

Nevada County Energy Plan

Overview of the Energy Plan

The guidelines contained in this Energy Plan are adopted by the *County of Nevada* for implementation by employees to reduce the use of energy and water in the operation of County of Nevada facilities. This Plan is enacted for the purpose and intent of reducing County of Nevada operational expenses associated with energy and water use.

County of Nevada has established a goal to reduce overall energy usage by five percent (5%) in the first year, fifteen percent (15%) in the second year, and five percent (5%) in the third year by implementing the practices, measures, and procedures outlined in this Energy Plan.

At an annual interval, the County of Nevada will measure the fiscal effect of the conservation efforts by comparing total annual energy billings to historical usage (adjusted for energy cost increases or inflation) and reallocate any savings as determined by the 'Retention of Savings and Rebates' section of the Performance Measure, Management and Reward sub-section of the Implementation Plan.

The Energy Plan is comprised of four major areas adopted by the Board of Supervisors. The major components are:

1. *Energy Policy and Administrative Regulations*
2. *Mission Statement, Goals and Performance Criteria*
3. *Guidelines for Implementation*
4. *Equipment Standards*

The Energy Plan is not intended to cause discomfort to customers or employees, and there is flexibility for individual situations where adjustments must be made for health and safety reasons.

It is important that each person in the County of Nevada do their part to ensure that the guidelines and standards are implemented and followed throughout the course of each workday in order that the County of Nevada may prevent energy costs from seriously affecting County operations.

The County of Nevada Energy Plan moves toward managing energy costs by:

- *REDUCING ENERGY WASTE.*
- *IMPROVING EQUIPMENT PERFORMANCE.*
- *DEVELOPING ENERGY EFFICIENCY INTO MODERNIZATION AND NEW CONSTRUCTION PROJECTS.*
- *INVOLVING COUNTY OF NEVADA EMPLOYEES IN ENERGY USE DECISIONS.*

Section One: Energy Policy and Administrative Regulation

ENERGY AND WATER CONSERVATION

- The County of Nevada is committed to reducing its demand for electricity, natural gas and water in order to conserve natural resources and to save money to support other County needs. To that end, management shall establish goals to help reduce energy and water consumption at County facilities.

- The County of Nevada shall establish an energy efficiency program which includes specific strategies designed to help the County use energy more efficiently.

- As part of the energy efficiency program, the IGS Department shall develop an Energy Plan for both during and after regular operating hours. The Energy Plan shall also address the role of employees in helping to conserve resources and other activities to help the County of Nevada meet energy reduction goals.

- The IGS Department shall analyze the effect of any utility rate increases on the County budget and develop and implement any necessary contingency plans.

- Facilities Management shall regularly inspect County facilities and operations and make recommendations for maintenance and capital expenditures that will help the County reach its energy and water conservation goals.

- The IGS Department shall make every effort to identify funding opportunities and cost-reducing incentive programs to help the County achieve its resource conservation goals.

- The IGS Department shall annually report to the Board of Supervisors on the Counties progress in meeting energy and water use reduction goals.

Section Two: Mission Statement, Goals, Performance Criteria

COUNTY OF NEVADA ENERGY PLAN

MISSION STATEMENT

The County of Nevada is committed to environmental protection through energy efficiency as a fundamental operational objective and integral to the strategy of fulfilling our corporate mission.

We recognize that the efficient operation of our facilities reduces adverse environmental impacts.

We recognize our position as responsible community citizens and the opportunity to create a positive, public role model for resource conservation in County of Nevada assets.

Therefore, our operational and planning decisions will incorporate the prudent use of energy resources by:

- Preventing and minimizing energy related pollution and wastes.
- Fostering a culture of personal responsibility for resource conservation among all County of Nevada employees.
- Emphasizing a resource conservation and environmental protection ethic among all County of Nevada employees.
- Continually improving our Energy Plan performance.
- Deploy resources to reflect the County of Nevada's environmental protection commitment through energy efficiency and resource conservation.

GOALS OF THE ENERGY PLAN

The County of Nevada commits to actively improving our energy practices in order to reduce costs and emissions that contribute to environmental pollution and to demonstrate community leadership in resource conservation.

Improve Energy Efficiency

- The County of Nevada will institute an Energy Plan that reduces energy consumption through the application of cost effective efficiency measures and employee training.
- The Energy Plan will speed the introduction of cost effective, energy-efficient technologies into our facilities.

Reduce Greenhouse Gases

- Through cost effective energy efficiency measures, the County of Nevada will reduce greenhouse gas emissions attributed to our facilities energy requirements.

Address Renewable Energy

- The County of Nevada will evaluate renewable energy resources (passive solar, solar thermal, solar electric, wind, geothermal, biomass) within our facility operations on equal footing with conventional energy resources.
- The County of Nevada will evaluate purchasing electricity from renewable energy sources where available and affordable.

Goals of the Energy Plan (continued)

Improve Transportation Efficiency

- The County of Nevada commits to reduce petroleum fuel consumption through improvements in fleet fuel efficiency and by the use of alternative fuel vehicles if practical.
- The County of Nevada will promote the use of alternative modes of transportation including public transportation, carpooling, bicycling, and walking.

Water Conservation

- The County of Nevada will reduce water consumption and its associated energy delivery costs in our facilities by implementing cost effective efficiency measures.

ENERGY PLAN PERFORMANCE CRITERIA

- Maximize opportunities to reduce energy costs through energy efficient lighting and mechanical systems, improved lighting and mechanical equipment controls, natural lighting, maintenance and operations best practices, and general equipment efficiency and maintenance.
- Specify sustainable building practices during new construction and renovation to increase energy performance to exceed the minimum level of energy efficiency prescribed by California State standard Title 24.
- Specify and ensure that fundamental building system components are constructed, installed, commissioned, and maintained to function as intended to achieve energy performance goals.
- Encourage energy conservation, energy efficiency, load management, customer owned generation, solar and renewable technologies and load management, and demand response strategies to reduce environmental impacts associated with energy use.
- Encourage architects, vendors, and contractors to support the environmental standards of this plan and to work in partnership with the County of Nevada to ensure that facilities and operations incorporate the highest level of environmental protection through energy efficiency at a practical cost.
- Ensure that personnel who work with energy equipment or are involved in energy-related decisions receive training for implementing this Plan.

Section Three: Guidelines for Implementation

The County of Nevada will continually reduce its energy use and costs by:

- Purchasing and installing energy efficient and water efficient equipment that reduces energy costs and conserves natural resources.
- Promoting energy efficiency, water efficiency, material reuse, recycling, and renewable energy resources.

The County of Nevada will seek to institutionalize energy efficiency as a worthwhile value by:

- Providing training and technical resources to assist the Facilities Maintenance Division in evaluating various energy-saving technologies.

Nevada County Energy Plan

- Enabling the Facilities Maintenance Division to implement energy efficiency projects using financial strategies such as energy cost savings reinvestment, participating in favorable loan programs, and participating in Pacific Gas and Electric Company or other utility financial incentive programs for energy efficiency.
- Implementing outreach and communication strategies to increase awareness among all employees, not only those involved in energy or facility management.
- Encouraging all employees to practice energy efficient habits in the workplace.
- Serving as a positive example to the community by demonstrating the benefits of energy efficiency, water efficiency, and renewable energy resources.

IMPLEMENTING THE ENERGY PLAN

Leadership

- The IGS Department will designate an individual responsible for meeting the goals and requirements of this Plan, including an annual summary of effectiveness to management. The annual summary addresses Plan performance and includes a statement of the net annual energy and cost saving impacts of the Plan.
- Each County of Nevada facility will designate an individual as responsible for submitting updates for inclusion in the annual summary.

Energy Team

- The County of Nevada will form an energy team consisting of appropriate procurement, legal, budget, safety, management, and technical representatives as well as a utility representative to expedite and encourage the goals and requirements of this Energy Plan.

Life-Cycle Cost Analysis for Efficiency Decisions

- The County of Nevada will use life cycle cost analysis for decisions regarding investments in products, services, design, construction, and other projects to reduce energy and water consumption and lower energy and resource costs.
- Where appropriate, the County of Nevada will consider the life-cycle costs of blended projects, particularly to encourage bundling of energy efficiency projects with renewable energy projects.
- The County of Nevada will retire inefficient equipment on an accelerated basis where replacement results in lower life-cycle costs as funding allows.

Energy and Water Audits at County of Nevada Facilities

- Facilities Management shall conduct a walk-through energy and water efficiency survey of each of its facilities. The surveys shall be used to rank facilities for future comprehensive energy and water efficiency audits.

Comprehensive Facility Audits

- Based on the walk-through surveys, Facilities Management shall develop and implement a plan to conduct or obtain comprehensive energy and water efficiency audits.
- Facilities Management shall conduct energy and water audits as soon as possible, either independently or through utility energy efficiency service offerings.
- Audits of facilities performed within the last thirty-six months may be considered current for the purposes of implementation.
- "No-cost" audits shall be utilized to the extent practicable.
- The County of Nevada shall conduct surveys and audits of any leased facilities to the extent that the recommendations of such surveys and audits could be implemented under the lease terms.

Implementation of New Audit Recommendations

- Based on preliminary data from the walk-through surveys, high priority facility audits shall be completed first.
- Within twelve months of the completion of a comprehensive facility audit of each facility, the County of Nevada shall begin implementing cost effective recommendations for the installation of energy and water efficiency recommendations and renewable energy technologies as funding allows.

Implementation of Existing Audit Recommendations

- Within twelve months of the date of this Energy Plan, the County of Nevada shall begin implementing the cost effective recommendations of any audit performed within the past thirty-six months for the installation of energy and water efficiency and renewable energy technologies as funding allows.

ENERGY MANAGEMENT STRATEGIES

Utility Rebate Programs

- The County of Nevada will participate in all appropriate utility rebate programs and equipment manufacturer rebates. Pacific Gas and Electric Company provides cash rebates for low cost measures using the ***Energy Efficiency Rebate*** program, financial incentives for investment grade measures using the ***Customized Energy Efficiency / Demand Response Incentive*** program, and for efficient design and construction using the ***New Construction Rebate*** program.

Deferred Maintenance

- Equipment scheduled for deferred maintenance, replacement, emergency repairs, or special needs allocations should always include control of the energy performance of associated equipment.

Discount Purchasing Programs

- Evaluate purchasing opportunities for energy products / equipment / services such as electricity, natural gas, water and others that would reduce costs, enhance energy efficiency and conserve natural resources.

Energy Star® and Energy Efficient Products

- The County of Nevada shall select Energy Star® equipment or equipment within 10% of the energy rating of Energy Star® equipment. For product groups where Energy Star® labels are not yet available, the County of Nevada shall select products that are in the upper 25 percent of energy efficiency for their respective product categories.

High Performance Facility Design

- The County of Nevada shall consider sustainable design principles for all new construction and modernization projects. The County of Nevada will consider sustainable principles to the orientation, design, construction, and operation of new facilities.
- The County of Nevada will optimize life-cycle costs, pollution reduction opportunities and other environmental and energy costs associated with the construction, operation and decommissioning of County of Nevada facilities.

Facility Efficiency Improvements

- The County of Nevada will investigate efficiency opportunities (where system appropriate) for steam systems, boiler operation, air compressor systems, ventilation, and renewable energy technologies.

Highly Efficient Systems

- The County of Nevada will require high performance energy systems in new construction or retrofit projects when the systems are life cycle cost effective.
- The County of Nevada will consider incremental efficiency specifications when upgrading existing equipment when the efficiency upgrades are life cycle cost effective.
- The County of Nevada will survey local natural resources to optimize use of naturally occurring energy sources.

Self Generation

- The County of Nevada will consider alternative energy systems including solar hot water, solar electric and solar outdoor lighting where such systems are life-cycle cost effective and offer additional benefits including pollution reduction, source energy reduction, reduced infrastructure cost, or expedited service.

Competitive Power

- The County of Nevada will evaluate competitive opportunities in electric, natural gas, water, and other resource markets to reduce costs and enhance services.

Fleet and Transportation Efficiency

- The County of Nevada shall work to reduce fleet operations petroleum fuel consumption by practicing energy efficient driving habits, minimizing individual trips, and eliminating the unnecessary idling of County of Nevada pool vehicles. The County of Nevada should consider the acquisition of alternative fuel vehicles or higher fuel economy vehicles when replacing County of Nevada vehicles.

PERFORMANCE MEASUREMENT

Annual Budget Submission

- The County of Nevada's annual budget submission should specifically request funding to achieve the goals of this Energy Plan. Budget submissions should include the costs associated with:
 - Administering the Energy Plan.
 - Providing contractual capabilities to implement cost effective efficiency measures.
 - Procuring cost effective efficiency products.
 - Constructing sustainable new buildings.
 - Implementing energy efficiency in the modernization and renovation of County of Nevada facilities.

Annual Implementation Plan

- The County of Nevada will provide annual adjustments to the Energy Plan to fulfill the goals of the Plan. Adjustments should be noted in the annual Management Summary.

Annual Management Summary Requirements

- The County of Nevada will measure and include its progress in meeting the goals and requirements of the Plan in an annual Management Summary. The annual Management Summary is due at the end of each fiscal year.
- The Management Summary will describe how the County of Nevada is using the strategies described in this Plan to help meet resource cost savings and environmental pollution reduction goals. The Management Summary explains which strategies saved energy costs, and which did not.

Retention of Savings and Rebates

The IGS Department is granted authority to retain savings generated from resource efficiency activities and to reinvest these savings into additional efficiencies. Savings from Plan implementation may be redirected to:

- Purchasing new energy efficient equipment.
- Financing of additional energy efficiency retrofit projects.
- Supporting renewable energy projects where cost effective.

Training and Education

- The County of Nevada will ensure that all appropriate personnel who work with energy equipment or are involved in energy related decisions will receive training for implementing this Plan.
- The County of Nevada will provide training or training materials for any programs made available relating to the resource efficiency strategies contained in this Plan.
- Each new employee working in facilities or with energy equipment will be given basic instruction on whole building energy systems, lighting, HVAC, energy management systems, and resource efficiency.
- The County of Nevada will incorporate training for the Purchasing Department that includes life-cycle cost analysis, utility rebate and incentive programs, energy savings performance contracts, Energy Star[®] and resource conservation.
- The County of Nevada is encouraged to develop outreach programs that include education, training in and promotion of Energy Star[®] products for all its employees.

Section Four: Equipment Standards

Overview

Facilities Management shall document approval of any equipment such as vending machines not owned by the County of Nevada before its use at County of Nevada facilities. The department utilizing the non-County equipment will complete an equipment approval form and forward it to Facilities Management for approval.

Equipment

Microwaves, coffee makers, and refrigerators shall be permitted only in employee break rooms or designated employee areas. Appliances shall meet County standards for energy efficiency.

Computers, televisions, VCR's, overhead projectors, printers and other equipment needed for operational purposes are required to be plugged directly into wall outlets or approved surge protectors. Appliances shall be attached with approved anchoring devices to prevent theft and accidental falling in the event of an earthquake. If a power strip is available, it should be turned off at the close of the work day.

Only County approved (heavy grade with ground) extension cords are allowed. At no time are extension cords to permanently power any appliance. No ground plug adapters will be allowed. If permanent power is necessary, a work order is to be submitted to Facilities Management to request the necessary modifications.

Office equipment, such as copy machines, mimeograph, and duplication equipment shall be installed as per manufacturer recommendation. Adequate ventilation will be established before use. The equipment is to be turned off at the close of business.

Electric space heaters are not permitted unless provided by Facilities Management, and then only as a temporary measure. A space heater or other means of heating may be used after the site manager (or their designee) has submitted a work order for repairs of the existing HVAC system and

Nevada County Energy Plan

the repairs cannot be completed in time to ensure the comfort, health and safety of employees. All heaters must be unplugged when the room is unoccupied and flammable material shall be kept away from the electric heater at all times. Space heaters are a temporary measure and not intended for permanent use.

Used or new refrigerators or freezers offered by the public for use at County of Nevada facilities shall not be accepted unless the refrigerator or freezer is certified as an Energy Star® unit or has an energy usage rate within 10% of an Energy Star® unit.