

ARKANSAS ENERGY OFFICE

Presentation

State Energy Programs

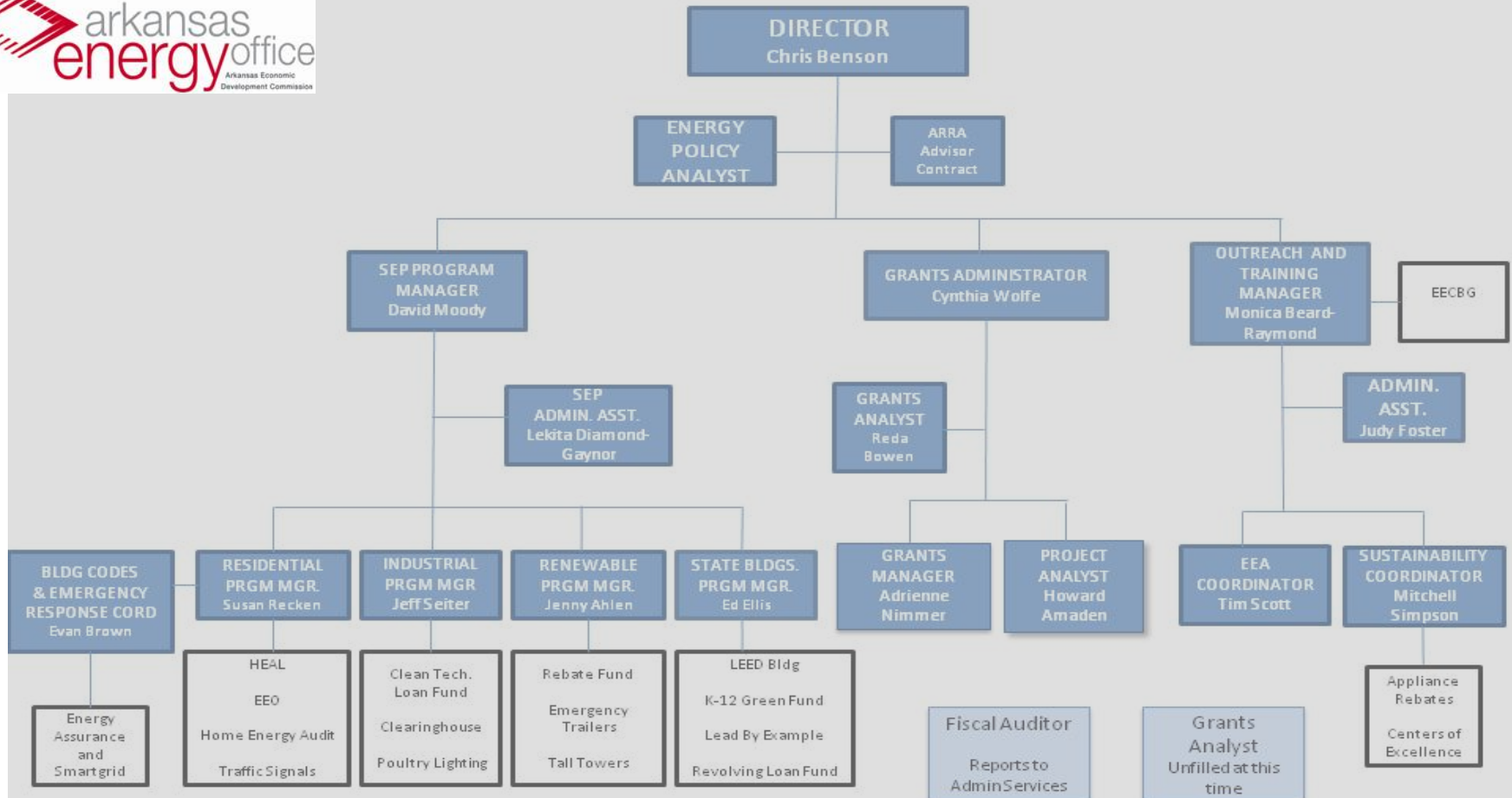
January 6, 2010



To create, advocate, and support energy efficiency and sustainable development opportunities that promote economic and environmental well-being for all citizens of Arkansas.



Organizational Chart



- Encourage deployment of best practices, fuels and new energy technologies
- Advocate and promote energy efficiency and renewable energy
- Disseminate energy information to the public and government
- Administer Arkansas Energy Code for new buildings
- Support state energy policy development



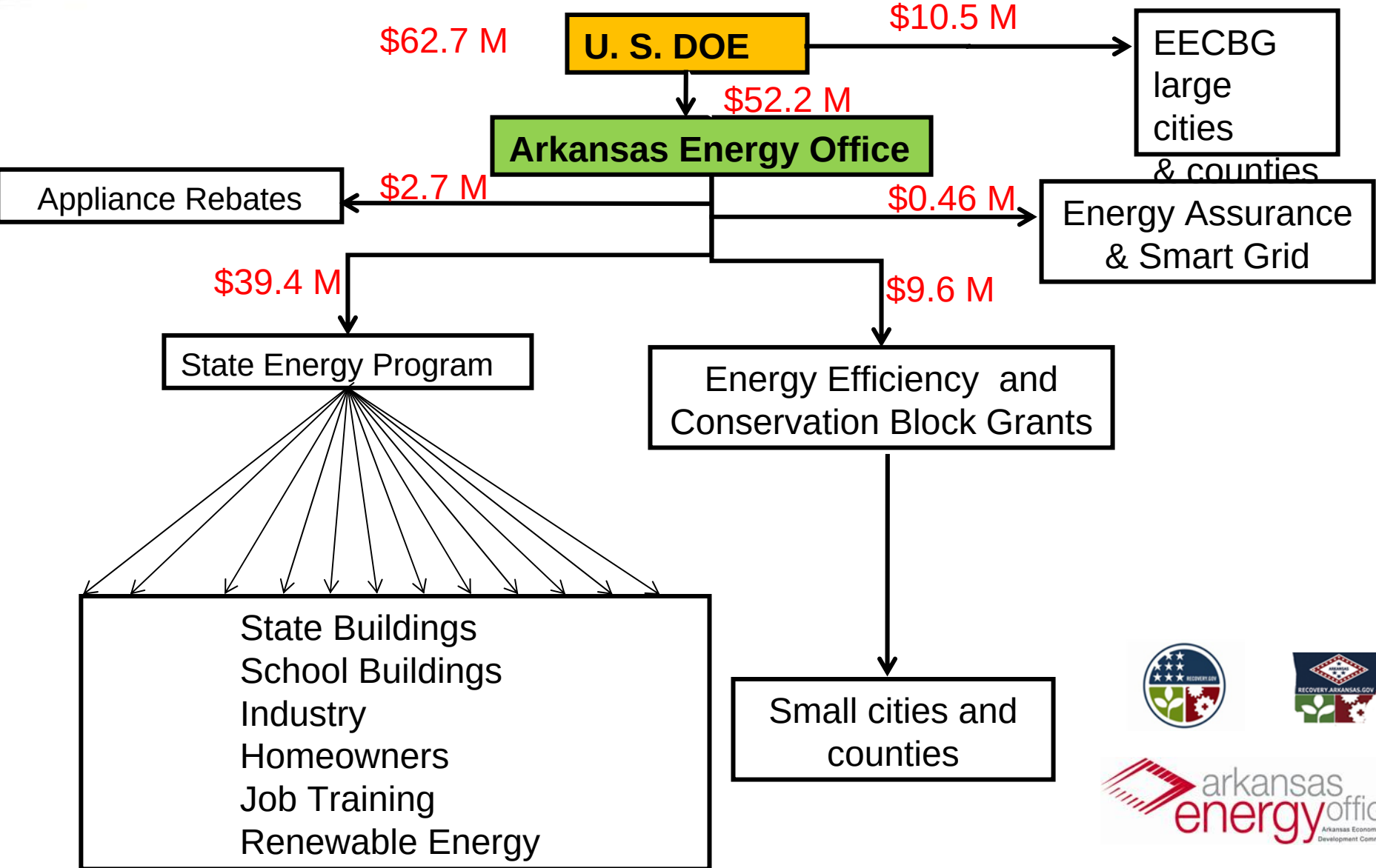
American Recovery and Reinvestment Act of 2009 - Objectives



- Create and retain jobs, and promote economic recovery
- Assist those most impacted by the recession
- Increase economic efficiency through technological advances
- Invest in infrastructure that will provide long-term economic benefits



ARRA ENERGY FUNDS



State Energy Program Goals

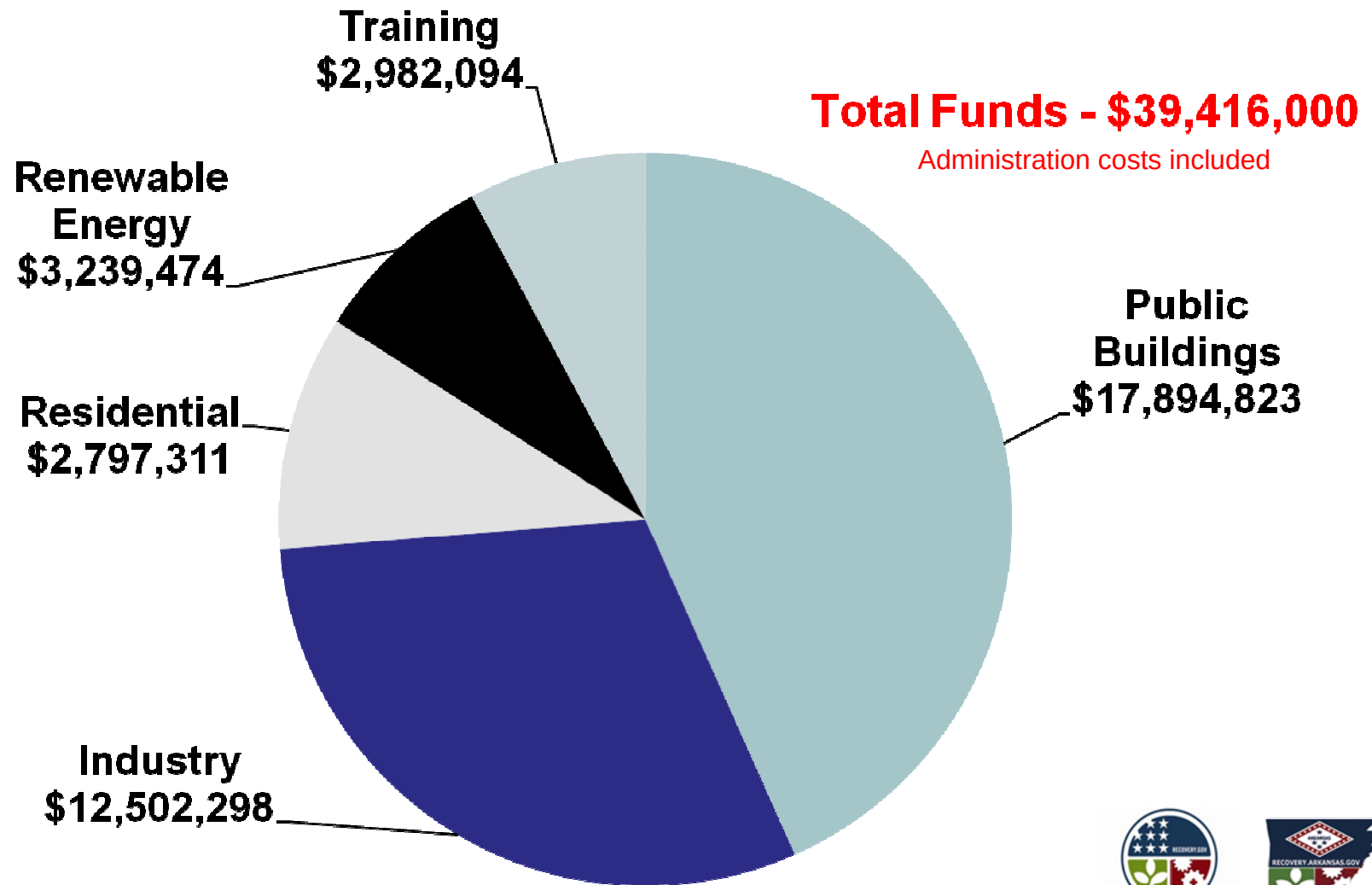
\$39.4 million



- Increase energy efficiency to reduce energy costs
- Reduce reliance on imported energy
- Reduce the impacts of energy production and use on the environment

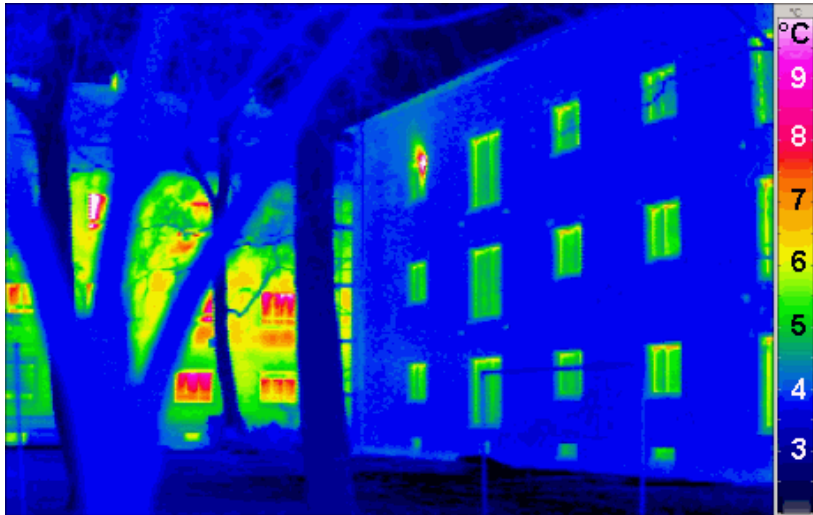


Arkansas' Proposed State Energy Programs



State Building Energy Management Program

“Lead By Example”



Establish building design requirements and improve energy management in state buildings.

ARRA - \$1.5 million



Sustainable Building Design Revolving Loan Fund



Arkansas Building Authority will administer a State buildings capital revolving loan fund for energy improvements.

ARRA - \$12 million



State Green Building



The Arkansas Building Services is reconstructing a new agency building that will be designed to meet at least Silver LEED standards; to include solar electric, high performance HVAC, a plug-in electric vehicle recharging station, etc.

ARRA - \$1.2 million





LED Traffic Signals

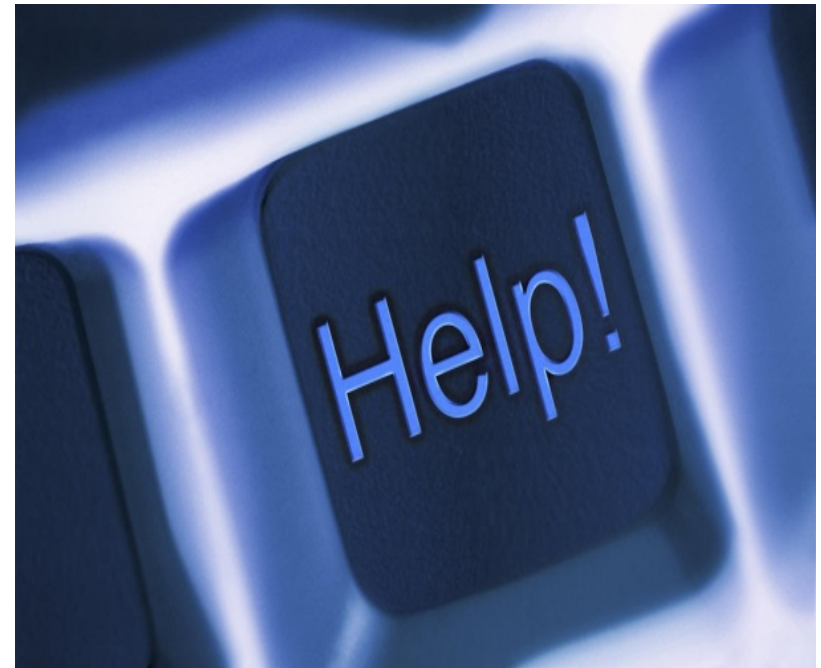
- Grant to Arkansas Highway and Transportation Department
- Estimated 497 intersections in Arkansas communities to be upgraded

EECBG – \$2.4 million



Industrial Energy Efficiency Clearinghouse

A web based information and communication system will be developed for industries in Arkansas. It will be staffed by the Engineering Dept at the U of A and promoted by Arkansas Manufacturing Solutions.



ARRA - \$0.8 million



Industrial Energy Technology Loan Fund

AEDC will administer a revolving loan program is to help industries make energy efficiency improvements, reduce energy demand, and incorporate clean energy technologies.

ARRA - \$10 million



Advanced Lighting Technology for Poultry Houses



U A Poultry Science Center will conduct a field trial and evaluation of lighting technologies followed by a demonstration project to install lighting technology in selected poultry houses.

ARRA - \$1.6 million

Tall Towers Wind Measurement Study



To increase the data on wind resources in Arkansas, five to ten existing tall towers will be fitted with anemometers to measure and record wind data.

ARRA - \$0.5 million



Emergency Renewable Energy Power Project



24 solar powered trailers will each deliver over 1 kW to power emergency needs under control of the Arkansas Dept of Emergency Management.

ARRA - \$0.8 million



Renewable Technology Rebate Fund



Rebates will be provided to individuals and organizations that install solar hot water, and solar electric, wind or biomass equipment for providing electricity to the grid.

ARRA - \$2 million



Building Training Centers of Excellence



Two building trades training centers will be developed at community colleges to train energy auditors.

ARRA - \$3.2 million.

Home Energy Assistance Loan Program (HEAL)



This is a pilot program to connect Arkansas business and their employees through energy efficiency programs that benefit both parties. In each congressional district, one Arkansas-owned industry and their employees will be targeted in this pilot.

ARRA - \$2 million



Energy Efficient Appliance Rebate



- This program will focus on the retirement and replacement of older, less efficient appliances which will be replaced by Energy Star® equivalents
- Refrigerators and washing machines and certain water heaters
- Cannot be used in conjunction with refrigerator replacement under the USDOE-State Weatherization Program
- Program will launch in March

ARRA - \$2.7 million



Energy Efficiency Outreach Program



- Residential Energy Auditor Training
- Residential Duct Sealing
- Create “Do-it-yourself” energy improvement videos for residential consumers. Example: changing filters, reduce water heater temperature, insulation in the attic or crawl space, etc.
- Create “testimonials” on home energy improvements
- Add video and testimonials to arkansasenergy.org

ARRA - \$0.8 million

For More Information



AEO: For information on Arkansas Energy Office's programs: arkansasenergy.org.

STATE: For a summary of all of the recovery programs and projects in Arkansas: recovery.arkansas.gov

FEDERAL: For information on how the Act is working and up-to-date data on the expenditure of funds: recovery.gov.



EO 09-07 and Act 1494



- Executive branch agencies, 45, reported Strategic Energy Plans to the Governor by October 31, 2009. The plans have been reviewed and some returned to the agencies for editing. Edit deadline is January 7, 2010.
- All of these agencies have established an Energy Manager/Team and submitted basic building count and ownership data. This data is being edited.

- Energy Star Portfolio Manager will be used to set the baseline for each agency for compliance with the energy reductions required.
- These reductions are 20% by 2014 and 30% by 2017.

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EO 09-07 and Act 1494



- As a part of ARRA the AEO has granted \$12 million to ABA for the purpose of funding energy efficiency projects for state buildings, December, 2009.
- ABA is developing the rules for this fund and plans to approve the first round of projects in March, 2010.
- AEO will participate with ABA on acceptance of these projects.

Act 1494

Goals and Objectives

**Goal 1. Build and renovate public
buildings using sustainable,
energy-efficient methods
(25-4-401)**

- **Objective 1.** Use sustainable, energy-efficient designs to:
 - Avoid resource depletion of energy, water, and raw materials;
 - Prevent environmental degradation caused by facilities and infrastructure throughout their life cycle;
 - Create buildings that are livable, safe, and productive
 - Improve employee and student performance

- **Objective 2.** Establish specific performance criteria and goals for sustainable, energy-efficient public buildings that are based on recognized, consensual standards with a scientifically proven basis and a history of successful performance.

Goal 2. Build a sustainable energy-efficient buildings program (25-4-403)

Act 1494 Goals and Objectives



- **Objective 1.** Promote energy conservation in buildings owned by public agencies
- **Objective 2.** Develop the Sustainable Energy-Efficient Building Program for public agencies
- **Objective 3.** Issue policies to establish procedures and methods for compliance with the criteria and the performance standards for major facility construction or major renovations.

Act 1494 Goals and Objectives



- **Objective 4.** Issue technical guidelines to establish procedures and methods for compliance with the criteria and the performance standards for major facility construction or major renovations.
- **Objective 5.** Administer an energy operations and management program.

**Goal 3. Develop
performance standards
for major construction
and major renovations
(25-4-404)**

Act 1494 Goals and Objectives



- **Objective 1.** Achieve ten (10) percent more efficient facilities than baseline energy consumption determined IAW ASHRAE 90.1 2007 as of Jan 1, 2009, unless excepted
- **Objective 2 .** Achieve twenty (20) percent more efficient facilities than baseline water consumption based on the 2006 Arkansas Plumbing Code

Act 1494 Goals and Objectives



- **Objective 3.** Achieve fifty (50) percent less potable water usage compared to standard practices for landscapes.
- **Objective 4.** Determine alternative design criteria if use of ASHRAE 90.1 2007 is not practicable.
- **Objective 5.** Verify building performance to design requirements are met during the first 12 months of operation and report to Arkansas Energy Office.

Act 1494 Goals and Objectives



- **Objective 6.** Investigate
 - performance deficiencies,
 - investigate causes and
 - recommend corrections/modifications

Goal 4. Manage Energy Use of Public Agencies (25-4-406)

- **Objective 1.** Develop an energy program to manage energy, water, and other utilities to reduce total energy consumption per gross square foot for all existing state building
 - By 20% by 2014
 - By 30% by 2017
 - Baseline year is FY2008-9

- **Objective 3.** Develop and implement policies, procedures and standards to ensure agencies are following purchasing practices to
 - Improve efficiency of energy, water and utilities
 - Consider cost of product over economic life time
 - Green.Arkansas.gov is the portal for this information.

- **Objective 4.** Adopt and implement building energy design guidelines for public agencies that include
 - Energy use goals and standards
 - Life Cycle Cost Analysis (LCCA)
- **Objective 5.** Modify criteria for construction or renovation to require LCCA

Act 1494 Goals and Objectives



- **Objective 6.** Identify and recommend energy conservation maintenance and operating procedures
 - Designed to reduce energy consumption
 - Require no significant expenditure of funds
- **Objective 7.** Require maximum interchangeability and compatibility of equipment components

Act 1494 Goals and Objectives



- **Objective 8.** Develop an energy audit and procedure for conducting an energy audit
- **Objective 9.** Audit all public agencies by April 7, 2014.
- **Objective 10.** Create a list of agency buildings that need to be retrocommissioned

**Goal 5. Create a
building advisory committee
for energy - efficiency
(25-4-408)**

- **Objective 1.** Identify committee members;
 - Representatives from the design and construction industry who are involved in public works contracting
 - Persons from public agencies who are responsible for overseeing public works projects or for developing energy efficiency programs and policies; and
 - Other persons that the director considers to have useful information.

- **Objective 2.** Lead the committee to provide advice on the implementation of this program, including without limitation recommendations regarding:
 - An education and training process for persons who are involved in the implementation of this subchapter;
 - An ongoing evaluation or feedback process to help the authority to implement this section; and water-deficiency requirements and energy-efficiency requirements.

- **Goal 6. Develop rules for energy efficiency in public buildings
(25-4-409)**

Act 1494 Goals and Objectives



- **Objective 1.** Adopt rules for the implementation of operation and maintenance of energy conservation measures in public buildings; and

- **Objective 2.** Develop or revise the Arkansas Energy Office's architectural and engineering standards to provide assistance in determining:
 - Which energy conservation measures are best suited to the unique characteristics of each building; and
 - The specifications for the energy conservation measures under this subchapter

Act 1494 Goals and Objectives



- **Objective 3..** Adopt rules for the development of education and training requirements for the various personnel that may be involved in a major facility or a major renovation under this subchapter.

- **Goal 7. Conduct a performance review of the energy-efficiency buildings program (25-4-410)**



Ed Ellis 501-682-7694

EEllis@ArkansasEDC.com

