



Sierra Pacific™



Nevada Power®

More power to you.

May 1, 2008

Carbon Benefits of Nevada Utility Conservation Programs

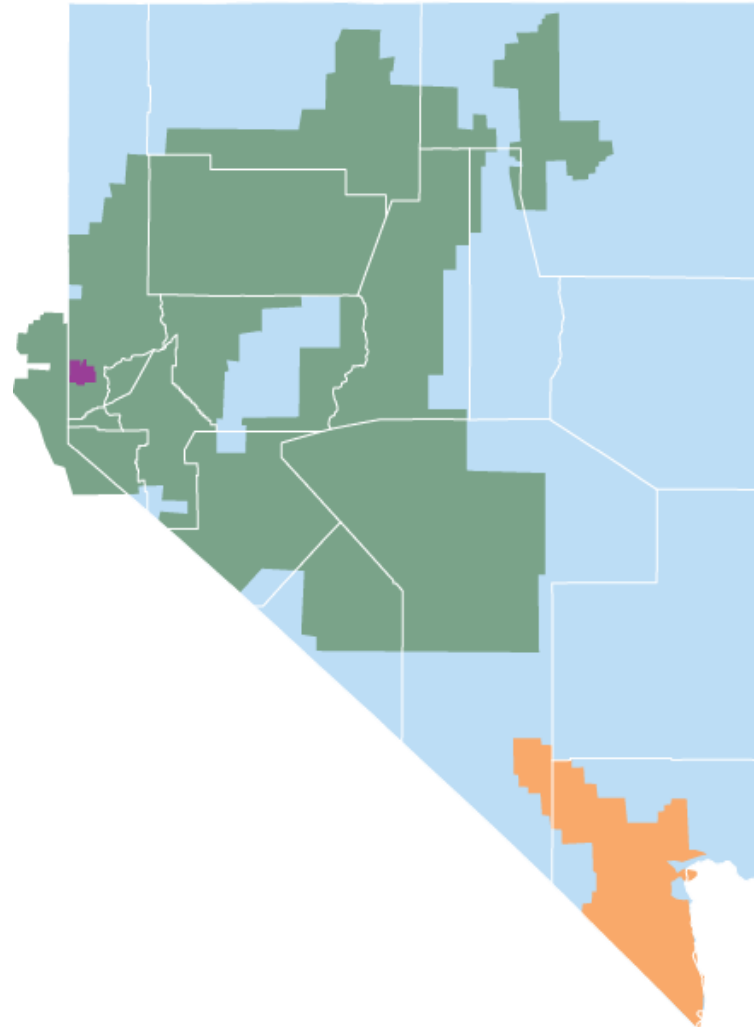
Starla Lacy

*Director, Environmental Services
Sierra Pacific Resources*

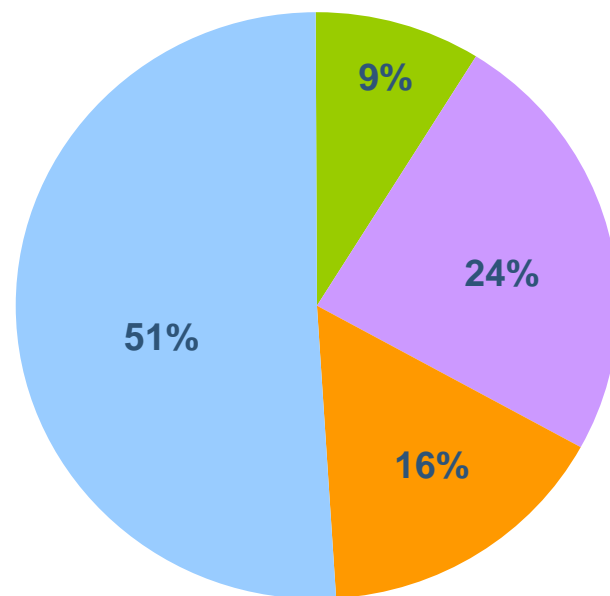
Presented for 28th Annual Utility Energy Forum
Tahoe City, California

Sierra Pacific Resources at a Glance

- **Serves most of Nevada, Lake Tahoe, and into California**
- **1.2 million electric customers**
 - 2/3 south, 1/3 north
- **54,500 square miles**
- **147,000 gas customers**
 - North only
- **7,600 MW consolidated peak in 2007**
- **4,200 MW consolidated generation in 2007**



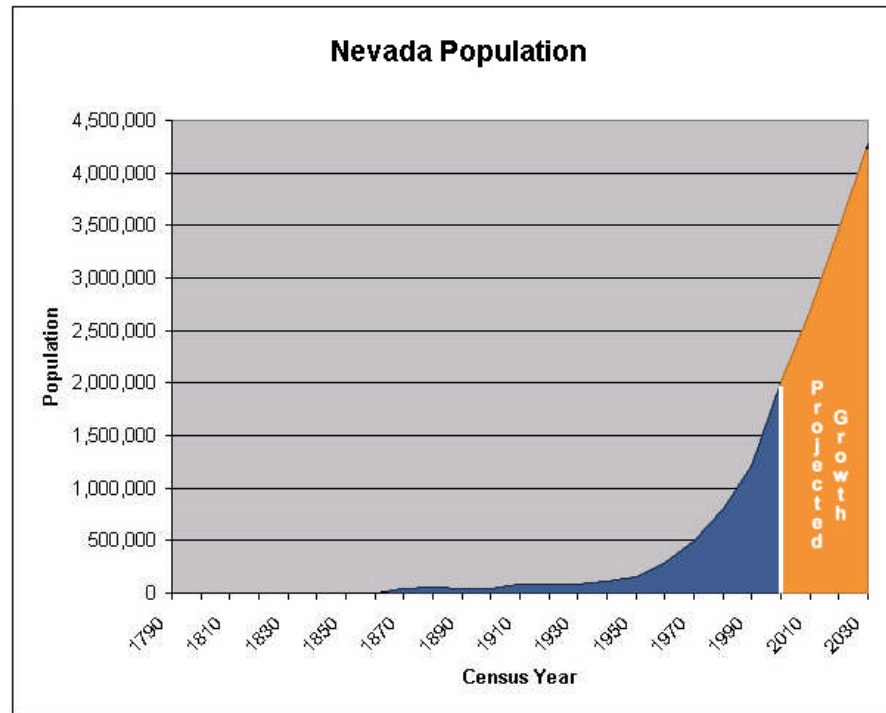
Today's Resource Energy Mix



Renewable	Coal
Purchased Power	Natural Gas

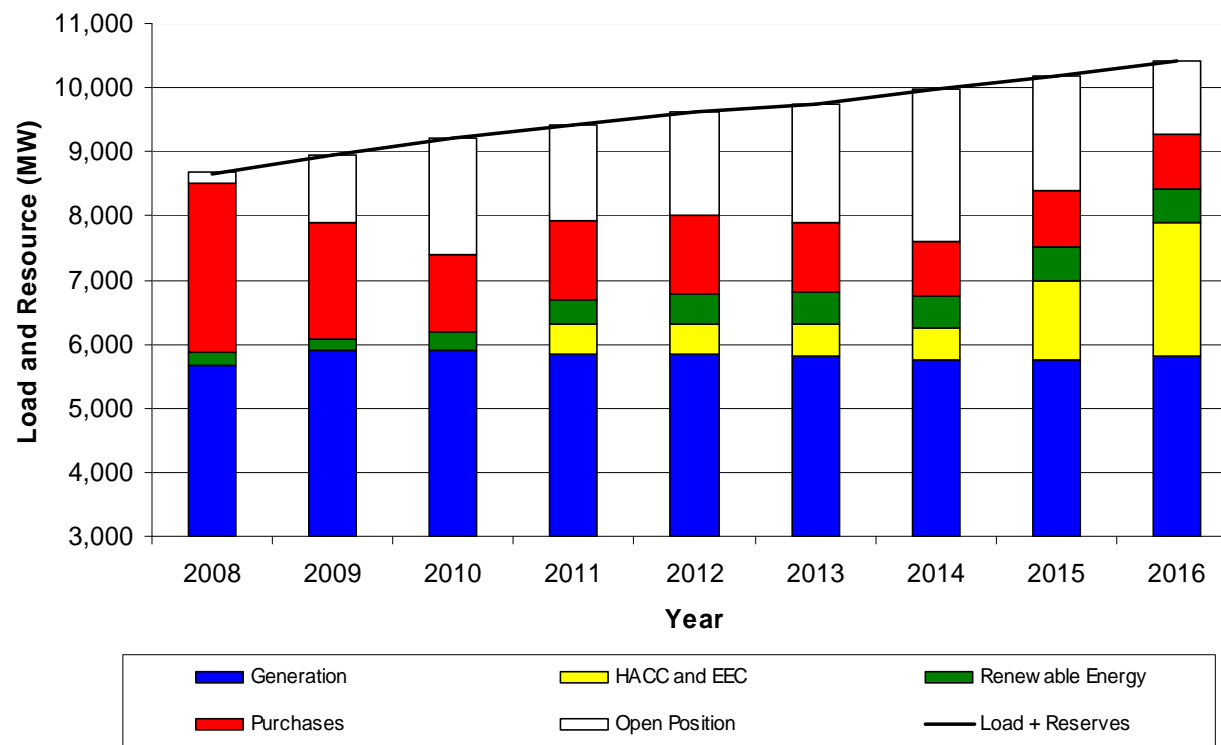
The Challenge

Over the last 20+ years, Nevada has been consistently ranked as the fastest growing state in the country. And it's not stopping!



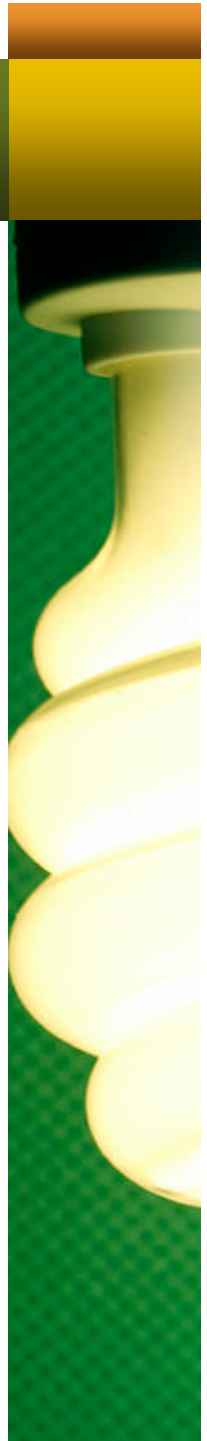
NPC and SPPC Loads and Resources

Growth Projection



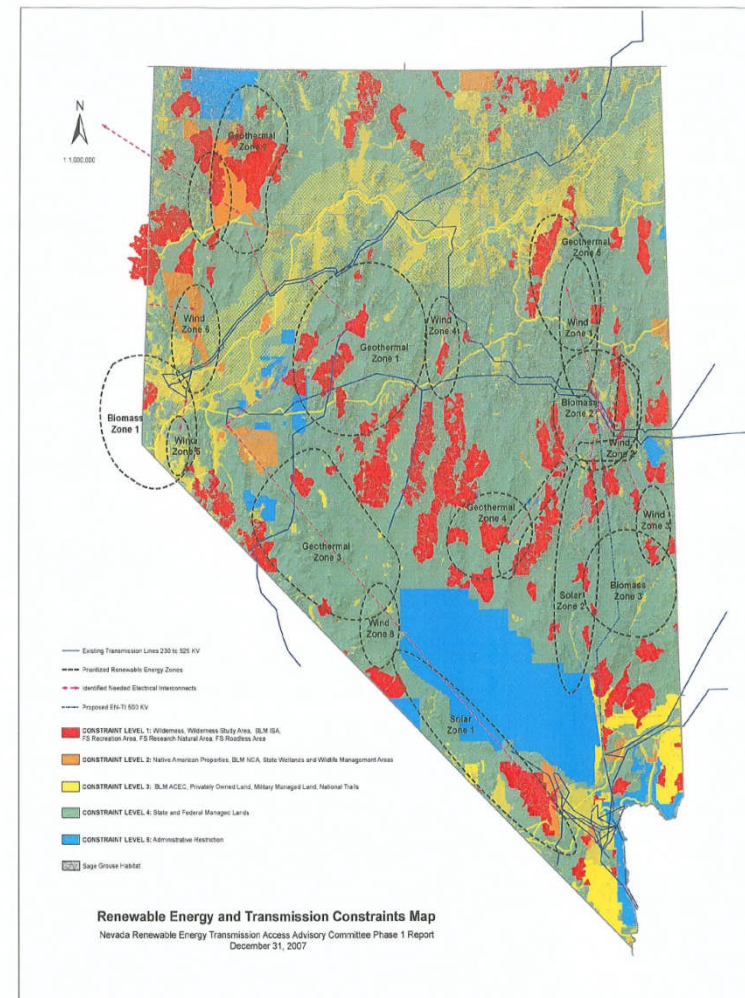
To add to the challenge....

- **86%+ of land in Nevada is federally owned and/or controlled**
- **Significant numbers of areas are 'off limits' for power plant and transmission line development due to land use designations such as:**
 - military operations and control
 - threatened/endangered species
 - conservation and park lands
 - cultural resource restrictions



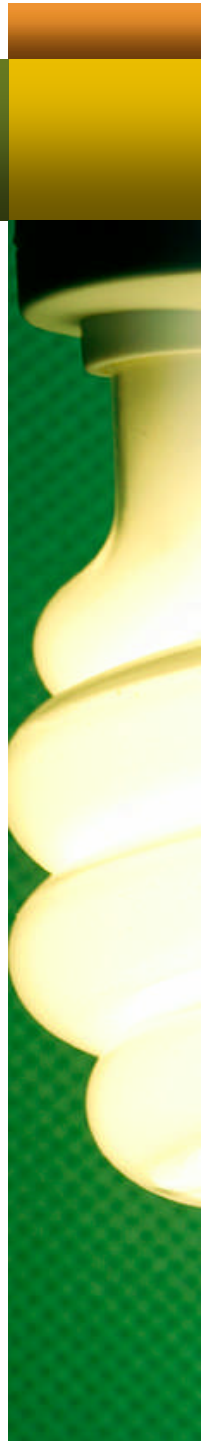
Example Constraint Map - Transmission

- **Red** – Wilderness, Recreation, Research & Roadless areas
- **Orange** – Native American, NCA, State Wetlands and Wildlife Mgmt
- **Yellow** – ACEC, Private, Military Managed, National Trails
- **Green** – State and Federal Managed
- **Blue** – Administrative Restrictions



The Big Question

So how can a utility balance substantial demand growth against legislative mandates requiring a reduction in carbon emissions?



Our Response

Sierra Pacific Resources Three-Part Energy Supply Strategy

1. Increase energy efficiency and conservation programs
2. Expand renewable energy initiatives and investments
3. Build new efficient power plants

Step 1 - Increase energy efficiency and conservation programs

Negawatts!

Energy efficiency and conservation programs have the lowest capital, lowest risk, and usually the shortest lead time for making substantive reductions in an organization's carbon emissions

To make real reductions and have a meaningful impact, customers need direct access to energy-saving tools and information



Our Commitment

- **Over the next three years, we are investing \$135 Million dollars in energy efficiency programs and initiatives**
- **Our existing programs saved over 250 Million kWh in 2007**
 - That equates to an annual offset of over 164,400 metric tons of CO₂ across our system

A sampling of our Nevada Initiatives

DSM Residential Programs

Program	2008 Budget (millions)	Annual Energy Savings	CO ₂ Savings (metric tons)
ENERGY STAR Lighting & Appliances	\$ 5.20	97,000 MWh	63,800
Air Conditioning Load Management	\$ 11.80	1,000 MWh	660
High Efficiency AC	\$ 5.40	13,000 MWh	8,600
Low Income Weatherization & Education	\$ 3.70	3,000 MWh	2,000
Pool Pumps	\$ 0.80	3,600 MWh	2,400
Second Refrigerator Collection & Recycling	\$ 2.30	16,000 MWh	10,500



DSM Commercial Programs

Program	2008 Budget (millions)	Annual Energy Savings	CO ₂ Savings (metric tons)
SureBet Commercial Incentives	\$ 8.30	69,000 MWh	45,400
SureBet New Construction	\$ 2.45	11,000 MWh	7,250
SureBet Small Hotel & Motel	\$ 2.20	7,000 MWh	4,600
ENERGY STAR Manufactured Homes	\$ 0.60	8,000 MWh	5,300

DSM Other Programs

Program	2008 Budget (millions)	Annual Energy Savings	CO ₂ Savings (metric tons)
Non-Profit Improvement Grant Program	\$ 0.20	448 MWh	300
SureBet Schools	\$ 0.80	5,000 MWh	3,300
Energy Consultation and Education	\$ 1.05	TBD	TBD

Highlighted Initiative - CFL Lightbulb Installs

- **The utilities have actively partnered with local businesses and organizations to get CFLs directly into our customer's homes and offices**
- **To date, more than 3.3 Million CFLs have been distributed in Nevada, accounting for more than 209 million kWh of first-year energy savings**
- **This program equates to 137,450 tons of CO2 saved annually**



Highlighted Initiative - Refrigerators

■ Refrigerator Recycling

- In 2007, we recycled 9331 old units in Nevada
- In addition to kWh savings, destruction of the contained CFCs in one refrigerator equates to an additional 5 tons of CO₂ offset per unit
- Therefore the CFC destruction from our 2007 recycling program yielded a total of 46,655 additional tons of CO₂ saved
- The average refrigerator today consumes one-quarter the energy of the average unit sold in 1973

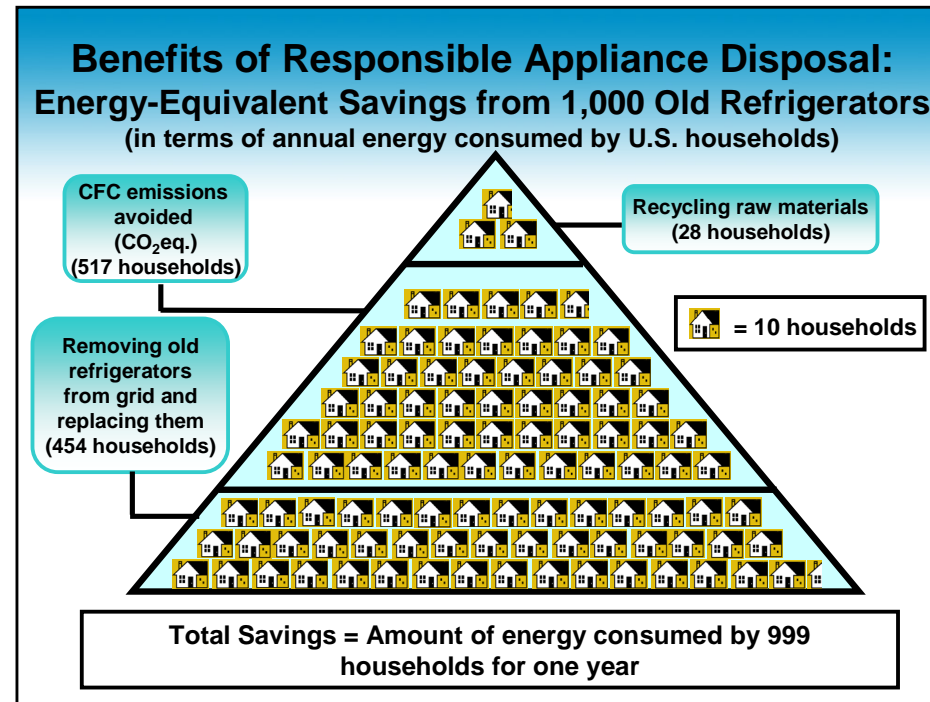


Figure Source: EPA

Leading by example

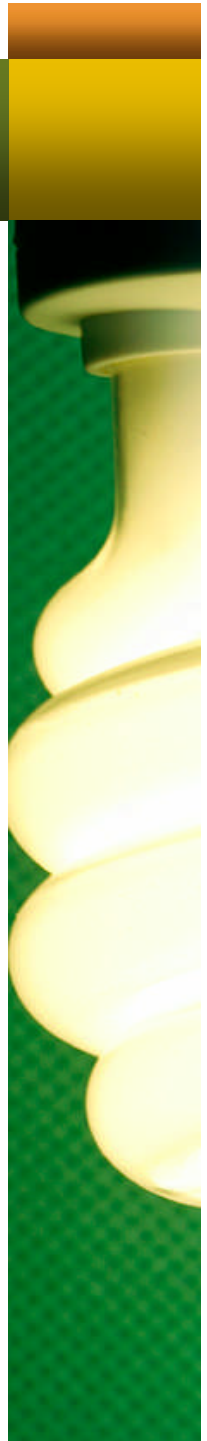
- **Sierra Pacific Resources joined the California Climate Action Registry in 2006 and is a Founding Member of The Climate Registry (National)**
 - Taking that first step to quantify fleet emissions allows a considered approach to identifying, controlling and minimizing your carbon footprint
 - Early action also allows for economic optimization of your program targets

Meeting Demand Growth while Minimizing Carbon

- **Energy Efficiency Programs are a key component of our response to demand growth – and the associated carbon reduction is a significant benefit!**
- **“The cleanest kWh is the one never used” and those savings defer the need to build**
- **Incentives in the form of shared savings align customer and shareholder interests and contribute to the ultimate success of our programs**

Back to Our Strategy – Step 2: Expand Renewable Energy Initiatives and Investments

- **Nevada is #1 in the nation for solar and geothermal power per capita**
- **Nevada has one of the most progressive statutory renewable portfolio standards in the US**
 - 20% by 2015
 - Up to one quarter may come from energy efficiency initiatives
- **Nevada has abundant renewable resources**
 - But recall that earlier map!
 - Thoughtful, focused development is needed to protect our State's fragile environment
- **Renewables represent “low to zero” carbon resources that offset fossil alternatives!**



Step 3: Build new efficient Power Plants

- **We will have added another 2800 MW of highly efficient natural gas generation to our system by the end of 2008**
- **To diversify our portfolio, we must also focus on low carbon, coal-based generation technologies**
 - Through our active participation with the Electric Power Research Institute (EPRI), WESTCARB and others, we are evaluating ways to capture carbon dioxide from conventional pulverized coal plants.
 - The next step is to develop and commercially demonstrate carbon dioxide capture and storage (or sequestration) from fossil fuel-based generation.
 - Carbon dioxide capture and sequestration costs are currently projected to be higher than the costs to control nitrogen oxides or sulfur dioxide emissions.
 - Funding for research, development and demonstration is needed now
 - This is the surest way to enable commercial availability and economic viability of low carbon technologies within a reasonable time frame.