

Energy and Resource Conservation Plan



Energy and Resource Conservation Plan Team

San Juan Unified School District

May 22, 2001

Table of Contents

Executive Summary	page 3
Energy and Resource Conservation Plan Team	page 4
Background	page 5
Plan Requirements	page 6
Mission Statement, Goals, Objectives and Strategies	page 8
Attachments:	page 12
1. Superintendent's letters on energy conservation	
2. Board Resolution No. 2201, February 27, 2001, For Energy Conservation	
3. Emergency Guidelines for Rotating Outages	
4. Low-cost and no-cost energy efficiency measures for schools	
5. Resource Conservation Management Program Agreement between SMUD and the San Juan Unified School District	

EXECUTIVE SUMMARY

- The district's energy plan enhances the district's "Blueprint for Success" focusing on the support goals.
- The mission of the energy program conservation includes:
 - Reducing energy usage
 - Maintaining a safe and healthy environment
- Eight key goals:
 - Achieve and maintain the highest level of energy efficiency, promote resource conservation, and reduce costs at all district sites.
 - Educate and involve employees, students, and the community in energy and resource conservation to gain commitment and support.
 - Monitor energy savings; analyze data and prepare reports on a regular basis.
 - Secure funding to implement energy efficiency measures.
 - Investigate and utilize alternative energy resources whenever possible.
 - Plan for first, second, and third stage energy alerts and outages, and their impact on school and district operations.
 - Work collaboratively with SJUSD personnel, SMUD, and the CEC to achieve common goals.
 - Continue our commitment to energy efficiency and work towards a long-term solution for the state's energy crisis.

San Juan Unified School District

Energy and Resource Conservation Plan Team

A district-wide energy and resource conservation plan will guide the district's actions as we progress towards achieving energy reductions within the district. This plan was put together by a team consisting of facilities, teacher, custodial and administrative employees. The team recognized early on that without support from every level of the organization, the plan would not be as effective. On February 27, 2001 the board approved the formation of a multi-disciplinary team to develop a district-wide energy and resource conservation plan. The first team meeting was on March 13, 2001 and the team met regularly with the goal of having a completed plan ready for the May 22, 2001 board meeting. The team developed the goals, objectives and strategies necessary to carry out the mission of the energy and resource conservation plan. The team worked diligently and is acknowledged for their participation and contributions.

Energy Team Member Name

Position/Department

Rich Battistessa	Principal, Fair Oaks Elementary School
Dave Bisbee	Sacramento Municipal Utility District (SMUD)
Pam Costa	Director, Schools & Programs (ECE)
Bob Davis	Mechanical Supervisor
Gary Flamm	California Energy Commission (CEC)
Dick Gonsalves	Principal, Arcade Middle School
Rob Hollingsworth	Principal, Rio Americano High School
Nikki Hughes	Director of Transportation
Jim Kurtz	Custodial Supervisor, San Juan High School
John Lemieux	Director, Food Services
Charlene Mathews	Director, Schools & Programs
John Palmer	Director, Planning
Patty Paulsen	Senior Director of Finance/Business Operations
Nancy Waltz	President, San Juan Teachers Association

Background

An energy plan is the single most important part of an effective energy program. Without a plan, district management can only react to a given situation. An energy plan allows individuals to be proactive. When the energy crisis lessens, a plan allows every one to proceed with energy conservation as a priority and policy for the district. Principles of quality management show us that strategic planning is how programs and projects get accomplished. Not only will an energy plan indicate that you are proactive on energy issues, but it will be developed and implemented according to quality principles.

The energy and conservation resource plan supports the “Blueprint.” This energy plan has been developed to:

- Reduce operating costs. (Goal 4)
- Incorporate energy measures and practices that teach. (Goal 2)
- Improve academic performance by improving the learning environment. (Goal 3)
- Protect our environment. (Goal 3)
- Support community values. (Goal 5)

Plan Requirements

Mission of Program

A successful energy and resource conservation program for the San Juan Unified School District (SJUSD) requires commitment, employee involvement, and a vision of where the program is going. To be effective, there should be a sense of purpose and broad commitment toward the mission and goals. Essential aspects for a successful energy and resource conservation program include management support, program responsibility, project funding, program evaluation and a formal energy and resource conservation plan.

Support from Top Management

The energy and resource conservation program requires the support of the Board of Education and top management to be successful. This support includes approval of the energy and resource conservation plan. This approval lets all district employees know that district leaders consider the energy and resource conservation program a priority, which in turn encourages all employees to actively participate in the program. Approval of the energy and resource conservation plan will provide the working framework for the energy and resource conservation program.

Program Responsibility

The director of planning carries a primary responsibility for ensuring the success of the energy and resource conservation program. This program, however, is equally dependent upon the support of all district administrators and employees. Therefore, coordinating energy management efforts in all district facilities is a key role of the director of planning. The director of planning will encourage various communication activities to link the areas within the district in the energy and resource conservation effort.

Financial Aspects of the Program

In most cases, an initial cost outlay is necessary to implement energy conservation measures. However, once implemented, the project should not only “pay for itself” in terms of creating savings which offset the initial costs, but the ongoing project results should also produce an overall “net savings” to the district. The following represents financial aspects necessary for program development.

1. Financial performance criteria for energy conserving projects should include 5 to 7 year paybacks or less. The payback is determined by dividing the cost to implement an energy conserving measure by the annual dollar savings of energy costs resulting from the measure. One-year paybacks are essentially budget neutral and are no cost. However, long-term as well as short-term energy conservation measures are necessary to provide an effective and balanced program. Life cycle cost analysis should also be considered when determining energy conservation measures.

2. The various financial categories, including utility rebates, grants, and ongoing savings will be tracked by the director of planning and reported as part of ongoing energy and resource conservation program status updates.
3. The director of planning will consider several sources of available financing to provide up front money that is needed to implement various energy conservation projects. These sources will include available budget dollars within the facilities department, general obligation bond funding, utility and agency provided financing and grants.

Measurement

The energy accounting software package FASER was purchased in February, 2001 to provide the measurement component of an effective energy and resource conservation program. To create the necessary base of information, utility bill data for the last two years is being loaded into the program for all district facilities. When completed, the program will monitor and measure electric, natural gas, water, sewer and refuse bills. Incorporation of this utility information on an ongoing basis will allow the director of planning to closely monitor the overall situation and to present the results of the program in a timely and meaningful manner.

The energy and resource conservation plan will be the basis of the district-wide comprehensive energy and resource conservation program for the San Juan Unified School District. The plan consists of various goals, objectives and strategies developed by a multidisciplinary team consisting of facilities, custodial, teaching, and administrative personnel.

MISSION STATEMENT

To develop a district-wide energy and resource conservation plan for the San Juan Unified School District to reduce energy usage and decrease expenditures for energy within the district. The plan will address electricity, natural gas, water, sewer and refuse. This plan will ensure that the safety and health of students and employees will remain the top priority.

GOALS / OBJECTIVES

Goal 1: Achieve and maintain the highest level of energy efficiency, promote resource conservation, and reduce costs at all district sites.

Objective: To reduce energy consumption by a minimum of 10% to reduce district costs and help solve the state's energy crisis.

Strategy: Gather energy data about sites, evaluate savings, and recommend appropriate energy resource conservation opportunities.

Strategy: Provide feedback to management and sites on how we're doing.

Strategy: Monitor consumption patterns at the various sites – utilizing baselines.

Strategy: Implement the Faser energy accounting software and monitor usage.

Strategy: Look at M&O procedures and practices for conservation opportunities.

Strategy: Train staff

Strategy: Reduce energy requirements by adhering to the superintendent's recommendations of 68 degrees for heating and 78 degrees for cooling.

Strategy: Capture energy savings potential in new equipment installations in existing facilities

Strategy: Ensure the modernization program goals include energy efficiency.

Strategy: Set up an incentive program to reward the sites for energy management/savings.

Objective: Improve all recycling and water conservation measures.

Objective: Set a leadership example for other school districts, governmental agencies, and private sectors.

Goal 2: Educate and involve employees, students, and the community in energy and resource conservation to gain commitment and support.

Objective: Provide awareness of the impact on the district (i.e., cost, and effect of outages)

Strategy: Publish energy information on district's internet/intranet web site

Strategy: Create awareness with the energy wise posters/San Juan Scene/teacher newsletters, school parent newsletters.

Strategy: Communicate with use of facility groups on energy saving procedures.

Strategy: Include energy efficiency as a topic to be addressed at various administrative and employee district meetings.

Objective: Provide a better understanding that small contributions from employees, students and the community can have a big impact on the district.

Strategy: Individual site energy plan following district guidelines.

Strategy: Kids Count energy patrol campaign.

Strategy: Awards, share of savings to sites, signed pledges by employees, students.

Strategy: Competition campaigns – award plaque to site that conserves the most.

Objective: Promote energy education to help employees, students, and all stakeholders make informed decisions and reduce energy costs in district facilities and home.

Goal 3: Monitor energy savings; analyze data and prepare reports on a regular basis.

Objective: To be able to provide feedback to managers (board, superintendent), stakeholders (staff, employees, and students) on how well we are doing.

Strategy: Provide site-specific energy and resource data to appropriate personnel (principal/custodian) in an easily understood format.

Strategy: Publish case studies (i.e., success story).

Goal 4: Secure funding to implement energy efficiency measures.

Objective: Expedite implementation of energy savings projects and reduce the impact on the district's budgets.

Strategy: Coordinate with M&O to identify projects with potential savings and receive rebates.

Strategy: Implement measures – do the project - take action

Strategy: Investigate available funding and financing including departmental sources, bonds, utility and governmental financing and grants.

Strategy: Provide coordination of all SMUD, PG&E, CEC grant or rebate programs.
Strategy: Allocate energy savings into energy projects.

Goal 5: Investigate and utilize alternative energy resources whenever possible.

Objective: Investigate alternative resources that may reduce costs of energy.
Strategy: Consider Solar, P.V., small wind turbines, cogeneration, fuel cells, solar thermal energy.
Strategy: Negotiate third party natural gas purchasing
Strategy: Alternate energy resources to deal with special energy requirements during outages such as special ed., technology equipment, and systems.
Strategy: Consider SMUD's Green Energy Program as a renewable resource

Goal 6: Plan for first, second, and third stage energy alerts and outages, and their impact on school and district operations.

Objective: Minimize the impact on the instructional program and ensure the safety of students and employees
Strategy: Publish emergency guidelines for all district facilities to follow during outages.
Strategy: Reduce or eliminate air conditioning and lighting usage during a stage two or three alert at the direction of the director of planning.
Strategy: Identify equipment to shut down for each stage alert (stage 1, 2 & 3, and critical/non-critical loads).

Goal 7: Work collaboratively with SJUSD personnel, SMUD, and the CEC to achieve common goals.

Objective: Implement a districtwide energy and resource conservation program.
Strategy: Participate in SMUD's Resource Conservation Program.
Strategy: Invite SMUD, CEC and other energy related agencies to participate in the district's energy savings program.
Strategy: Communicate with all parties.
Strategy: Participate in existing programs and assist in development of new programs.

Goal 8: Continue our commitment to energy efficiency and work towards a long-term solution for the state's energy crisis.

Objective: Institutionalize the energy and resource conservation program so that energy usage saving is always a priority, not just during times of crisis.

Strategy: Energy star procurement standard program.

Strategy: Annual awards/incentives.

Strategy: Commitment to treat all concerned parties in an equitable and fair manner.

Strategy: Energy conservation training part of annual training programs.

Strategy: Lessen the impact on the future operations of the district.

Strategy: Incorporate energy and resource conservation into instructional program.

Strategy: Be open to change and new ideas.

Strategy: Establishing standards that are flexible (technology changes).

Strategy: Utilize practices established by the Collaborative for High Performance Schools (CHPS) whenever feasible.

Strategy: Assume leadership role in the statewide organizations (CASH, CASBO) to advocate for energy legislation favorable to schools.

Conclusion

Approval of the energy and resource conservation plan is a necessary and important step for the district to manage and reduce energy usage. With your approval, the Director of Planning will take the steps to implement the goals, objectives and strategies of the plan and will provide periodic updates regarding the program's progress.

ATTACHMENTS