**Nevada County, Nevada City and Grass Valley Energy Plans**

**Nevada County 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 governmental 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 staffs.

• Emphasizing a resource conservation and environmental protection ethic among all County of Nevada staffs.

• Continually improving our Energy Plan performance.

• Deploying resources to reflect the County of Nevada’s environmental protection commitment through energy efficiency and resource conservation.

**GOALS**

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 and maintain this Energy Plan that reduces energy consumption through the application of cost effective efficiency measures and staff 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.

***Improve Transportation Efficiency***

• The County of Nevada commits to reducing petroleum fuel consumption through improvements in fleet fuel efficiency and by the use of alternative fuel vehicles where 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.

<http://www.mynevadacounty.com/nc/igs/docs/Nevada%20County%20Energy%20Plan%202012.pdf>

**Nevada City Energy Plan**

The Nevada City Energy Action Plan (EAP) is a roadmap for expanding energy-efficiency and renewable-energy efforts already underway in the City. It builds upon energy-efficiency efforts begun in 2010 and work conducted by Sierra Business Council (SBC) from 2010-2014. The document focuses on three energy use sectors within the community – residential, non-residential and municipal (which is a subset of non-residential). The report only evaluates energy consumed by buildings and municipal operations; other energy consuming sectors such as transportation, solid waste, etc. are not addressed but could be at a future date. Nevada City owns/operates the City Hall, the City Yard, the Fire Station and Fire House, public parks, museums, water delivery, a water treatment plant, a wastewater treatment plant, streetlights and park lighting.

The two primary energy sources consumed by the three community sectors are electricity and natural gas which is distributed by Pacific Gas and Electric Company (PG&E). To date the City’s energy efficiency efforts are saving over 4.3 million kWhs of electricity and 32 thousand therms of natural gas annually, which underscores the importance of having such measures. The inventory and forecast work conducted by SBC identifies additional areas where significant opportunities exist for additional energy savings. The EAP specifies the actions needed to achieve those savings resulting in further reductions in energy consumption and increased energy savings for residents, businesses and the local municipal government.

The Plan goals address five key areas:

- Energy efficiency in existing structures

- Energy performance in new construction

- Expansion of renewable energy options

- Energy efficiency in municipal operations

- Water conservation which reduces energy needed to transport and treat water

The strategies focus on voluntary measures that can be taken by residents, businesses and the local government. Key components include developing and disseminating information on existing rebate and incentive programs; public outreach via the City’s website and printed materials; training for staff, contractors and developers; and partnerships with PG&E and local and regional organizations. Energy reduction performance indicators and targets are established for each group of strategies. If all the actions are implemented, the EAP would reduce electrical energy used in 2020 by 28% and natural gas use by 10%.

<http://www.nevadacityca.gov/files/documents/EnergyActionPlan1324031139041916PM.pdf>

**City of Grass Valley Energy Plans**

Tim Kiser, Director of Public Works for Grass Valley says his department is about to complete an approximately $5,000,000 comprehensive energy saving program in the next two months, which will install over 800 kW ground mounted Solar PV panels, solar hot water for heating the Memorial Park pool, and more.

Over the last 8 months, OPTERRA provided a recommendation to City Council for an energy and infrastructure improvement project for the City of Grass Valley. The recommended project included the following:

• Construction of three separate solar energy arrays. The largest being a 769 kW ground mounted solar array planned for a City-owned property adjacent to the Slate Creek Road lift station. The second system is an 82 kW photovoltaic solar canopy that will be installed at the City's water treatment plant to help power the facility and provide shaded parking for community members using the adjacent park. The third is 1,700 square feet of solar hot water panels for the Memorial Park Pool to reduce the cost of heating the pool while also providing much needed shade for pool users during hot summer months.

• Installation of a new, easier-to-use pool cover to better insulate the pool heat that is generated by the new solar thermal system.

• Replacement of the roof at City Hall and the retrofit of City-owned streetlights and lighting fixtures to high-efficiency LEDs, which will generate savings in both energy and maintenance costs.

The construction cost is just under $5 million, including interest or closing costs associated with financing the project. The projected net savings over 30 years is approximately $7 million.