

Washoe County Energy and Sustainability Strategy

Prepared by Green Team Members:

Dave Childs, Assistant County Manager
Daniel Inouye, Washoe County Air Quality, Sr. Air Quality Specialist
Yann Ling-Barnes, Washoe County Air Quality, Environmental Engineer II
Dave Solaro, Assistant Public Works Director – Facilities
Dan St. John, P.E., Public Works Director
Mike Sullens, Purchasing and Contracts Manager
Bill Whitney, Community Development Senior Planner

September 28, 2010

Washoe County Energy and Sustainability Strategy

Executive Summary

Purpose:

The purpose of this strategy is to introduce cost-effective, energy-efficient technologies into County facilities and promote an energy conscious culture that encourages prudent decisions with regard to energy consumption. The reduction in total energy demand that will result across all county government operations will help offset future higher energy costs and help drive down the need for new fossil fuel based energy production. Energy conservation is the key element of this strategy because of its potential to reduce overall energy demand and consumption. Energy conservation also plays an important role in addressing climate change by lowering the county's overall greenhouse gas emissions and carbon footprint. It is often the most economical strategy to advance climate protection efforts and provides an environmentally benign alternative to increased energy production and consumption. By lowering energy demand, energy conservation provides for greater flexibility in choosing preferred methods of energy production, e.g., "green power" - renewable energy that is produced with no man-made greenhouse gas emissions.

History:

In 2001 the Washoe County Board of County Commissioners adopted an energy strategy that was a first step in reducing energy consumption, and has shaped purchasing decisions in the subsequent years regarding environmentally friendly products.

Implementation:

This energy and sustainability strategy is supported by an implementation guide which sets measurable energy reduction goals. The implementation guide provides a structure to realize these goals through a combination of energy conservation upgrades, enhanced operational efficiencies, and employee action. It allows for a considerable reduction in overall energy consumption without the use of capital funding. The guide is not a static document and may be modified in the future to reflect emerging "best practice" energy conservation and energy management strategies and initiatives. The guide also supports objectives that result in healthier buildings and enhanced worker comfort, both of which can contribute to greater workplace productivity.

Washoe County Energy and Sustainability Strategy

Purpose:

The purpose of this strategy is to ensure energy and resource efficiency are explicitly considered and examined throughout the County government and County decision-making. This strategy establishes guidelines for cost-efficient and sustainable resource consumption and allows the Washoe County Department of Public Works to coordinate implementation of the policy specifics through an Implementation Guide. This guide is not a static document and may be modified in the future to reflect emerging “best practice” energy conservation and energy management strategies and initiatives.

Core Beliefs:

- The efficient and conscientious use of energy by municipal government is essential to modeling good citizenship, accountability, and service.
- Local government has a responsibility to be a leader in workplace resource efficiency.
- Optimizing energy conservation and energy management can result in significant cost savings and enhanced environmental stewardship.
- The combustion of fossil fuels - through electricity generation, heating and transportation - results in carbon dioxide emissions.
- A reduction in energy consumption by Washoe County government will reduce greenhouse gas emission attributable to County operations.
- As energy costs continue to rise, energy conservation measures provide costs avoidance/cost savings as well as help to decrease domestic demand for volatile foreign oil imports.
- To effectively address energy conservation by a large municipal entity, both operational efficiency and employee usage patterns must be addressed.

The Washoe County Board of County Commissioners hereby resolves and declares that it is the strategy of Washoe County Government to:

- Recognize the energy demand and environmental impact associated with the County's operation and management of facilities necessary to provide services to the people of Washoe County;
- Establish efficient energy management within County government operations as a fundamental operational objective;
- Execute this implementation strategy;
- Implement, where practicable, energy efficiency measures through a variety of mechanisms such as life cycle analysis and energy performance contracting;
- Provide for the verification and commissioning of fundamental building systems to ensure they are designed, constructed, installed, calibrated, and operating as intended, in order to achieve exemplary energy performance goals;
- Adhere to voluntary green construction and remodeling standards for buildings where appropriate, such as ENERGY STAR, and encourage various nationally supported and resource efficient standards, such as:
 - The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED), for building excellence when appropriate and/or life cycle cost effective.
- Encourage operation and planning based on the prudent use of natural resources and minimize greenhouse gas emissions from burning fossil fuels, water use, and waste generation;

- Encourage the tracking, promotion, and publication of sustainable and energy efficient practices;
- Encourage vehicle fleet efficiency and the use of alternative fuels;
- Encourage the adoption of environmentally preferable purchasing policies for products, vehicles, and service and suggest that contractors and suppliers commit to similar energy efficiency and sustainability standards;
- Encourage the expansion of renewable energy use and other distributed generation technologies throughout the County's facilities and activities.
- Provide County personnel with proper training and education in implementing this policy;
- Serve as an educational and informational resource in energy efficient practices within the workplace and foster a sense of personal responsibility for optimal energy management in employees;
- Recognize and reward individual and collective efforts that contribute to the County's energy and sustainability strategy goals;
- Regularly measure the County's environmental impact, including energy use, water use, fleet emissions, recycled materials, and waste generation;
- Support continuous energy performance improvements by funding new efficiency measures with funds derived from utility savings.
- Research and consider additional cost-effective technologies as they become available;
- Utilize innovative financing and contractual mechanisms, incentive and reward systems, and shared savings programs to further the County's goals.

WASHOE COUNTY ENERGY AND SUSTAINABILITY STRATEGY IMPLEMENTATION GUIDE

WASHOE COUNTY ENERGY AND SUSTAINABILITY STRATEGY IMPLEMENTATION GUIDE

I. MISSION STATEMENT

- A.** Washoe County commits to significantly improve its energy management in order to maximize the use of taxpayer dollars and maximize resource efficiency. Washoe County further commits to continually seek ways to realize the full potential of current energy control systems as well as new equipment and upgrades and to accelerate the implementation process of behavioral and operational resource conservation measures.

The following objectives form the basis of this energy policy and will be modified to reflect current conditions over time:

- Continually and systematically improve the efficient use of all Washoe County energy resources to ensure a secure and sustainable energy supply by increasing energy efficiency to the maximum extent practicable in all Washoe County buildings and facilities.
 - Ensure that new and existing Washoe County buildings and facilities are designed, maintained and upgraded, as required, to be as energy efficient as practicable based on life-cycle cost evaluations.
 - Implement clean and renewable energy systems to the maximum extent practicable in Washoe County buildings, facilities and operations to improve energy security, and reduce costs.
 - Increase energy efficiency to the maximum extent practicable for all Washoe County vehicles, including the increased use of the most fuel efficient vehicles available and alternative-fuel vehicles in the county fleet.
 - Continually and systematically reduce harmful greenhouse gas emissions generated through Washoe County operations by replacing conventional and more polluting sources of energy with clean and renewable energy sources in order to conserve essential energy resources and positively contribute to a healthy and stable climate future.
 - Promote emerging technology that hold promise for the future by adopting demonstration projects that serve to model our green values to the community.
- B.** Washoe County seeks to encourage comfortable and productive employee working conditions, introduce cost-effective, energy-efficient technologies into its facilities, and promote an energy conscious culture to encourage cost-effective decisions with regard to energy consumption.
- C.** As a consumer of products and services, Washoe County encourages reducing our energy and water use and cost where appropriate by:
- 1) Purchasing best practice energy-and water-saving products and technologies, which reduce operating costs;
 - 2) Promoting energy and resource efficiency, water conservation, and the use of renewable energy products, and by helping to foster markets for emerging technologies; and
 - 3) Participating in the existing local, statewide, regional, and federal energy management training efforts and encouraging internal training.

- D. Where appropriate, Washoe County may encourage resource conservation as a workplace value by:
- 1) Providing training and technical assistance resources, which assist energy managers and facilities personnel in evaluating various energy-saving technologies.
 - 2) Providing clear goals, performance indicators, and a measurement framework to assist managers.
 - 3) Enabling Public Works personnel to implement energy efficiency projects using innovative financing strategies through public-private partnerships and utility incentive programs.
 - 4) Implementing outreach and communication strategies to increase awareness among employees at all levels, not only those involved in energy or facility management.
 - 5) Encouraging all employees to develop energy-efficient habits in the workplace on a daily basis.
- E. Washoe County strives to serve as a good example to other local governments and the general public by demonstrating, where appropriate, the benefits of energy efficiency, water conservation, and alternative energy strategies (renewable and other distributed generation technologies).

II. ESTABLISH ENERGY CONSERVATION PROGRAM STRUCTURE

A. Establish Team & Responsibilities

- 1) Designation of a Green Team: Washoe County will support a Green Team to review issues pertaining to this Guide and the Energy and Sustainability Strategy. The Green Team will address issues pertaining to energy laws, state and federal regulations affecting County facilities, coordinate with other similar efforts in the community, and inform and educate County employees regarding best practices and progress in the implementation of the Energy and Sustainability Strategy and this Implementation Guide.
- 2) The Green Team shall include at a minimum members of the Departments of Public Works, Building and Safety, Community Development, Water Resources, Health Department (Air Quality Division) and Purchasing.
- 3) Technical Support Teams consisting of appropriate maintenance, custodial, and facilities personnel from each county building or facility can also be formed to meet the goals and requirements of this Energy and Sustainability Strategy and Implementation Guide. Technical Support Teams are encouraged to be in regular contact with the Green Team to implement goals and develop building-specific plans to reduce resource consumption wherever necessary.

B. Establish Accountability Framework

- 1) To effectively achieve its energy and resource conservation goals, Washoe County is dedicated to tracking and measuring results. Life Cycle Assessment strategies will be utilized where appropriate.
- 2) Annual Resource Conservation Review The Green Team will meet annually to revisit goals, discuss metrics and performance tracking, and update this guide. Revised plans may be included in annual reports to the Board of County Commissioners and should coincide with the development of a long term, 5-year plan.
- 3) Annual Budget Submission The Department of Public Works submissions may

specifically request funding necessary to achieve the goals of this policy and guide. Budget submissions may include the costs associated with: encouraging the use of, administering, and fulfilling agency responsibilities under energy savings performance contracts, utility energy-efficiency service contracts, and other contractual platforms for achieving conservation goals; encouraging implementation of life-cycle cost-effective measures; encouraging procurement of life-cycle cost-effective products; encouraging implementation of shared savings with other involved departments.

4) Shared savings and financial incentives A portion of savings potentially derived from the ongoing implementation of this Energy and Sustainability strategy is encouraged to be designated to Washoe County as a whole to be shared and to protect against budget shortfalls or for use at the discretion of Washoe County. Consistent with the promotion of energy efficiency, a portion of the energy savings will be budgeted through a County approved shared savings plan to encourage:

- Purchase of new energy-efficient equipment and/or to finance energy-efficiency retrofitting projects, additional energy saving management projects, related capital improvements, initiatives, and training, invest in renewable energy systems, and purchase electricity from renewable energy sources.
- Training and/or technical assistance; operation and maintenance training for building operators and maintenance staff that can have tremendous impact on energy and water use; and promote employee involvement to enhance facility comfort and/or make operations more efficient, typically resulting in reduced maintenance costs.

5) Innovative Financing and Contractual Mechanisms

- In addition to available appropriations, Washoe County encourages maximization of its use of available alternative financing contracting mechanisms, including, but not limited to, utility demand side management programs, shared energy savings contracts, and energy savings performance contracts, to meet the goals of the policy and implementation guide. Energy savings performance contracts provide significant opportunities for making County facilities more energy efficient at no net cost to taxpayers. In addition, the Department of Public Works is encouraged to work with the Board of County Commissioners to identify and eliminate internal regulations, procedures, or other barriers to implementation of the strategy and guide. Washoe County will strive to procure appropriate utility rebates and/or equipment manufacturer's rebates.
- The Washoe County Purchasing Department and the Public Works Department shall seek additional opportunities to negotiate favorable rates for electric power and natural gas purchases, including but not limited to pursuing an aggregated and cooperative procurement of electricity supply that emphasizes increasing the amount of clean and renewable energy purchased in a competitive marketplace.
- Part of this process can require the use of skilled local contractors to provide energy efficiency improvements to Washoe County buildings and facilities. This approach can help to keep more of our "energy dollars" in local circulation, creating an "economic multiplier" effect which strengthens the local economy. Moreover, financial savings accrued over the life of these initial energy efficiency improvements can be reinvested in the local economy in the form of more advanced energy conservation measures that can provide even more savings and local economic benefits. This approach provides that energy

efficiency improvement projects designed to minimize the drain of energy dollars from the local economy can be leveraged to save money while helping to spur local economic growth.

C. Staff Development & Engagement

- 1) Washoe County encourages all appropriate personnel that are involved in resource conservation related decisions and operations to receive training for implementing the strategy and guide.
- 2) Washoe County may provide relevant training or training materials for those programs that are deemed appropriate in relating to the energy management strategies contained in the strategy and guide.
- 3) At a minimum, every new employee that works in County facilities or with energy equipment is encouraged to be given basic instruction on the introduction to energy management, the whole building approach, lighting, HVAC, energy management systems and controls, efficient water use, and efficiency standards for other natural resources.
- 4) Washoe County will incorporate into existing procurement courses, or develop for new courses, information on energy management tools, including energy savings performance contracts, utility energy efficiency service contracts, ENERGY STAR and other energy efficient products, water and other natural resources, and life cycle cost analysis.

D. Communications & Recognition Strategy

- 1) Washoe County will develop outreach programs that include education, training, and promotion of ENERGY STAR and other energy efficient products for all its employees.
- 2) Washoe County will develop a comprehensive internal and external communications strategy to showcase its resource conservation efforts and successes.
- 3) Washoe County will designate exemplary new and existing facilities with significant public access and exposure as showcase facilities to highlight energy or water efficiency and renewable energy improvements.
- 4) When Washoe County constructs a new building or building addition, the building will meet U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) if appropriate and cost effective. As an alternative, the project will showcase advanced technologies and practices for energy efficiency, water conservation, or use of solar and other renewable energy.
- 5) Washoe County may designate one of its major buildings to become a showcase to highlight energy or water efficiency and may also attempt to incorporate cogeneration, solar and other renewable energy technologies, and indoor air quality improvements. Selection of such buildings will be based on factors such as the level of visitors, historic significance, the likelihood that visitors will learn from displays and implement similar projects, and economic drivers.

III. FACILITIES

Goals & Performance Indicator(s)	Reduce energy consumption in buildings, facilities and operations by a minimum of 10%, as a county portfolio, over the next five years beginning in 2011, using 2009 energy use as a baseline. All new buildings to achieve a 75 in EPA's Target Finder. Reduce water consumption in facilities by 10% as a County portfolio, by 2012.
Baseline(s)	Establish baseline energy (by 2010) and water (by 2012) performance for every major facility.
Measurement	Track energy and water use monthly using EPA's ENERGY STAR Portfolio Manager.
Goals &	All ENERGY STAR products; top 25% energy efficient products where ENERGY STAR products

Washoe County encourages development of sustainable building principles in new and existing facilities utilizing the "LEED Silver" designation of the US Green Building Council as a guideline for the minimum rating standard of energy efficiency. Where it makes sense the rating system shall be followed for all new construction and major renovation of county buildings and facilities.

Washoe County is encouraged to optimize life-cycle costs, pollution, and other environmental and energy costs associated with the construction, life-cycle operation, and decommissioning of facilities.

A. Proposed Energy Efficiency Measures

Energy efficiency measures shall include, but not be limited to, the following:

- 1) Physical Plant - routine maintenance and upkeep
 - Lighting
 - Turn off all unnecessary lights, especially in unused offices and conference rooms and turn down remaining lighting levels where possible.
 - Replace incandescent lighting with energy efficient low-wattage lighting.
 - Install energy efficient parking lot and emergency lighting; all outdoor lights are to be placed on photo cells and/or timers.
 - Install LED traffic signals and exit signs wherever practicable.
 - Replace all incandescent flood lights with low-wattage lighting.
 - Buildings
 - Temperature set points; Cooling set point in summer months shall be set at 76 °F and Heating set points in winter months shall be set at 68 °F as practicable
 - Install maximum temperature set back during heating season; air conditioning shut down on nights and weekends.
 - Convert existing toilets to power 1 gal /1.6 gal flush units.
 - Install automatic low flow faucet and toilet controls.
 - Place all exhaust fans on individual timers or computers.
 - Set hot water temperature at or below 120 °F., or as practicable.

2) Projects

- Lighting
 - Place all interior lighting on timers or computer controls for low occupancy conditions; Install interior motion sensors in all county buildings to optimize lighting use.
 - Maximize the use of natural lighting through design excellence.
- Buildings
 - Retrofit buildings and facilities to established high performance energy efficient standards as required, e.g., comprehensive air sealing and maximum insulation.
 - Replace existing boilers with new high efficiency boilers.
 - Install specific energy savings devices, e.g., programmable thermostats, motion sensors, variable speed motors for HVAC equipment, etc., where appropriate.
 - Implement high efficiency energy standards for major renovations and new construction.
 - Install “economizers” on all HVAC equipment (Provides greater thermal efficiency by recovering low temperature energy from the flue gas before it is exhausted to the atmosphere).

B. Reduction of Fossil Fuel Use

- 1) Through life-cycle cost-effective energy measures, reduce fossil fuels usage and the associated greenhouse gas emissions attributed to building and facility energy use.
- 2) Consider renewable energy sources as an alternative to conventional fossil fuels and as a potential means to reduce and/or eliminate unnecessary fossil fuel use through the deployment of renewable energy sources or by other appropriate methods.
- 3) Where alternative fuels and/or renewable energy sources are not practical or cost-effective, encourage the improvement of the efficiency of our buildings and facilities.

C. Life-Cycle Analysis

- 1) Washoe County is encouraged to use life-cycle cost analysis in making decisions about investments in products, services, construction, and other projects to lower our costs and to reduce energy and water consumption.
- 2) Buildings that minimize life-cycle costs with efficiency measures are encouraged to be recognized. Such recognition is an assessment of the County’s progress toward implementing the Energy and Sustainability Strategy.

D. “ENERGY STAR”; “LEED”

- 1) Washoe County will strive to meet the ENERGY STAR building criteria for energy performance and indoor environmental quality in all eligible facilities to the maximum extent possible by using ENERGY STAR tools currently available.
- 2) All county funded buildings shall be designed to achieve a minimum of 75 points on the EPA national energy performance rating system as determined by EPA’s ENERGY STAR Target Finder, provided that the building is supported by EPA’s rating system.
- 3) Operating buildings should be benchmarked annually using EPA’s existing ENERGY STAR Portfolio Manager.
- 4) Buildings that rank in the top 25 percent in energy efficiency relative to comparable commercial and State buildings will receive the ENERGY STAR building label.
- 5) Washoe County may integrate this building rating tool into additional general facility audits that may be undertaken as part of the energy performance contracts.
- 6) Washoe County may use voluntary standard assessment rating systems including, but

not limited to, the U.S. Green Building Council's LEED (Leadership in Environmental and Efficient Design) rating system.

E. Energy Audits

- 1) Washoe County will implement cost-effective recommendations from comprehensive audits of facilities performed within the past 5 years, for installation of energy efficiency, water conservation, and renewable energy technologies consistent with supporting the energy program goals.
- 2) Washoe County will further identify high priority buildings and facilities to conduct comprehensive energy audits. After completion of a comprehensive facility audit of each targeted county building or facility, Washoe County will implement cost-effective recommendations for installation of energy efficiency, water conservation, and renewable energy technologies for each facility consistent with supporting the specific needs of the facilities' Technical Support Teams. Such audits may be conducted as part of energy performance contracts and should also be used to verify energy savings.

F. Off-Grid Energy Generation

- 1) Washoe County may use off-grid generation systems, including solar hot water, solar electric, solar outdoor lighting, wind turbines, fuel cells, and other off-grid design alternatives, where such systems are life-cycle cost-effective and offer benefits including energy efficiency, pollution prevention, source energy reductions, reduced infrastructure costs, or expedited service.

G. Water use

- 1) Through life cycle cost effective measures, such as increasing efficiency of water usage by installing high efficiency plumbing fixtures for all facilities and pumping processes including waste water, Washoe County encourages the reduction of water consumption and associated energy use in our facilities to reach the goals set under the appropriate sections of this policy. Where possible and appropriate, water cost savings and associated energy cost savings will be included in Energy Savings Performance Contracts and other financing mechanisms.
- 2) Washoe County encourages water quality protection and the reduction of storm water costs through Low Impact Development (LID) strategies and practices. Washoe County will investigate the cost effectiveness of implementing LID principles and practices in our local climate. LID is an approach to land development (or re-development) that works with nature to manage storm water as close to its source as possible by preserving and recreating natural landscape features such as street trees, bioretention, swales and permeable pavement. Storm water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions.

H. Temperature Settings

- 1) Central heating controls and individual room thermostats shall be programmed to a specific temperature range and may have an unoccupied setback temperature setting as low as 55 °F.
- 2) Central cooling controls and individual room thermostats shall be programmed to a specific temperature range and may have an unoccupied setback temperature setting as high as 85 °F.

- 3) Setback temperatures may go into effect as early as deemed necessary by facilities staffs provided that such increases or decreases in temperatures do not create undue discomfort for employees and their working environment during normal operating hours. Setback times may vary by building.
- 4) Specific temperature settings shall be under the total system control of the Department of Public Works. Individual building occupants will not have the ability to change or override settings. Any temperature change requests must be directed through the current work order system.
- 5) Building temperatures will remain at setback temperatures during weekends and holidays unless specific requests have been made 24 hours in advance through the work order system and deemed necessary and cost effective by the Assistant Public Works Director-Facilities or designee. Exception: Buildings open for normal public use on weekends shall be set to accommodate normal work day settings.
- 6) Normal work schedule temperature settings will be set at a minimum of 68°F and maximum of 76°F. The operating hours of each building will be set as those hours in effect at the adoption of this Energy and Sustainability Strategy. Changes to the operating hours will need the prior approval of both the Finance and Public Works Departments, since those changes affect the approved utility budget.

I. Space Heaters

The use of electric space heaters in individual offices and departments is **prohibited** unless an approval is obtained through the Assistant Public Works Director-Facilities or designee, and a safety endorsement made by the Risk Management Division, for staff member(s) with specific medical conditions/needs..

IV. Purchasing

Goals & Performance Indicator(s)	Reduce energy consumption in buildings, facilities and operations by a minimum of 10%, as a county portfolio, over the next five years beginning in 2011, using 2009 energy use as a baseline. All new buildings to achieve a 75 in EPA's Target Finder. Reduce water consumption in facilities by 10% as a County portfolio, by 2012.
Baseline(s)	Establish baseline energy (by 2010) and water (by 2012) performance for every major facility.

Washoe County encourages the initiation of a regional purchasing approach for energy products/equipment as well as services such as electricity, natural gas, water, and any other identified measures that would further enhance energy efficiency and conservation of natural resources. Washoe County will strive to develop a purchasing plan that specifies products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.

The Purchasing Department and the Department of Public Works shall seek additional opportunities to negotiate favorable rates for electric power and natural gas purchases,

including but not limited to pursuing an aggregated and cooperative procurement of electricity supply that emphasizes increasing the amount of clean and renewable energy purchased in a competitive marketplace.

The Purchasing Department is further encouraged to increase the sourcing of county office supplies containing the highest percentage of recycled materials content to the maximum extent practicable. For suppliers that provide the same quality of recyclable content, always choose the one geographically closest, whenever practicable, to reduce transportation related carbon footprint.

A. ENERGY STAR and Other Energy-Efficient Products

- 1) The Purchasing Department is encouraged to select, where life-cycle cost effective, ENERGY STAR and other energy efficient products when acquiring products that use energy, e.g., HVAC equipment, hot water heaters, computers and office equipment, appliances, etc. For product groups where ENERGY STAR labels are not yet available, the Purchasing Department is encouraged to select products that are in the upper 25 percent of energy efficiency for their respective product categories.
- 2) Washoe County is encouraged to incorporate energy-efficiency criteria consistent with ENERGY STAR and other designated energy efficiency levels into all guide specifications and project specifications developed for new construction and renovation. Product specification language is also encouraged to be developed and incorporated into purchasing procedures.

B. Electricity from Renewable Energy Sources

- 1) Washoe County encourages the expansion of the use of renewable energy (passive solar, solar thermal, solar electric, wind, hydro electric, geothermal, biomass) and other distributed generation technologies within our facilities and in our activities by encouraging the implementation of alternative energy projects and by encouraging purchase of electricity from renewable energy sources.
- 2) Through life cycle cost analysis, Washoe County may evaluate its current use of electricity from renewable energy sources. Washoe County may also consider the greenhouse gas intensity of the source of the electricity and may strive to minimize the greenhouse gas intensity of purchased electricity.
- 3) Based on this review, Washoe County may adopt policies and pursue projects that increase the use of electricity from renewable energy sources. Washoe County may include provisions for the purchase of electricity from renewable energy sources as a component of their requests for bids whenever procuring electricity. Washoe County may use savings from energy efficiency projects to pay additional incremental costs of electricity from renewable energy sources.

V. Transportation

Goals & Performance Indicator(s)	Reduce energy consumption in buildings, facilities and operations by a minimum of 10%, as a county portfolio, over the next five years beginning in 2011, using 2009 energy use as a baseline. All new buildings to achieve a 75 in EPA's Target Finder. Reduce water consumption in facilities by 10% as a County portfolio, by 2012.
Baseline(s)	Establish baseline energy (by 2010) and water (by 2012) performance for every major facility.
Measurement	Track energy and water use monthly using EPA's ENERGY STAR Portfolio Manager

Washoe County strives to reduce petroleum consumption by encouraging improvements in fleet fuel efficiency and the use of alternative fuel vehicles using fuels such as E85, bio-fuels, or electricity. Washoe County also encourages improved access to alternative modes of transportation, including public transportation (e.g., buses, light rail), carpooling, bicycling, and walking. Specifically, Washoe County seeks to:

- Reduce the total number of fleet vehicles.
- Downsize current and future fleet vehicles.
- Require the highest fuel efficiency vehicle available be procured for each vehicle class and explicitly consider fuel costs over a projected 5 year period to more accurately reflect the total cost associated with specific vehicle purchases.
- Require alternate-fuel vehicles to the maximum extent practicable be procured for each vehicle class, explicitly considering fuel costs over a projected 5 year period to more accurately reflect the total cost associated with specific vehicle purchasing.
- Reduce vehicle idling to no more than 5 minutes, and whenever feasible, eliminate vehicle idling.
- Replace required on-the-job driving with telecommunications, mass transit, carpooling, biking or walking to the maximum extent practicable.
- Create incentives to reduce county employee driving, e.g., transit passes, preferred parking for carpools and vanpools., commute by bike and on foot.
- Review current technologies and infrastructure needs for electric vehicle recharging stations for personal and fleet vehicles.
- Reduce Vehicle Miles Traveled (VMT)

A. Fleet purchasing & fuel specifications

Washoe County may develop a purchasing plan for E85, biofuel, or combined power vehicles.

B. Community Advocacy

Washoe County may work with vehicle-intensive businesses throughout the County to reduce greenhouse gas emissions through fleet and fuel choices.

VI. Waste & Recycling

Goals & Performance Indicator(s)	Reduce energy consumption in buildings, facilities and operations by a minimum of 10%, as a county portfolio, over the next five years beginning in 2011, using 2009 energy use as a baseline. All new buildings to achieve a 75 in EPA's Target Finder. Reduce water consumption in facilities by 10% as a County portfolio, by 2012.
Baseline(s)	Establish baseline energy (by 2010) and water (by 2012) performance for every major facility.
Measurement	Track energy and water use monthly using EPA's

When we think about energy, it is important to consider more than just our direct energy consumption (e.g. lights, appliances, vehicles, heating and cooling) but all the energy required to produce the goods and materials we use everyday. All goods and materials require energy in their processing, manufacturing, distribution, and disposal. The recycling of materials decreases not only the demand for raw materials but also the amount of energy required for the processing and extraction of raw materials. Therefore, increasing the capture rate for all recyclable materials within all county offices and agencies is also an important contributor to the goals of a comprehensive Energy and Sustainability Strategy.

As an additional energy saving measure, county recycling requirements shall be developed for "regulated recyclable materials". These recyclable materials shall include, but not be limited to; all regulated recyclable materials in addition to construction and demolition debris, automotive and consumer batteries, computers and other electronic devices, fluorescent lamps, thermostats and other mercury-laden devices where appropriate.

Washoe County is encouraged to implement a program to work with local waste management to ensure efficient pickup of trash and solid waste through the elimination of unnecessary pickups. This can be accomplished through effective compacting of trash bins prior to pickup and appropriate bin sizing, pickup frequency, and recycling practices. Washoe County is encouraged to implement an enhanced recycling program at each facility to offer alternatives to waste collection, processing and disposal that may derive additional cost savings for the County.

VII. Technology Services

Goals & Performance Indicator(s)	Reduce energy consumption in buildings, facilities and operations by a minimum of 10%, as a county portfolio, over the next five years beginning in 2011, using 2009 energy use as a baseline. All new buildings to achieve a 75 in EPA's Target Finder. Reduce water consumption in facilities by 10% as a County portfolio, by 2012.
---	--

Washoe County Technology Services is a major user of energy resources, not only to power desk top computer and printer equipment, but also to cool server rooms and maintain the uninterrupted power supply required to provide for a stable computing environment. Washoe County Technology Services is committed to ensuring that the equipment solutions proposed and ultimately provided meet the needs of County users while maintaining the highest level of energy efficiency practicable. Technology Services will partner with the Department of Public Works, and the Purchasing Department to find mutually agreeable solutions to further the County's commitment to energy conservation.

VIII. Employee Energy Conservation

The Green Team will develop a program to educate and encourage county employees to reduce energy consumption and promote "ownership" of energy costs by individual departments.

Electricity used by common office equipment (including computers, monitors, copy machines, computer network equipment, telephone network, printers and fax machines) makes up a significant share of the electricity used in commercial buildings. Power monitoring is a common technique that decreases the amount of power consumed when the equipment is not in use. Other efficiency features such as double-sided printing can save money and reduce the environmental costs of producing the paper.

The Program shall include, but not be limited to:

- Office Temperatures – Employee Education for the adopted cooling and heating set points.
- Lights Out - Turning off lights in unoccupied areas; use lighting appropriate to the task – unnecessary lighting should be turned off.
- Power Down - Fully enabling energy saving features on computers and office equipment, e.g., "energy saver" mode on copy machines; shutting down equipment that is not in use overnight or on weekends.
- More E-Mail = Less Paper – Make greater use of e-mail for communication, reducing the need for printing and copying.
- Double-Sided Printing & Copying - Whenever an office printer or copier must be used, make sure all defaults are set for double-sided.
- Scan vs. Copy - Utilize the scanner feature on the copier to export documents to a computer, reducing the amount of paper used.
- Energy Conservation Captains - Assign one or more employees in each work area to assure that lights and equipment are turned off at the end of each workday, recycling requirements are consistently met, etc.