

ADA COUNTY FIVE-YEAR ACTION PLAN for Energy Conservation and Resource Use

REBUILD IDAHO

August 7, 2007

(Revised annually since 1999)



Rebuild partners attend the 2007-2008 meeting at the new Barber Park Education and Event Center

Vision

Our vision is to incorporate "energy efficiency" into the day-to-day operations of Ada County by proactively identifying and implementing methods for conserving natural resources, controlling utility costs, and maintaining building efficiency.

Management and staff work together to accurately measure energy efficiency and develop a phased approach for efficiency implementation. Ada County demonstrates to employees and the community that public buildings are operated in a cost-effective manner, to save resources and maximize tax dollars.

Program Goal

The County believes that actions undertaken by the Rebuild Idaho Program are wise investments that will benefit all the citizens of Ada County. The goal of this program is to maintain a dynamic five-year plan for identifying cost-effective and economically sustainable energy and resource efficiency priorities for all Ada County facilities. These priorities should meet the needs of County citizens, County Commissioners, Elected Officials, management, maintenance staff, and building occupants.

Major Objectives

- Make County facilities as energy and resource efficient as reasonably possible.
- Make County buildings comfortable for staff and citizens.
- Identify building operation and efficiency improvements that require action.
- Incorporate building commissioning efforts into construction projects.
- Control the costs of utilities for long and short term.
- Utilize energy savings for other building and County purposes.
- Educate facility staff about building systems, energy efficient operations, maintenance principles and practices.
- Implement and promote Countywide-recycling projects.
- Protect the environment through the proper disposal of wastes.
- Educate County employees to make good energy and resource decisions.
- Promote and expand the partnership.

Barriers

Potential barriers to effective program implementation include:

- Identification of strategies that are not supported by the County staff who are key to their successful implementation.
- Appropriation of resources, staff, partners, and dollars, to produce effective and timely implementation of measures.

Organization and Responsibilities

The partnership is supported from the top down beginning with the Board of Ada County Commissioners. Financial support comes through the established County budgetary process. The continuing planning process is designed to bring on-going support from partners and other stakeholders as they are identified.

The Ada County Director of Operations is the lead for the County Partnership. The Director's role is to provide the focus, leadership, staff and monetary resources that will support the development and implementation of a successful program.

The Ada County Energy Specialist is the lead for updating and implementing the County's action plan. Responsibilities also include:

- Maintaining utility management software and databases.
- Recommend operation and maintenance, resource, and efficiency changes.
- Assist in the development of a monitoring and verification plan.

The Idaho Department of Water Resources Energy Division (IDWR) assists the partnership as follows:

- Facilitate communication between the partners and other Idaho partnerships.
- Provide the County with low- to no-cost operation and maintenance (O&M) options that will increase building efficiencies.
- Assist with building surveys and audits.
- Provide training for building maintenance staff and management.
- Assist the County in obtaining funding and resources for plan implementation.
- Provide financial assistance for building sub-monitoring and building commissioning.

Other program partners include service and business organizations within the community that provide annual input into the plan and its priorities. As members of the Ada County partnership,

these organizations may provide program recommendations, planning resources, technical support, and services that are both in-kind or for pay. They are recognized as professional organizations that have an investment in the community.

Current Partners

Ada County Partners	Position
Bob Batista	Director of Expo Idaho
Bob Batista	Director of Parks and Waterways
Steven Dye	Director of Juvenile Court Services
Rick Emerson	Facility Maintenance Superintendent
Dave Logan	Director of Operations
Dolly Hall	Operations, Office Manager
Ted Hutchinson	Deputy Director of Solid Waste Management
Cheryl Neal	Director of Purchasing
Dave Neal	Director of Solid Waste Management
Selena O'Neal	Operations, Energy Specialist
Fred Tilman	Board of Ada County Commissioners
John Traylor	Director of Development Services
John Traylor	Director of Indigent Services
Derek Voss	Director of Administrative Services
Brian Wilbur	Director of Weed, Pest, and Mosquito Abatement
Scott Williams	Deputy Director of Operations
Paul Woods	Board of Ada County Commissioners
Rich Wright	Director of Public Information
Rick Yzaguirre	Board of Ada County Commissioners

Business Partners	Company / Organization
Greg Allen	Hummel Architects
Ken Baker	K energy Consultant
Steve Benner	CSHQA
Gary Childe	KJM International
Doug Cooper	McKibben+Cooper Architects
Byron Defenbach	Intermountain Gas Company
Bill Johnson	City of Boise, Public Works
Geoff Johnson	Eidam & Associates
Kent Johnson	City of Boise, Public Works
Paul Johnson	CH2M Hill
Rod Jones	G2 Energy
Bill Kissinger	ATS Inland NW
Sherry McKibben	Sustainable Idaho
Chuck Mickelson	City of Boise, Public Works
Curt Nichols	Idaho Power Company
Kristi Pardue	Idaho Power Company
Bruce Poe	Modus Architecture
Sue Seifert	Idaho Energy Division
Bill Slaybaugh	Heery International
Kevin Van Den Wymelenberg	Integrated Design Lab
Scott Wendell	Lombard Conrad Architects
Mike Wisdom	Engineering Inc

Building maintenance and custodial staffs are involved in the development and implementation of planned activities because they are responsible for carrying out the day-to-day operation and maintenance activities, which can produce significant cost savings. Building occupants are important to the program as well, though not specifically listed as a partner in Rebuild Ada County. Their behavior, such as turning off unused lights and equipment etc., can reduce building energy use by 10%, a significant contribution to County expenditure reduction.

Rebuild Ada County Partnership Challenge

The Partnership, which includes service and business organizations within the community, is "**challenged**" to actively participate in the creation and implementation of Ada County's five-year energy conservation and resource use action plan. Partners are specifically recruited and selected to bring their particular expertise and experience to the program. Each partner will be requested or challenged to assist Ada County in determining both short and long range goals and objectives that can be accomplished.

Promotion and Expansion

Through coordination with Ada County staff, IDWR will develop and promote the Partnership locally and nationally through the ~~Rebuild America program~~ State Energy Office. IDWR will promote Partnership savings and successes through the national ~~Rebuild America program and publications, and through publication in IDWR's Currents newsletter and Ada County's monthly newsletter.~~ Case studies will be developed for distribution and publication on IDWR's ~~Rebuild~~ website and also the County's website. Local press releases will also be used to announce program successes.

Annual Strategic Plan

The Partnership produces an annual strategic plan that outlines the progress and successes of Ada County's Rebuild Program during each fiscal year. This plan is presented to the Board of Ada County Commissioners and Elected Officials at a pre-determined public meeting. The Rebuild Partners may use portions of the plan or the information contained in it for newsletters and publications to promote the program.

County Facilities

Ada County owns and operates a variety of buildings to provide County services to the general public as well as office space for County employees. Each facility is regularly looked at, on an individual basis, to identify ways to make them more energy efficient.

Major County facilities include:

- Ada County Courthouse and Administration Building
- Public Safety Building and County Jail Complex
- Juvenile Court Services and Detention Facility
- Barber Park
- Expo Idaho
- Solid Waste Management Facilities
- Weed, Pest, and Mosquito Abatement Facility
- Emergency Medical Stations
- Morris Hill Morgue and Storage Facility
- "Future" Meridian Campus Buildings
- The Justice Center

Monitoring, Metering, and Reporting

Monthly utility billing information is compiled in Utility Manager software for electricity, natural gas, water, sewer, and trash to establish a baseline of energy use for the County buildings. This data is used to monitor energy usage, identify and prioritize buildings with high utility costs, determine potential energy-saving measures, evaluate future energy and resource use and savings, and assess post-improvement performance of retrofitted buildings.

The use of sub-meters and EnergyView software also assists the Partnership in establishing a building-by-building energy use profiles at select facilities. The Public Safety Complex was the first facility to have a sub-metering system installed. The Expo Facility also uses sub-meters and an online reporting service to monitor energy usage.

A metering plan will be developed for buildings that are selected for pursuance of Energy Conservation Measures (ECMs). It will be used to establish a baseline of system or building energy consumption so subsequent savings from ECMs can be quantified. The savings information can then be used for marketing the success of the program.

An evaluation and reporting plan will be developed using a monthly reporting format to document actual energy use for each County building. Reports summarizing energy, resource and cost savings will be prepared and presented semi-annually to the County Commissioners. Monthly savings reports using a standardized format will be forwarded to the IDWR for assistance in program analysis.

Building Assessments

Building assessments will be conducted on the County buildings identified in the plan using a variety of resources. Priority will be based on analysis of utility data, County needs, and financial capabilities. Assessments will identify specific building-by-building O&M's for maintenance staff implementation. Once assessments are completed, buildings will be selected for retrofit action. New buildings and structures are considered candidates for commissioning programs.

The selection criteria for building assessments include:

- The potential for building energy savings
- An estimate of time and dollars needed to perform the measures
- The availability of time and resources to devote to the project
- The potential of implementing effective ECMs

Assessments include an in-depth analysis of the whole building including:

- The building envelope
- Lighting and control systems
- Engineering analysis of building mechanical systems such as pump air flows, and equipment operating efficiencies
- Metered water use and sewer billing
- Trash generation rates

An assessment report includes:

- Recommended ECM's
- An estimated cost for ECM implementation and calculation of ECM simple payback
- Life Cycle Costing optimization where appropriate
- Identification of existing operating efficiencies

- Identification of funding options for measure implementation
- Identification of Operations & Maintenance's (O & M's)
- Recommendation to reduce water consumption and sewer bills
- Recommendation to reduce trash generation volumes

Under the direction of the Energy Specialist, a contract engineer may lead the assessment team along with IDWR and the County staff. An assessment report will be prepared with recommendations for ECM actions for the County's consideration. Life cycle cost analysis will be utilized for ECM assessment to facilitate Ada County in optimizing their return on investment.

Retrofit Objectives

Building retrofits can generate savings that enable the County to purchase new equipment, add new employees, or expand existing programs. In most circumstances, when retrofit objectives are identified in advance, the objectives can be incorporated and completed with other remodeling projects and building additions.

Retrofit projects designed to increase the efficiency of building systems will positively affect concerns that are important to Ada County officials. Concerns such as:

- Building safety
- Comfort and productivity of occupants
- Increased employee productivity
- Reductions in system failures
- Expansion of anticipated life-cycle or intended use
- Reduced maintenance and utility costs

Costs and Return On Investment

Proposed ECM's will go through a life cycle cost analysis. A 20% IRR (internal rate of return) will be programmed for each project.