selected by the state. This should be acceptable to the projects assuming that their minimum contract capacity is met by the initial state commitment. It is anticipated that there may be pricing blocks, so that pricing would drop if more of the project is committed through subsequent. This agreement has the potential to contract volumes approaching 100-200MW.

**FY 09 Accomplishments**

A Request for Proposals was drafted and issued on February 11, 2009. All proposals were due by July 7, 2009. Currently, proposals are being reviewed.

**Return on Investment**

This initiative will serve as a unique opportunity for state, county and local governments to partner with Maryland’s academic institutions in the purchase of renewable energy. By combining purchasing power, this effort presents a tremendous opportunity for generators to develop and market new clean energy generation capacity with stable pricing. Counterparties would benefit from the PPA by reducing their carbon footprint associated with electricity production, while state and local benefits could extend to improved electricity reliability and increased local commerce.

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| **Program Goal** | **Projected Results** |
| Projected annual renewable energy generation | 1,500,000 MWh equivalent |
| Annual renewable generation equivalent to energy need of MD homes | 85,000 homes |
| Carbon Dioxide Emissions Avoided | 1,300,000 tons |
| Equivalent to cars off the road | 224,000 cars |

**E. Off-Shore Wind**

**Budget:** This initiative is primarily directed at facilitating partnership between commercial offshore wind developers and utilities. While some expenditure of MEA funds may be required to provide data collection and resource assessment support for development of offshore wind energy resources, ultimate development of these resources will not involve MEA funding.

**Beneficiaries:** All Marylanders will enjoy the environmental and public health benefits associated with large-scale renewable energy development. The State will be able to take advantage of the rate stability, domestic REC production and grid congestion relief offshore wind energy would offer. Finally, the business community of Maryland would benefit from the significant economic development benefits of offshore wind development.

**The Way It Works:** MEA is working in coordination with state energy offices in Delaware and Virginia to determine the most productive method of assessing coastal resources in the Atlantic Ocean. The Nature Conservancy, under an agreement with the Department of Natural Resources is performing significant mapping and evaluation of ecosystem and habitat data. The Environmental Law Institute, also under contract with DNR is reviewing the legislative and regulatory framework for development of offshore wind energy resources.

MEA is also collaborating with the Mid-Atlantic Regional Council on Oceans (MARCO) to develop a regionally consistent approach to developing these resources. Ultimately, MEA plans to work closely with the federal Minerals Management Service, the Public Service Commission and developers to facilitate a commercial lease and Power Purchase Agreement (PPA) for installation of offshore wind turbines.

This overall framework reflects a four-part strategy to create a suitable environment for developers to generate renewable energy from offshore wind:

* 1. Determine siting possibilities – assembling existing data within the state, identify gaps and issue RFP to fill the gaps.
  2. Request Expressions of Interest for developing Maryland’s off-shore wind
  3. Initiate an out-reach program for citizen knowledge and acceptance, utilizing academic institutions
  4. Facilitate financially viable framework to attract off-shore wind developers

**Return on Investment:** Offshore wind has the potential to supply more renewable energy than any other resource in the region. The wind resource available in the Mid-Atlantic region surpasses that found in the areas of the Midwest that have seen rapid wind energy development. If Maryland is able to successfully harness these resources, the State will be able to satisfy its Renewable Portfolio Standard (RPS) requirements and benefit from the growing Renewable Energy Credit (REC) market.

**FY 09 Accomplishments**: MEA Staff attended the 2009 European Wind Energy Conference as well as a Marine Technology Society Seminar and gathered information on offshore wind energy industry trends and practices. Additionally, MEA conferred with DNR, PPRP, MARCO and Maryland Geological Survey to discuss gaps in data that can be addressed through a resource assessment study.

**Goal 3 – Financing Clean Energy Innovation**

**A. EmPOWERing Financing (EF) initiative:**

**Budget:** $2.0 million (ARRA Loans)

$2.0 million (ARRA Grants)

$4.0 million (Total)

The EmPOWERing Financing (EF) initiative will leverage public funds with private capital to offer local governments a voluntary clean energy loan program for their citizens.

**Beneficiaries**

Maryland families and small commercial businesses that invest in energy efficiency and renewable energy systems.

**The Way It Works**

Based on the EZ Annapolis and the Montgomery County Home Energy Loan Program (HELP), the EF initiative will offer localities a program whereby interested Marylanders could voluntarily obtain a clean energy loan secured through the locality (e.g., collected on water bills, property taxes, etc). MEA will partner with a state-wide non-profit such as the Maryland Clean Energy Center to create a “program in a box” that enables municipalities to offer energy efficiency and renewable energy financing quickly and effectively. This “program in a box” will include: model local ordinances, standard contracts, development for software to assist with the application process, and marketing concepts.

**FY 09 Accomplishments**

This is a new program to be launched in FY10

**Return on Investment**

By helping to overcome the longstanding barrier imposed by the upfront costs associated with clean energy investments, this innovative financing program will enable Maryland families and small commercial businesses to invest in energy efficiency and renewable energy systems. Over 70,000 MMBTU will be saved through this program.

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| **Program Goal** | **Projected Results** |
| Annual reduction in energy consumption | 6,000 MWh equivalent |
| Savings equivalent to the energy consumption of X number of MD homes per year | 350 homes |
| Direct energy cost savings | $900,000 per year |
| Carbon Dioxide Emissions Avoided | 5,300 tons |
| Equivalent to cars off the road | 880 cars |

**B. Clean Energy Economic Development Initiatives**

**Budget:** $5.943 Million (ARRA)

As Maryland moves to quickly build a vibrant clean energy sector and strives to create 100,000 “green-collar” jobs by 2015, the Maryland Energy Administration (MEA) has created the Clean Energy Economic Development Initiative (CEEDI) Support Program to assist in the growth of a clean energy industry throughout the State. In partnership with the Department of Business and Economic Development (DBED) and the Maryland Clean Energy Center (MCEC), MEA will aggressively seek to expand and attract emerging clean energy companies, such as thin film solar and wind turbine manufacturers, by providing economic development loans and grants.

**Beneficiaries**

Maryland businesses looking to grow or expand their clean energy business.

**The Way It Works**

To implement this program, MEA plans to partner with DBED's Maryland Economic Development Assistance Fund and Maryland Industrial Development Finance Authority, as well as MCEC programs. Furthermore, MEA plans to extend the attraction to manufacturers of components within the clean energy supply chain for all clean energy technologies used within the state and region.

**FY 09 Accomplishments**

This is a new program to be launched in FY10

**Return on Investment**

The program will significantly increase the number of clean energy businesses, particularly those that manufacture clean energy products, services and materials. MEA estimates that as many as 1,370 new jobs could be created as a result of this program.

**C. Clean Energy Job Training and Building Code Technical Assistance**

**Budget:** $0.75 million (SEIF – workforce training)

$0.75 million (ARRA- workforce training)

$0.5 million (ARRA – building codes training)

$2.0 million (Total)

The ARRA funding provides states with building code technical assistance to assist jurisdictions in becoming 90 percent energy code compliant. In addition, job training dollars are provided for by ARRA. MEA will develop programs to assist with code compliance and will partner with state agencies and academic institutions to provide job training in the clean energy field.

**Beneficiaries**

Maryland jurisdictions, businesses and job seekers.

**The Way It Works**

**Training:** Funds will be used to provide job training to assist the green businesses that are supporting the energy efficiency and renewable initiatives. MEA will work as appropriate, with DHCD, DLLR, GWIB, community colleges, universities and the Maryland Clean Energy Center to provide technical and business training.

**Energy Codes:** In coordination with the Building Codes office of the Department of Housing and Community Development, MEA will develop a series of strategies to ensure 90 percent code compliance by county and city planning offices. This will be achieved through mentoring and training, and advanced training and technical assistance.

**FY 09 Accomplishments**

This is a new program to be launched in FY10

**Return on Investment**

Energy savings statewide through increased code compliance and an increased workforce of skilled workers in the clean energy sector.

**Goal 4 - Provide Consumer Energy Information**

**A. Maryland’s Comprehensive Energy Outlook**

**Budget:** $275,000

Understanding Maryland’s energy issues and planning for its energy future is critical for achieving the goals of affordable, reliable clean energy resources for every Maryland citizen. MEA, energy consumers and suppliers, state agencies and citizens will be invited to participate in state energy planning efforts designed to focus attention on unique Maryland energy issues and to propose solutions for fostering improvements to Maryland’s energy future. Maryland’s Comprehensive Energy Outlook can help formulate the appropriate policies and direction that ensures a stable and secure energy future for Maryland. The report will also be used to develop strategies for reducing the state’s greenhouse gas emissions, consistent with the 2008 Maryland Climate Commission’s recommendations.

**Beneficiaries**

All Marylanders that use energy for homes, businesses and transportation.

**The Way It Works**

MEA will use SEIF Administrative funds to conduct a transparent and open review of Maryland energy supply and demand issues, to identify concerns and questions needing resolution and to formulate recommended directions and policies that support a future of affordable, reliable and clean energy. MEA will work with a knowledgeable consultant to develop its Comprehensive Energy Outlook.

**FY 09 Accomplishments**

Much of FY09 was spent in developing the planning Request for Proposals (RFP), evaluating competing vendors, selecting a vendor and finalizing a contract. MEA’s consultant (Energetics, Inc.) has just recently started work and is in process of developing supply and demand forecasts as an initial step in the energy review process.

**Return on Investment**

This effort will focus attention on Maryland Energy issues and provide a basis for helping MEA achieve its energy and climate goals in an effective fashion. A comprehensive energy document ensures that all energy issues have been reviewed and prioritized for follow-up implementation actions. While not necessary creating new energy jobs, implementation of a consistent energy direction, with appropriate policies, can ensure the reduction of energy consumption and peak use consistent with EmPOWER Maryland goals, as well as a reduction in greenhouse gases.

**B. Maryland’s Energy Information System**

**Budget:** $100,000 (SEIF)

Providing a Maryland Energy Information System where energy consumers can find important information specific to Maryland’s circumstances is a critical element in helping all energy consumers save money and use energy efficiently. Knowledge of Maryland’s energy systems, where the energy comes from and how its used, provides opportunities for all citizens to join efforts to save energy and achieve related goals. A one-stop shop for validated energy information can provide all public and private sectors with a consistent and well understood energy picture.

**Beneficiaries**

All Marylanders that need unbiased and validated energy information about their state’s energy sources and uses.

**The Way It Works**

MEA will use SEIF Administrative funds to develop an energy information database, establish website access and provide more sophisticated analytical capability in a three (3) phase work effort supported by various external vendors. The site will track on-going energy efforts and act as a portal for a broad array of state specific energy information.

**FY 09 Accomplishments**

In FY09 MEA selected a vendor and developed a validated energy information database. Toward the end of FY09 MEA bid and selected a vendor to provide a basic website portal for tracking performance and accessing database information. The initial website pages were completed on June 30, 2009 and the Phase II contract for additional pages and database access is continuing.

**Return on Investment**

This effort will provide consistent, validated energy information that can serve as a foundation for energy discussions and actions on the part of energy consumers, state agencies, utilities and other interested parties. Rather than constantly researching and pulling different data variables from various sources, the database will provide a single point of validated energy information for all users.

**C. Consumer Awareness - Educational Outreach Programs**

**Budget:** $1.5 million (SEIF)

The Maryland Energy Administration (MEA) oversees the State’s educational outreach efforts related to energy efficiency and clean energy, as well as the marketing of all related programs available through the MEA. This year’s focus is on promoting general energy awareness, in connection with practical, low and no-cost energy saving tips for consumers, while tying all messaging back to our State goal of EmPOWER Maryland: 15% energy reduction by 2015. The MEA strives to create relevant and impactful campaigns and community partnerships which will reinforce the resources available through the MEA and EmPOWER this demographic to make smart energy decisions.

**Beneficiaries**

All Maryland consumers, with an immediate focus on low to moderate income residents.

**The Way It Works**

**Large-Scale Traditional Media Campaigns:** Traditional media outlets are utilized through a mix of transit, outdoor, print, and web advertisements, as well as, local public/commercial radio messaging, informational posters and brochures. Targeted demographic sectors throughout the State will be reached in several stages and with multiple flights in conjunction with major seasonal shifts in temperatures and peak energy consumption. All messaging centers around building the *EmPOWER Maryland* brand awareness, in association with the MEA, and increasing the understanding of simple no and low-cost energy changes each consumer can make today for a more “Smart, Green and Growing” Maryland in the future.

**Grass-Roots/Earned Media and Community Involvement:** The MEA is currently working in partnership with students at the Center for Design Practice at the Maryland Institute College of Art (MICA). Immediate benefits of partnering with this local institution are found in lower development and production costs of educational outreach materials while delivering cutting edge design and powerful messaging for our targeted audiences. Earned media will stem from routine press releases, newsletters and community educational events, such as MEA speaker participation at community and group events, as well as presence at local fairs and festivals.

**FY09 Accomplishments**

MEA launched its first major educational awareness campaign in FY 09 with transit, outdoor, print, radio, and internet ads on the theme of “EmPOWER Maryland.” The budget total budget was $750,000. MEA’s goal was to reach Marylanders with simple low and no cost tips for increasing energy efficiency throughout our State. All media design and placement was chosen to support Governor O’Malley’s EmPOWER Maryland legislation, with messaging and graphics designed to primarily target low to moderate residents. In addition to media buys, monthly newsletters were sent to over 2,300 opt-in subscribers (up from 1,500 subscribers in FY08). Each newsletter was designed to highlight recent news, events and citizen-focused information on MEA’s available programs, grants and resources. Press releases and Opinion/Editorial articles were written in house and submitted for distribution through the Governor’s communications office, as well as MEA’s media contact list and directly through local papers. With the first Regional Greenhouse Gas Initiative (RGGI) Auction gearing up at the start of FY09, MEA held public town hall meetings throughout the State. During these meetings, MEA’s promotional literature was distributed, Compact Fluorescent Lighting (CFL’s) were given away in promotion of community and residential energy efficiency, and MEA’s email distribution list was increased by over 5 percent from these targeted events.

**Return on Investment**

Traffic to the MEA website is up by 9 percent from 2008, several of our programs which historically were slow to exhaust resources now have waitlists of upwards of 200 individuals, and with our large-scale outreach efforts just beginning, we anticipate increases in program participation. Performance metrics for our outreach efforts will be established this fall through State-wide surveys. This increased awareness of consumers’ energy savings options significantly increases the energy efficiency goals of the O’Malley/Brown administration.

**D. Smart Grid**

**Budget:** A DOE grant of $461,793 with $50,000 in matching MEA funds.

**Beneficiaries**

All Maryland residents who pay energy bills.

**The Way It Works**

Through a grant from the U.S. Department of Energy, MEA is researching the elements of a Smart Grid that could be used to help achieve the State’s energy goals, including the goals of EmPOWER Maryland. A Smart Grid can be characterized by two-way communication of electricity and real-time information. It should be able to enable electric utility customers to actively manage their electricity usage; accommodate new generation and storage options; enable new products, services, and markets; improve power quality; optimize asset utilization and operate efficiently; and anticipate and respond to system disturbances.

MEA is partnering with Energetic Incorporated, a Maryland energy consulting company, the American Council for an Energy Efficient Economy (ACEEE), a non-profit organization dedicated to the advancement of energy efficiency, and R.W. Beck, a nationally recognized technology company on the Smart Grid initiative. The project team is researching the various potential elements of a Smart Grid and evaluating the costs and benefits of these elements specifically for the Maryland environment. The research effort will be used to help inform the regulatory process related to Smart Grid.

**FY 09 Accomplishments**

This is a new program to be launched in FY10

**Return on Investment**

The grant will be used to help inform the regulatory process related to Smart Grid investments in the State of Maryland. The grant is also being used to educate interested Marylanders about what a “smart” electric grid may entail and about the benefits and costs associated with upgrading the existing electrical grid.