



Renewables: An Integral Part of Our Energy Future



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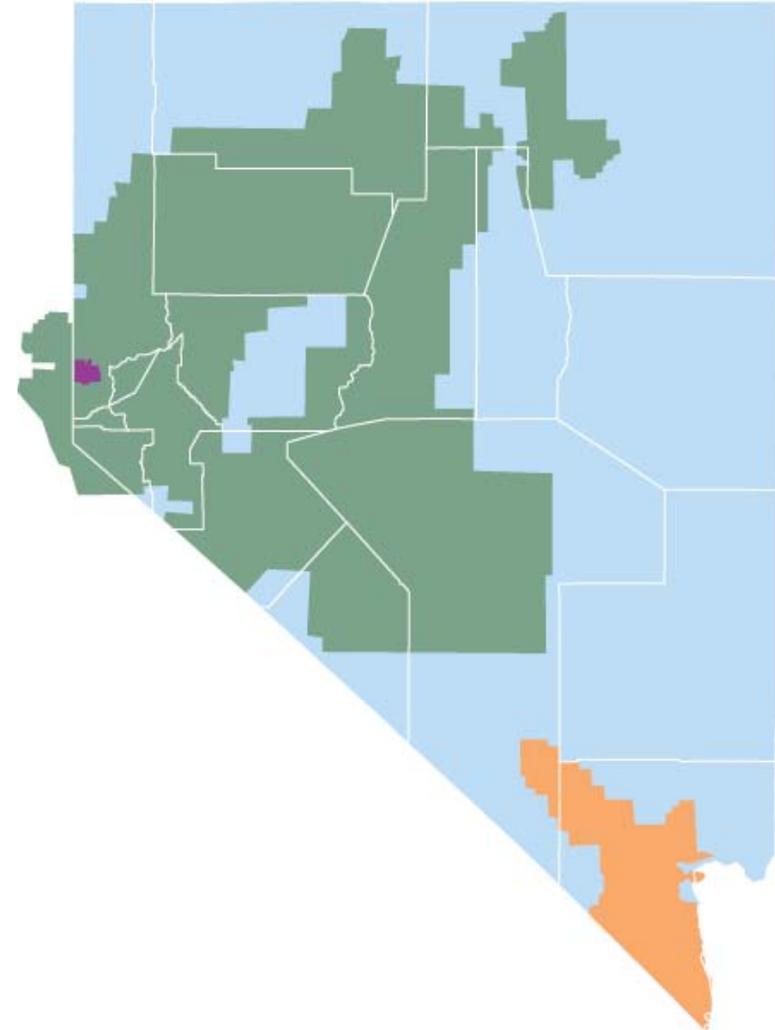
Presented to BLM TRI-RAC

November 13, 2008

NV Energy at a Glance



- ❖ **Serves Nevada, Lake Tahoe area of Calif.**
- ❖ **1.2 million electric customers**
- ❖ **54,500 square miles**
- ❖ **149,000 gas customers**
- ❖ **7,609 MW consolidated peak in 2007**
- ❖ **4,191 MW consolidated generation**
- ❖ **36,700 consolidated electric meter sets in 2007**



Key Goals

- ❖ Provide customers with clean, safe, reliable energy at predictable prices
- ❖ Improve the environment while reducing customers' energy bills through conservation, energy efficiency



3-Part Strategy

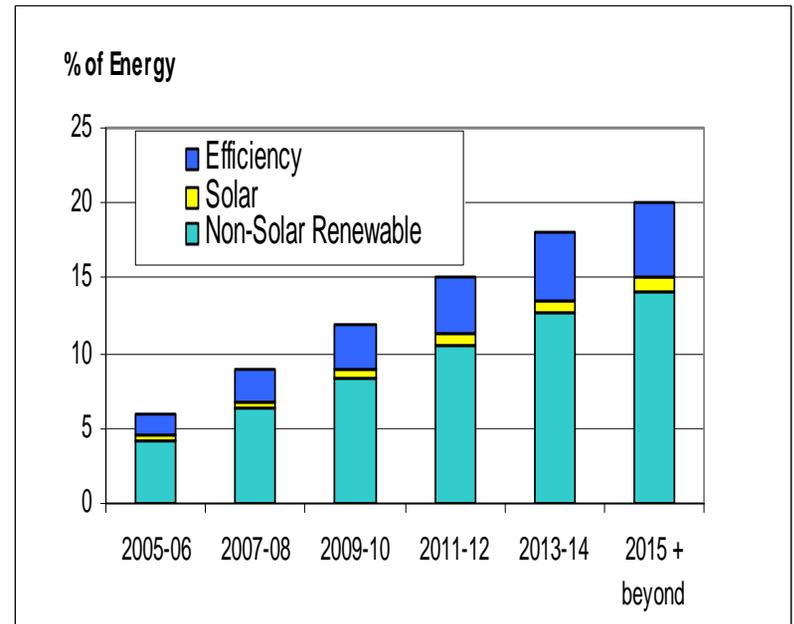


- 1. Increase energy efficiency and conservation programs**
- 2. Expand renewable energy initiatives and investments**
- 3. Add new generation using clean, cutting-edge technologies**



Nevada's Portfolio Standard

- ❖ One of first 3 states to adopt standards
- ❖ 20% of kWh sales by 2015
 - 1% solar
 - Up to one-quarter from energy efficiency



Renewable Resources in Nevada

❖ Solar

❖ Geothermal

- Purchases began in 1986

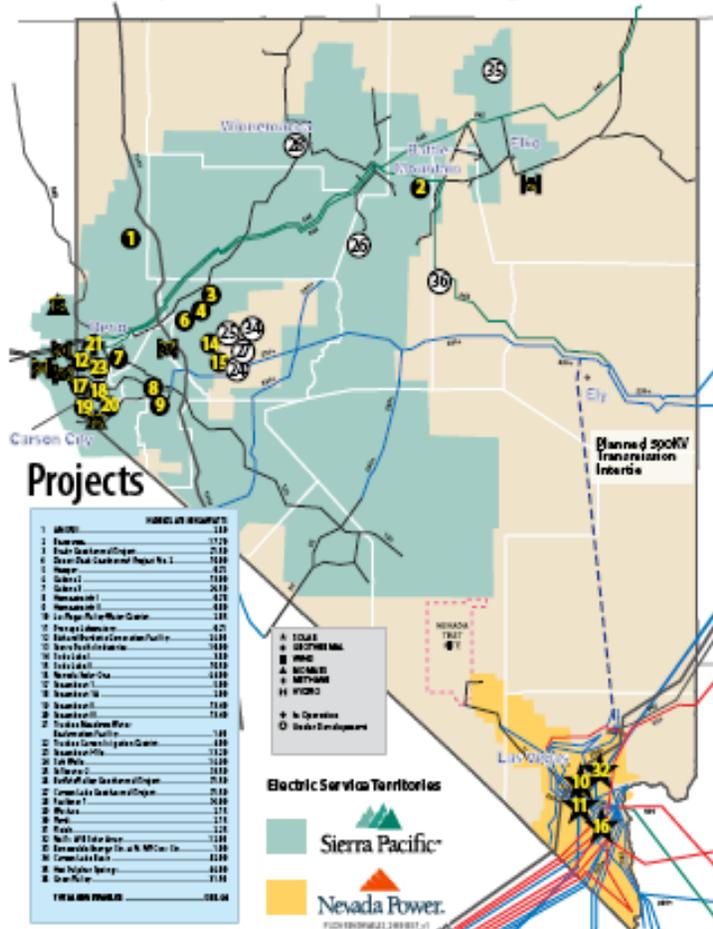
❖ Wind



Our Portfolio of Renewable Supplies



Companies' Renewable Energy Sources

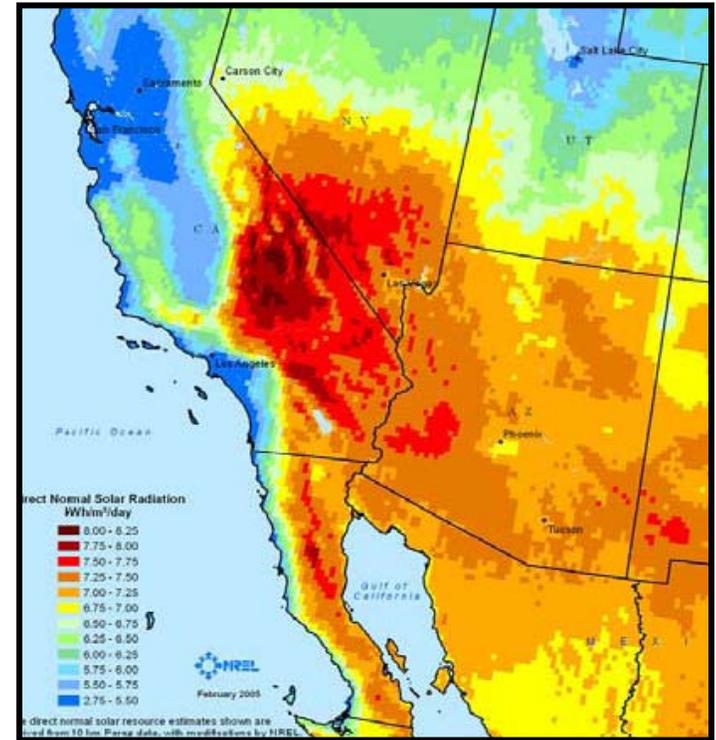


- ❖ Current portfolio of 36 projects totaling 586 MW; over 300 MW in-service
- ❖ 6 new projects (135 MW) completed in 2007-08
- ❖ 8 geothermal projects (~280 MW) in development; 210 MW in operation
- ❖ 2 of the U.S.'s largest solar plants now in S. NV
- ❖ Plan to add 200 to 400 MW of wind
- ❖ Portfolio to reach 1,000 MW by end of 2012

Use of Abundant Resources: Solar Power



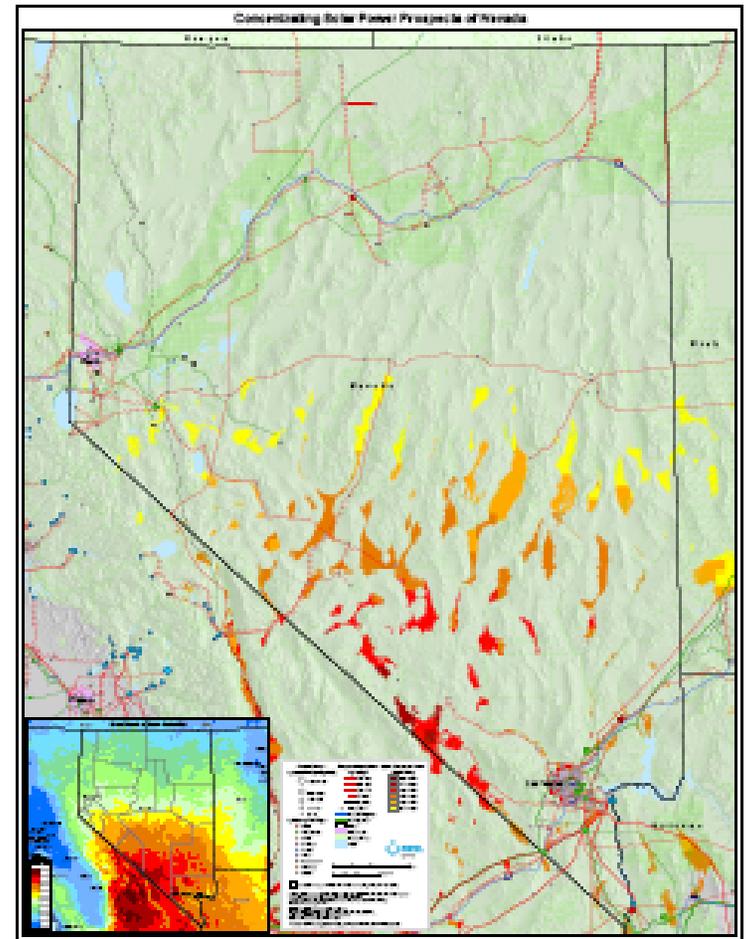
- ❖ Mojave Desert, centered in S. CA and extending into S. NV is the U.S.' prime solar resource
- ❖ Nevada is a leader in solar power per capita
- ❖ Solar technologies improving
- ❖ Cost per kWh is relatively high but declining



Solar Development in Nevada



- ❖ Requires large amounts of flat land
- ❖ Many applications in BLM's queue in S NV, and more in S CA
- ❖ Some sites may overlap, or not be feasible for environmental or other reasons
- ❖ NV Energy has a site near Las Vegas



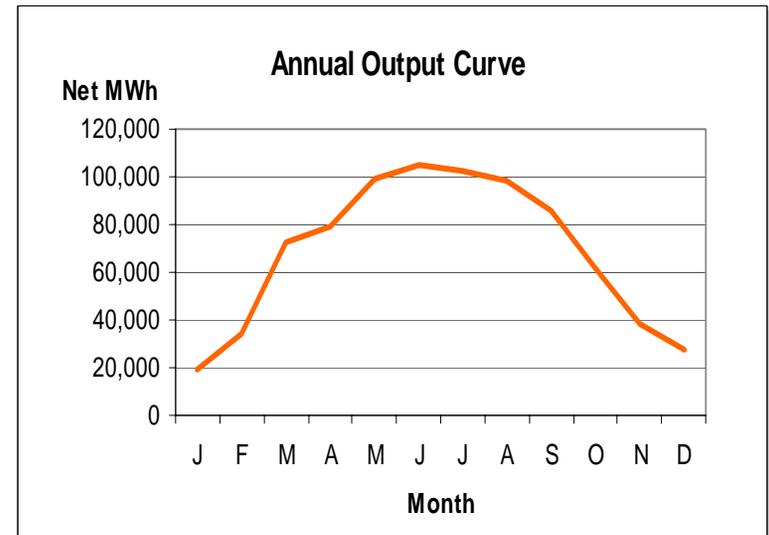
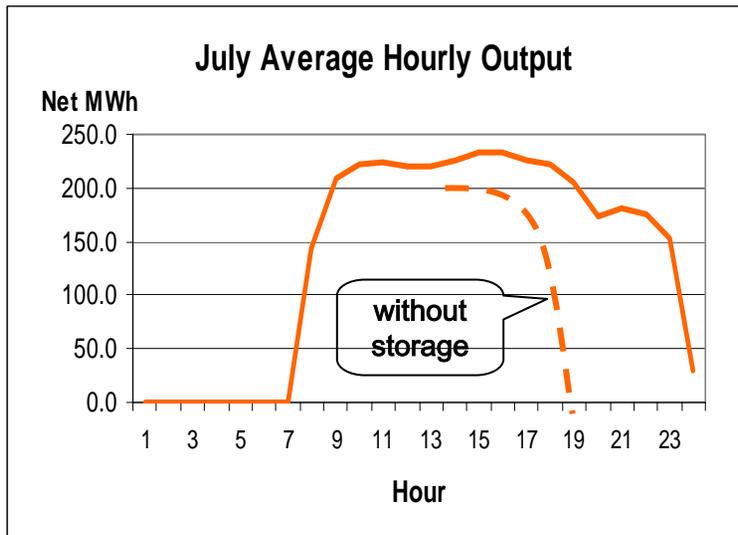
Use of Abundant Resources: Nevada Solar One

- ❖ Acciona's Nevada Solar One – 64 MW; on-line June '07
- ❖ El Dorado Valley in Boulder City energy zone
- ❖ Parabolic trough solar thermal plant
- ❖ Biggest U.S. solar plant in 16 years, marks the resurgence of solar development in U.S.



The Importance of Solar Thermal Storage

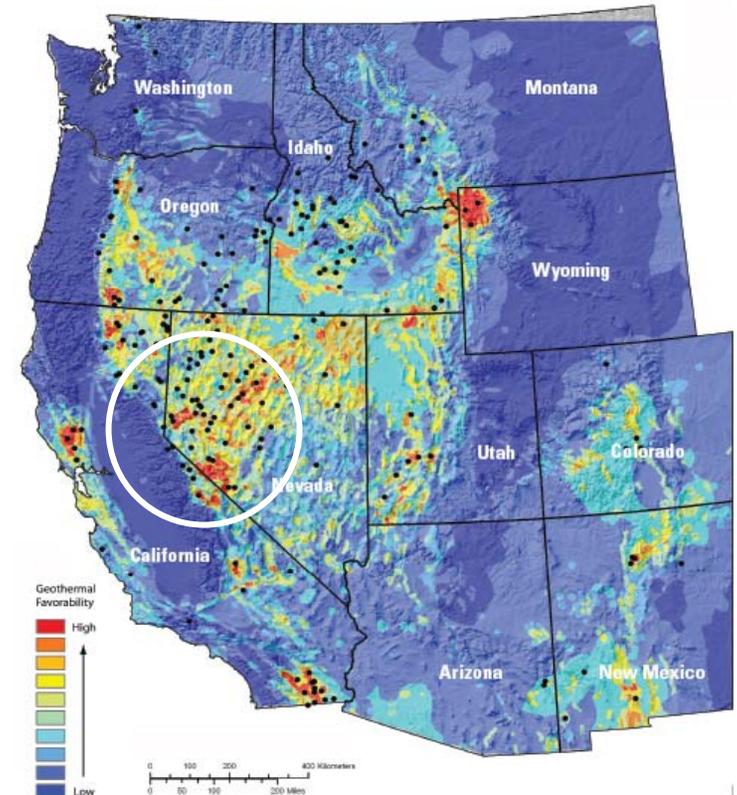
- Plant can produce electricity through peak load hours, or be used to firm-up output when clouds pass over
- Molten salt thermal storage close to being commercially available for solar plant application



Geothermal Potential (USGS)



	Identified	Undisc'd
	F50 MWe	F50 MWe
CA	5,140	9,532
NV	1,216	996
AK	606	1,428
OR	485	1,406
UT	171	1,088
NM	153	1,103

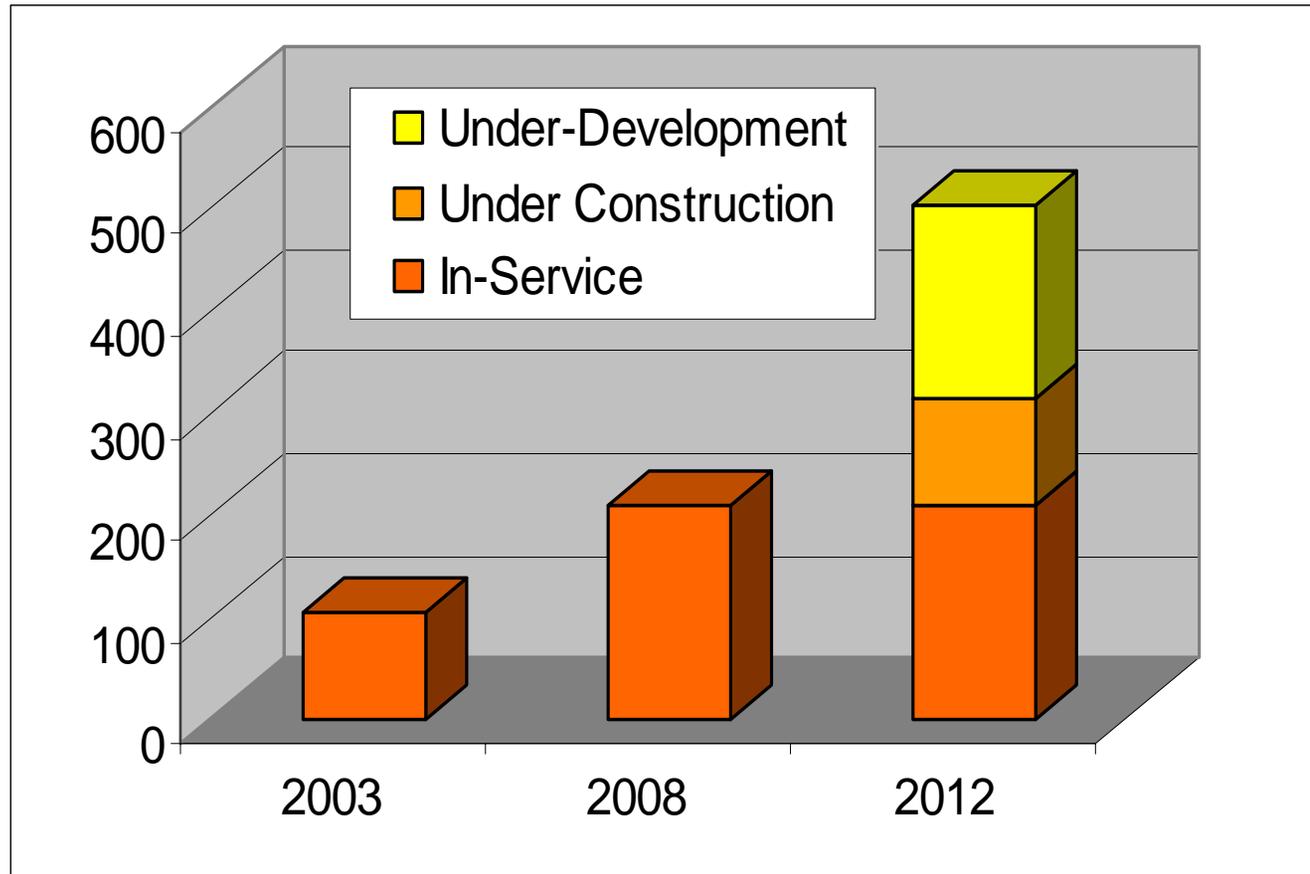


Geothermal Partnership

- ❖ Nevada is a leader in geothermal energy
- ❖ Contracts for close to 500 MW
- ❖ NV Energy Partnering with Ormat
 - 30 MW geothermal plant
 - 1st such joint effort by utility and developer



NV Energy's Geothermal Portfolio (Current Status - Nameplate MW)



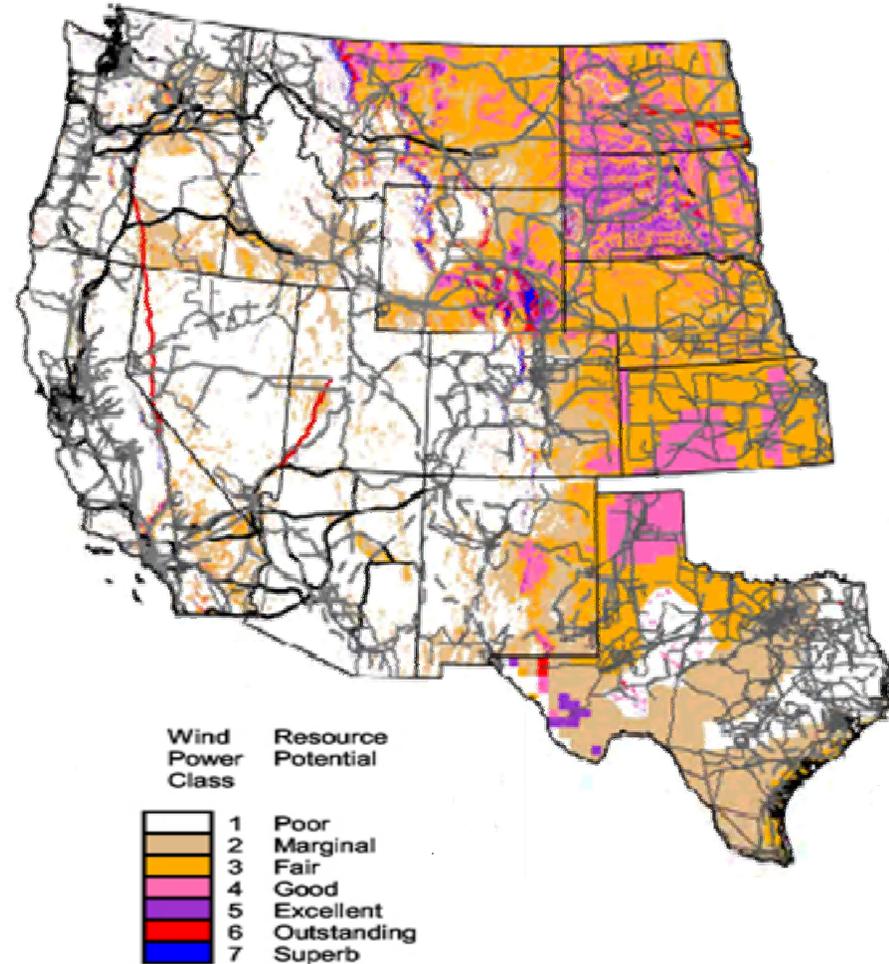
Wind Energy

- ❖ Proposed joint development
- ❖ RES Americas
- ❖ China Mountain in NE Nevada
- ❖ 200 MW
- ❖ Other projects in planning stages



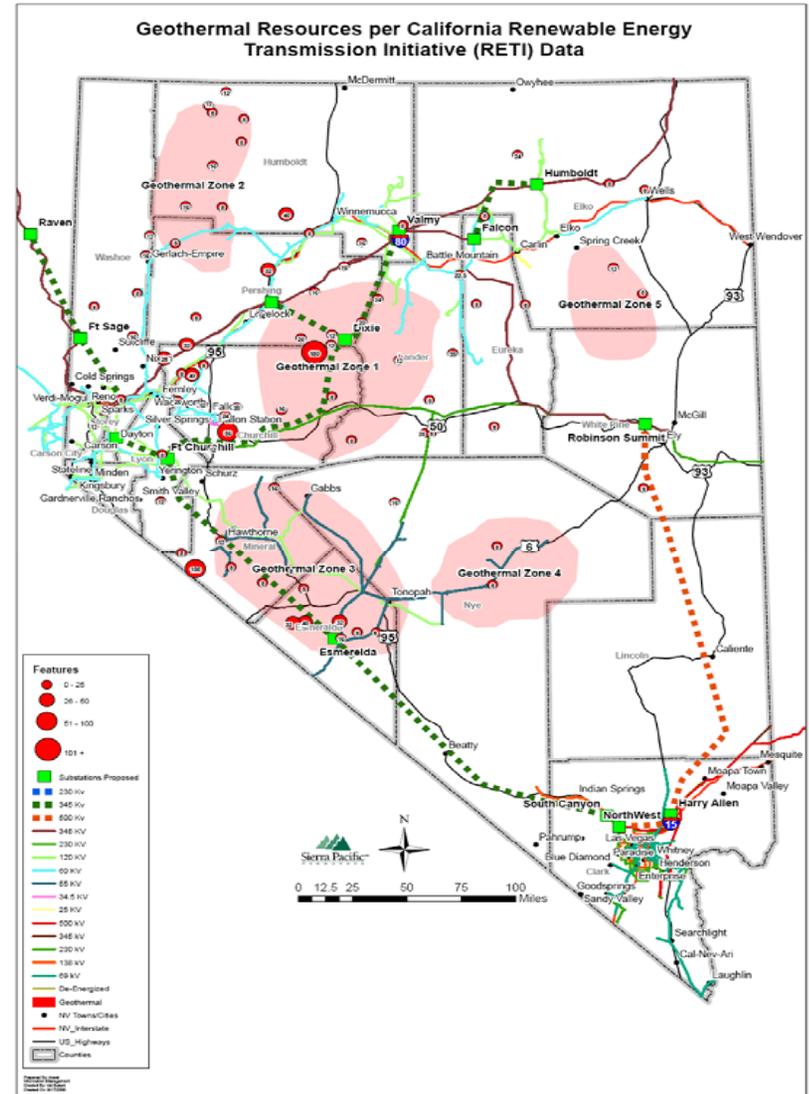
Wind Resource

- ❖ Resource not comparable to Great Plains, but adequate
- ❖ We are working on projects that would add 400 MW of wind to our portfolio
- ❖ Intermittent energy
- ❖ Siting issues:
 - difficult terrain
 - species of concern
 - military use of airspace



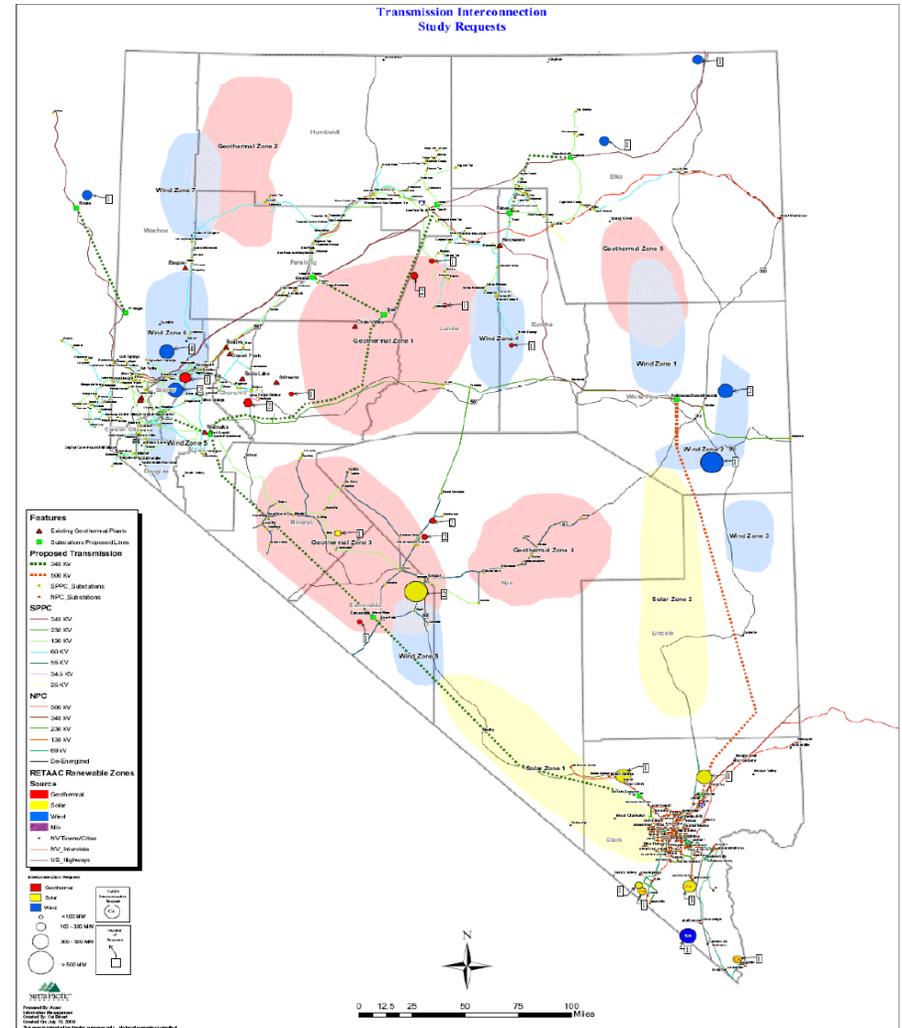
RETAAC – Geothermal Potential

- ❖ 1,000–1,450 MW
- ❖ Typically 10–30 MW scale projects
- ❖ Clustered in Western NV



Transmission Study Requests

- ❖ 1,900 MW wind, scattered throughout the State
- ❖ Solar in Southern NV



Solar per California RETI Draft Report

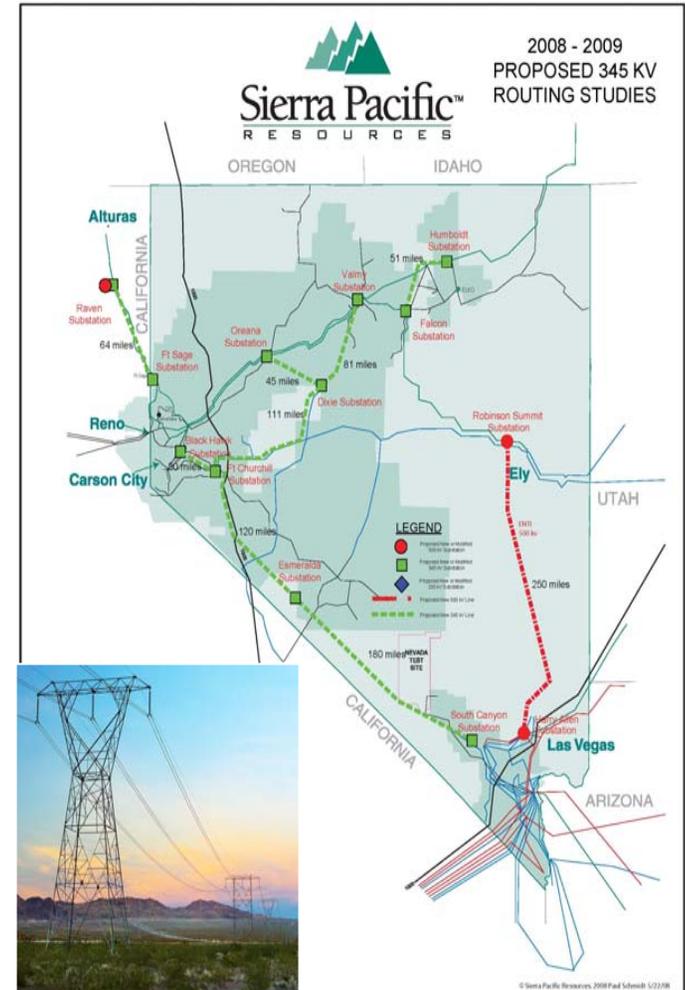
- ❖ Solar projects in S. NV
- ❖ 18,000 MW applied for



Planning New Transmission

❖ PUCN approved undertaking siting of over 500 miles of new backbone transmission:

- Facilitates greater development of renewable energy
- Reduces the distance for renewable generation ties
- Individual projects will be built-out as indicated by generation project activity





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