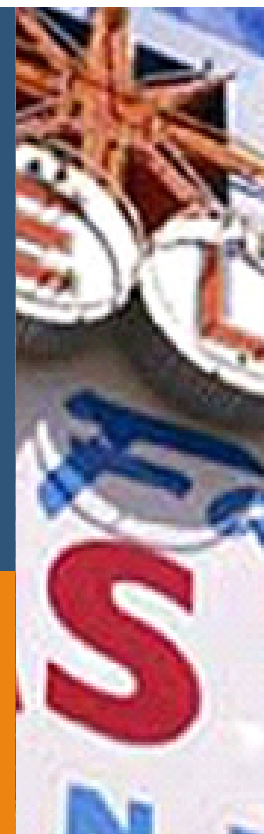




IAEI Meeting August 26, 2008

Tony P. Simmons, PE
Staff Engineer
Nevada Power Company



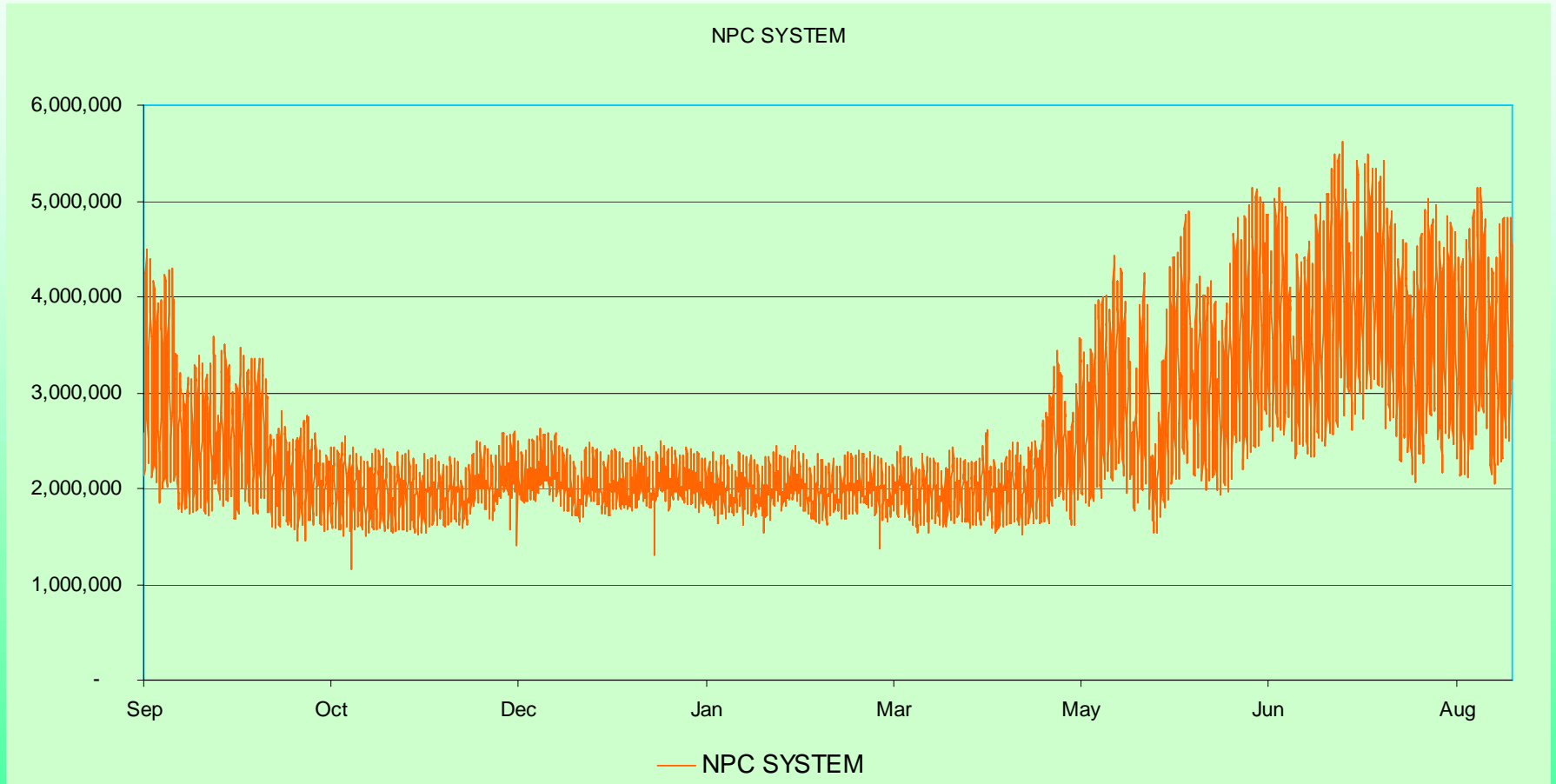
Fault Current

- ❖ **Current Fault Current Table is dated December 29,2004.**
- ❖ **Copies are available on the table by the exit.**
- ❖ **New table next year due to Federal efficiency requirements**

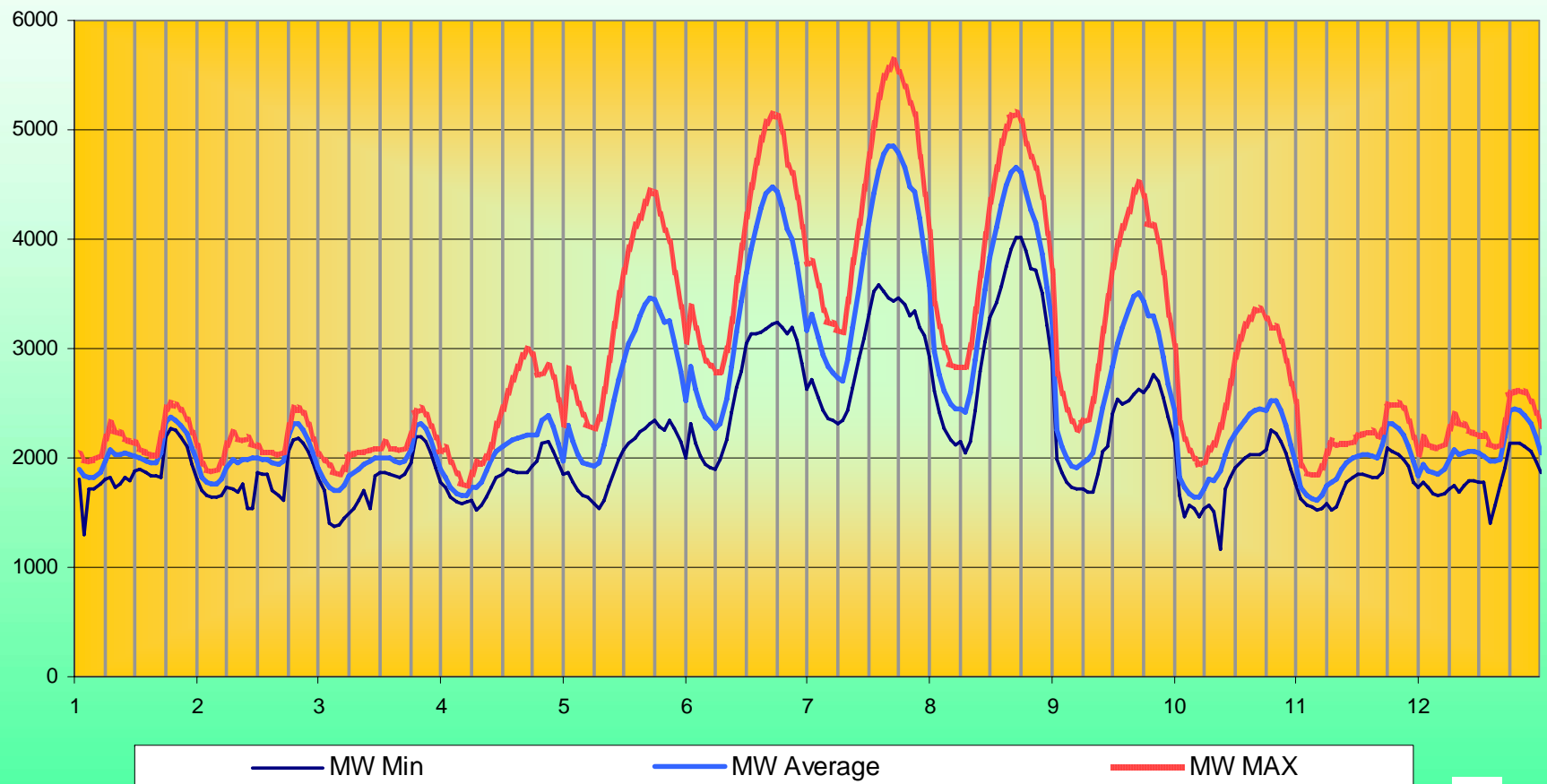
First Friday

- ❖ **Nevada Power has scheduled two hours for open discussion on the First business Friday of the month.**
- ❖ **9 AM – 11 AM**
- ❖ **2215 E. Lone Mountain Road**
 - Southwest corner of Lone Mountain and Lossee Road
- ❖ **Sept 5, 2008 – Presentation on Net Metering requirements.**

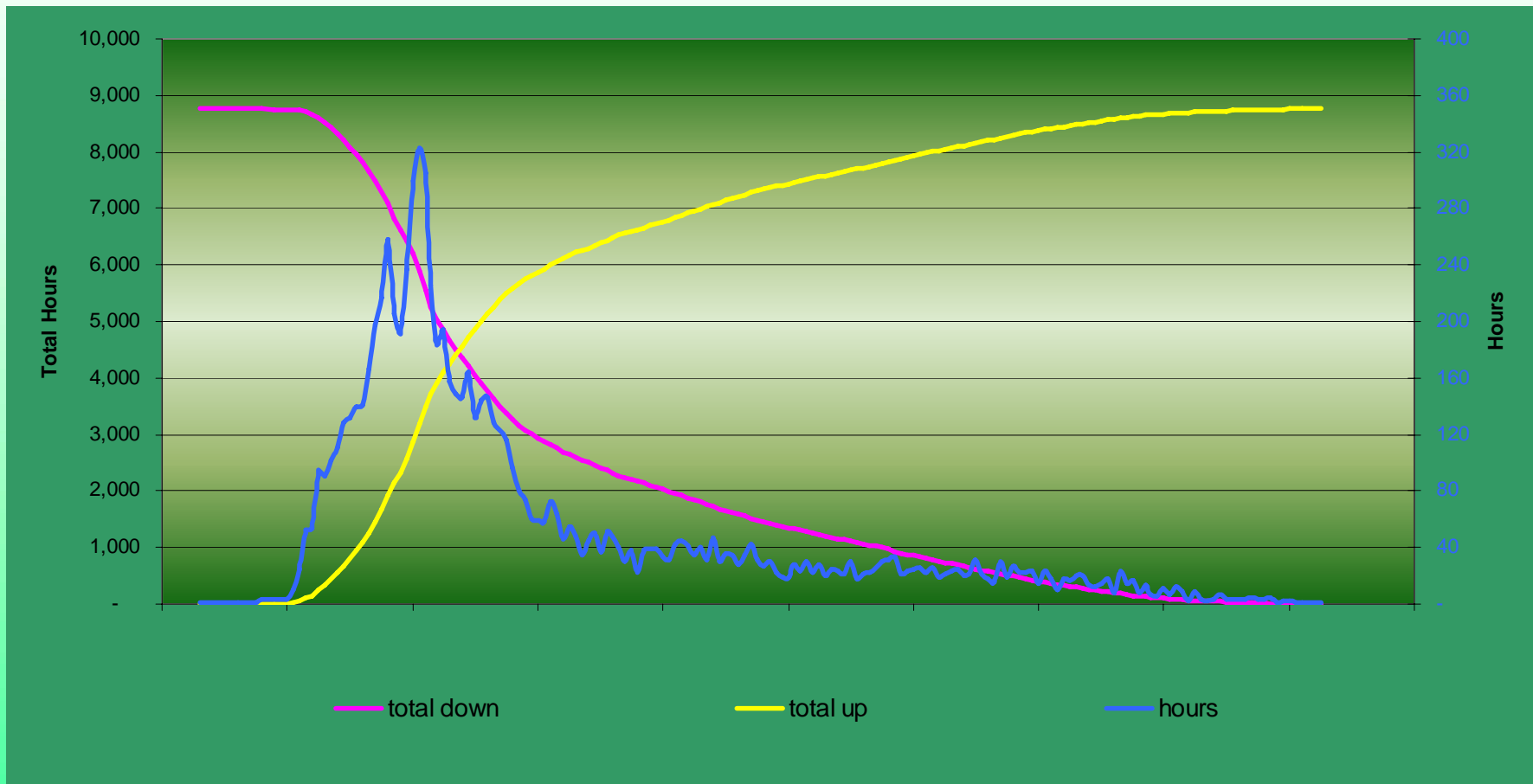
Nevada Power yearly profile in kW (kilowatts)



Monthly Usage Profile

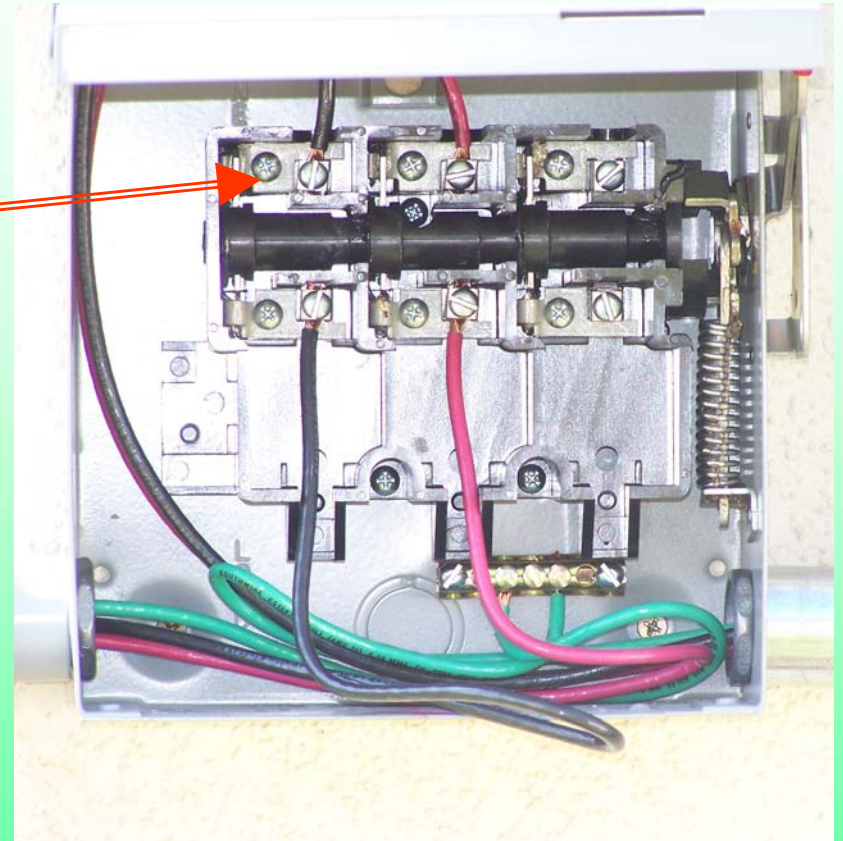


Hours of Usage per year



Net Meter Safety Switch

- ❖ The safety switch shall be connected so that the utility is connected to the line connections.
- ❖ This ensures that the movable blades are not energized when open.
- ❖ The inverter is designed to produce current if the correct voltage is present.



26. MULTIPLE METER INSTALLATION DESIGN

- ❖ **Service equipment to serve multiple tenants shall be designed so that all energy to one tenant space shall be measured by one meter.**
- ❖ **All energy for non-tenant specific (house) consumption shall be measured by one meter.**
- ❖ **Installations where the tenant is served under multiple rates such as general service interruptible water will have multiple meters. Consult NPC Meter Operations with questions.**

27. FIRE PUMP SERVICES

- ❖ Fire pumps shall be connected so that energy for the fire pump will be measured by the non-tenant specific (house) meter.
- ❖ When the fire pump controller is used as the main disconnecting means, the room where the fire pump controller is located shall meet all requirements for access and work space. An easement shall be required for access to the controller.
- ❖ When a separate disconnecting means is installed as supervised installation in accordance with NEC Article 695.4(B), the disconnecting means shall be installed near the service equipment or at a location approved by NPC Meter Operations. Consult NPC Meter Operation with questions.

Nevada Power Policy

❖ Diversify the Energy supply

- Proposed 1500 MW Clean Coal power plant in Ely

❖ Conservation

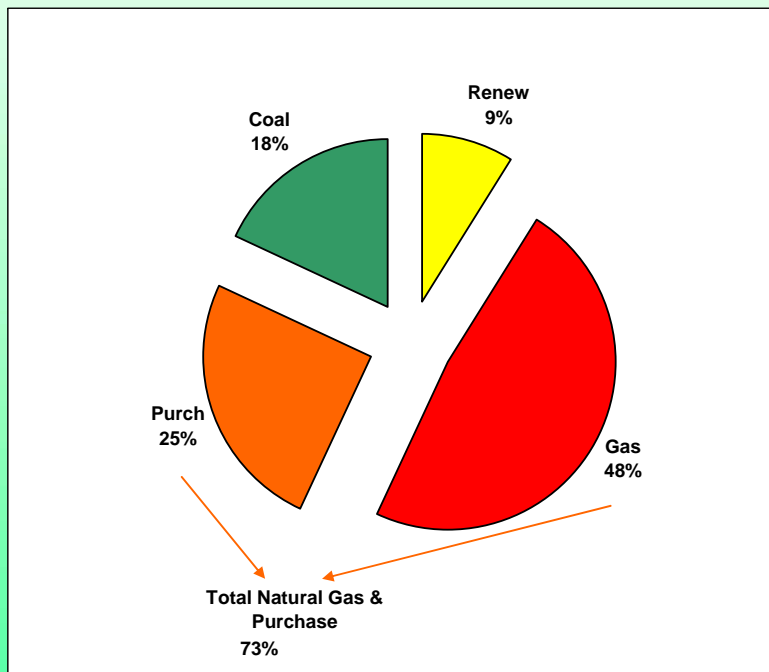
- Nevada Power can earn a higher rate of return on successful conservation projects.

❖ Increase use of Renewable Energy

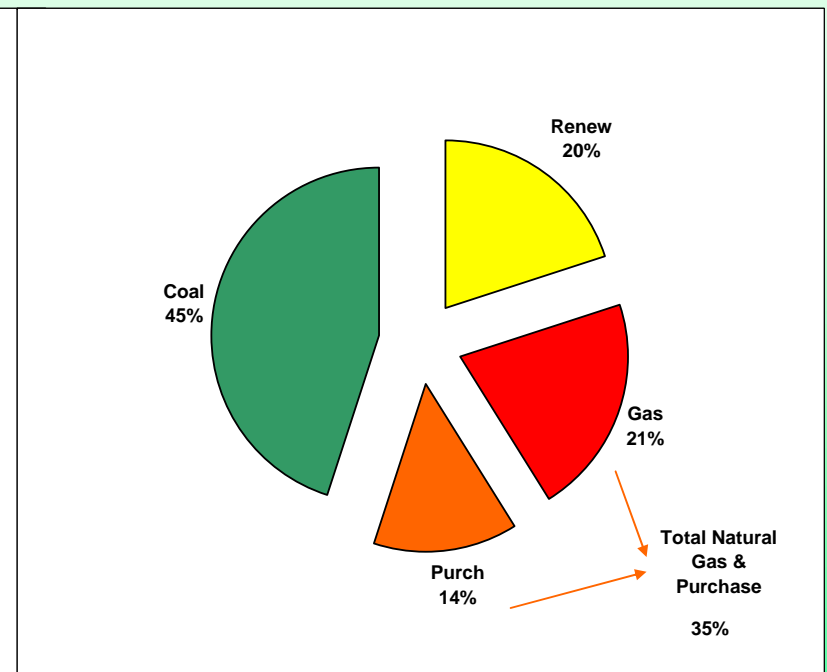
Energy Mix 2008 and 2015

Nevada Power Company - Energy Mix

2008



2015



Commercial Programs

❖ SureBet

- Comprehensive incentives (prescriptive & custom) to implement energy efficient improvements

❖ SureBet New Construction

- Provides incentives for new buildings in the commercial sector for energy saving technologies



Commercial Programs

❖ ENERGY STAR Manufactured Homes

- Provides incentives to manufacturers, dealers and contractors to install energy efficient measures

❖ SureBet Small Hotel/Motel

- Helps motel and small hotel owners reduce consumption

❖ Market and Technology Trials

- Introduces new energy-efficient technologies to the markets



AN ENERGY STAR QUALIFIED HOME

ENERGY STAR Climate region: _____

Manufacturer: _____

Plant Name/Location: _____

Manufacturer: _____

This home has been independently verified to meet ENERGY STAR's strict guidelines for energy efficiency. Each ENERGY STAR qualified home can keep 4,500 lbs of greenhouse gases out of our air each year.

www.energystar.gov

ENERGY STAR ENERGY STAR

Manufactured Housing Research Alliance

This ENERGY STAR Qualified Home Built by _____

Quality by Design
This home meets the ENERGY STAR guidelines established by the U.S. Environmental Protection Agency and was built and installed in conformance with the Manufactured Housing Research Alliance ENERGY STAR quality control processes.

Installation Certification
I certify that this home was installed in compliance with the ENERGY STAR for Homes specifications.

Manufacturer's field representative:
Signature: _____ Date: _____

Quality Assured™ Label



Major Programs

❖ ENERGY STAR Lighting & Appliances

- Direct incentives to customers
- Over 90% of this program is Compact Fluorescent Lights (CFLs) – 1.7 million



Residential Programs

- ❖ **Cool Share** 
 - Aimed at reducing peak demand by cycling a participant's AC system. Provides a \$1 incentive per incident rebate after the 4th incident
- ❖ **High Efficiency Air Conditioners**
 - Rebates to homeowners and builders
- ❖ **Pool Pumps** 
 - Provides incentives to install energy efficient two-speed pumps or variable speed motors
- ❖ **Refrigerator Recycling**
 - Provides customer \$30 to recycle their refrigerator
- ❖ **Low Income Weatherization & Education**
 - Provides energy efficient weatherization measures to “gap” customers

Residential Programs

❖ Energy Consultation

- A utility energy consultant provides energy consultation via phone or on-site

❖ Energy Education

- Provides energy education and efficiency outreach



Renewable Energy

- ❖ Nevada is #1 in solar power production per capita.
- ❖ Nevada is #1 in geothermal power production per capita.
- ❖ Nevada is #2 in geothermal resources. California is #1.

SolarGenerations

❖ An incentive program to encourage PV deployment.

- Program Year 6 opens September 6th
- Residential \$2.30 per watt of capacity up to 5,000 watts
- Small Business \$2.30 per watt of capacity up to 30,000 watts
- Schools \$4.60 per watt of capacity up to 50,000 watts
- Public Buildings \$4.60 per watt of capacity up to 30,000 watts

Solar Projects in Southern Nevada

❖ Nevada Solar 1	60 MW
❖ Nevada Star	14 MW
❖ Las Vegas Valley Water District	4 MW
❖ Nevada Power	225 kW
❖ Private Business	3 MW
❖ Schools	100 kW
❖ Residential	1 MW

Wind Potential

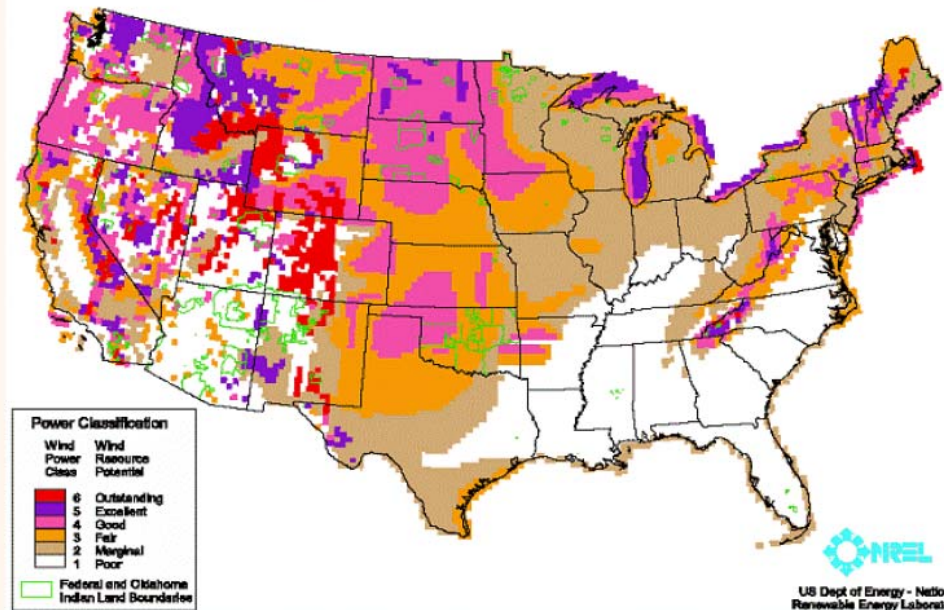
National Energy Policy

By Philip J Hopkinson, PE

National Goal Needs to be Energy Independence

The Wind Option

Figure 13. Wind Resource Potential



Wind generation claims to achieve \$0.04-0.10/kWh costs

30

WindGenerations

❖ Rebates

- Residential, Small Business, Agriculture
 - \$2.50 per watt up to 10 kW not to exceed 60% of the eligible installed cost
 - \$1.50 per watt up to 30% of eligible installed costs up to 30 kW.
- Public Buildings and Schools
 - \$3.00 per watt up to 10 kW not to exceed 60% of the eligible installed cost
 - \$2.50 per watt up to 30% of eligible installed costs up to 30 kW.

HydroGenerations

- ❖ **Focused on Agricultural customers.**



Other Renewable Resources

- ❖ **Bio-mass Generator at Northern Nevada Correctional Center in Carson City 1.3 MW**
- ❖ **Exhaust heat recovery system for Kern River Pipeline near Goodsprings– 6 MW**
- ❖ **City of Sparks Waste Water Treatment - 800 kW methane recovery system**
- ❖ **Hooper Hydro – 750 kw Hydro unit.**
- ❖ **Southern Nevada Water Authority**
 - 3 Hydro units on Pressure Reducing Stations.

Technology Trials

- ❖ **Pre Pay Metering**
- ❖ **AMI project – 25,000 customer with high customer contact**
- ❖ **In home displays**
 - Provide energy usage information into the home.

Who do I contact?



Nevada Power.®

nevadapower.com



Nevada Power.