

2008 Status of Energy in Nevada

Report to Governor Gibbons and Legislature



by

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This document was prepared in compliance with the Nevada revised statutes (NRS) 701.160

The mission of the Nevada State Office of Energy (NSOE) within the Governors Office is to implement the Governor's energy policy, so our citizens can have a reliable, affordable, clean and balanced energy supply. Developing our renewable energy resources, improving the energy infrastructure, and encouraging energy conservation and efficiency will enhance the energy security, stimulate economic development, and create high paying jobs for Nevada. NSOE also develops and implements energy-related regulations, policies, and activities given to our agency by Nevada Legislators as per NRS 701: Energy Policy (NRS 701.010 - 701.260); NRS 701A: Energy Related Tax Incentives (NRS 701A.100 - 701A.110 Green Building); and NRS 333A: State Performance Contracts for operating cost savings measures (NRS 333A.080 - 333A.140). Furthermore, NSOE implements and coordinates the federal energy policies, energy programs and projects funded by the federal grants within the state of Nevada

Acknowledgements

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NV Energy (Sierra Pacific Power Company / Nevada Power Company)

Nevada Rural Electric Cooperatives

General Improvement Districts

Nevada Municipal Utilities

Colorado River Commission

Southwest Gas Corporation

LS Power Development, LLC

Governor's Renewable Energy Transmission Access Advisory Committee (Phase I and II)

Nevada Division of Environmental Protection Agency

Public Utility Commission of Nevada

Nevada Bureau of Land Management

Kinder Morgan, Inc.

Renewable Generation

Table 1-13 lists the renewable generation resources currently under contract with Sierra Pacific and Nevada Power (NV Energy), as well as planned renewable energy projects as of January 2009. Figure 1-4 also provides a map of these facilities.

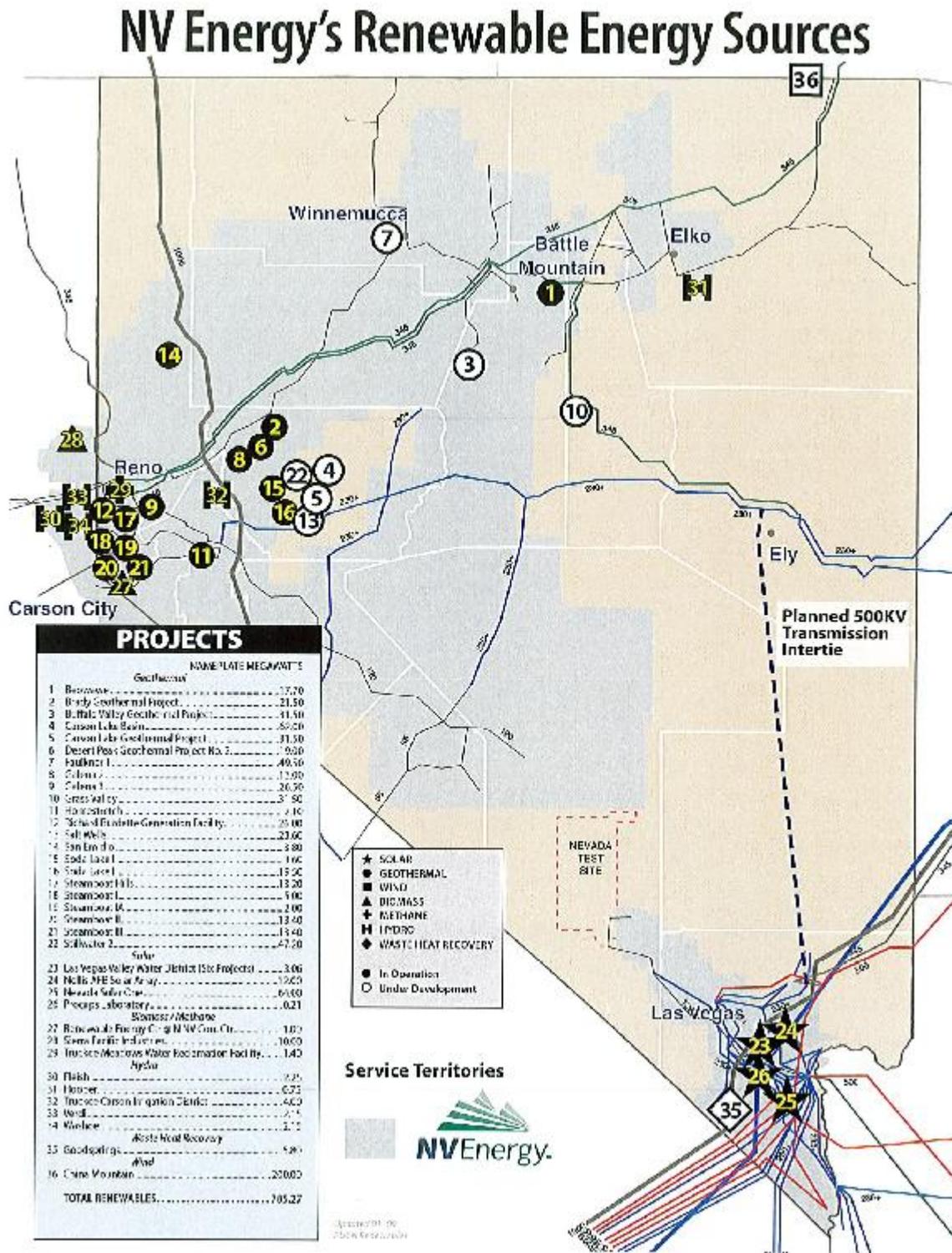
Table 1-13 Sierra Pacific and Nevada Power aka NV Energy, Inc.

Existing and Planned Renewable Energy Projects - January 2009

Energy Type	No.	Project	Company	MW	Annual MWh	Status
Geothermal	1	Beowawe	NV Energy	17.70		In-Service
	2	Brady	NV Energy	21.50		In-Service
	3	Buffalo Valley Carson Lake Basin	NV Energy	31.50		Under Development
	4		NV Energy	62.00		Under Development
	5	Carson Lake	NV Energy	31.50		Development
	6	Desert Peak 2	NV Energy	19.00		In-Service
	7	Faulkner 1	NV Energy	49.50		Under Development
	8	Galena 2	NV Energy	13.00		In-Service
	9	Galena 3	NV Energy	26.50		In-Service
	10	Grass Valley	NV Energy	31.50		Under Development
	11	Homestretch	NV Energy	2.10		In-Service
	12	Richard Burdette	NV Energy	26.00		In-Service
	13	Salt Wells	NV Energy	23.60		Under Development
	14	San Emidio	NV Energy	3.80		In-Service
	15	Soda Lake 1	NV Energy	3.60		In-Service
	16	Soda Lake 2	NV Energy	19.50		In-Service
	17	Steamboat Hills	NV Energy	13.20		In-Service
	18	Steamboat 1	NV Energy	5.00		In-Service
	19	Steamboat 1A	NV Energy	2.00		In-Service
	20	Steamboat 2	NV Energy	13.40		In-Service
	21	Steamboat 3	NV Energy	13.40		In-Service
	22	Stillwater 2	NV Energy	47.20		Under Development
		Subtotal		476.50	2,992,353	
Solar	23	Las Vegas Valley Water District	NV Energy	3.06		In-Service

	24	Nellis AFB Solar Star	NV Energy	12.00		In-Service
	25	Nevada Solar One	NV Energy	64.00		In-Service
	26	Procaps Laboratory	NV Energy	0.21		In-Service
		Subtotal		79.27	153,516	
Biomass/Methane	27	Renewable Energy Ctr. @ N. NV. Correction Ctr.	NV Energy	1.00		In-Service
	28	Sierra Pacific Industries Truckee Meadow Water	NV Energy	10.00		In-Service
	29	Reclamation Facility	NV Energy	1.40		In-Service
		Subtotal		12.40	1,937	
Hydro	30	Fleish	NV Energy	2.25		In-Service
	31	Hooper Truckee Carson	NV Energy	0.75		In-Service
	32	Irrigation District	NV Energy	4.00		In-Service
	33	Verdi	NV Energy	2.15		In-Service
	34	Washoe	NV Energy	2.15		In-Service
		Subtotal		11.30	49,494	
Waste Heat Recovery	35	Good springs	NV Energy	5.80		Under Development
		Subtotal		5.80	40,646	
Wind	36	China Mountain	NV Energy	200.00		Under Development
		Subtotal		200.00	350,400	
Total				785.27	3,588,346	

Figure 1-4 NV Energy's Renewable Energy Sources



2006 was a watershed year for Sierra Pacific's and Nevada Power's renewable energy program. The utilities moved forward with a three-pronged strategy for compliance with the state of Nevada's Portfolio Standard (PS) by: 1) accelerating their renewable energy procurement ("RFP") process, 2) ramping-up DSM, and 3) direct utility investments in the development of renewable energy facilities. These efforts have resulted in more new renewable energy power purchase agreements and new renewable project development activity than at any time in the past.

In addition, as shown on Table 1-14 the utilities have added a number of customer-scale PV systems. These systems have provided the utilities with a useful test-bed to reveal the kinds of practical issues that may be encountered by customers and PV contractors in installing such systems.

Table 1-14 Sierra Pacific and Nevada Power Utility Owned Renewable Generation

	Date of Initial Operations	Capacity (kW)
Nevada Power		
Clark Amonix System	April 06	75
Ryan PV System	February 07	115
Pearson PV System	May 05	19
UNLV PV-1	June 05	14
Subtotal		223
Sierra Pacific		
Sierra Plaza PV	November 06	75
Sierra Plaza Tracking PV	November 06	1.2
Sierra Plaza Wind Generator	November 06	10
Ohm Fleet Facility	March 08	75
Subtotal		161.2
Total		384.2

Solar Energy

In June 2007, 64 MW Nevada Solar One (NSO) concentrated solar power (CSP) project was completed which was the largest solar project undertaken in the U.S. in over 15 years. Sierra Pacific has contracted to purchase 32 percent of the total output of the NSO project and Nevada Power has contracted with the remaining 68 percent. To further reinforce and diversify the utilities' solar supply portfolio, Nevada Power contracted to purchase portfolio energy credits from the 15 MW Nellis Air Force Base SolarStar photovoltaic (PV) project. SolarStar is the largest single photovoltaic project in the U.S which was completed in December 2007.

When these projects went into service in 2007, Nevada was ranked **number one** in use of solar energy as measured in watts per person and percent of retail sales (kWh).

SolarGenerations Program

The Solar Energy Systems Demonstration Program (SolarGenerations) was created by the 2003 Nevada Legislature to encourage the development of a Nevada solar photovoltaic industry. The program was revised from a demonstration program to an ongoing program by the Legislature in 2007. The program provides customers in three categories with rebates for installing solar photovoltaic systems. The customer categories are: residents, small businesses, schools and other public buildings.

The SolarGenerations program is consistently oversubscribed in the residential and small business categories. Demand continued to be strong in 2008 with the residential and small business category fully subscribing within two hours.

On October 23, 2008 the Nevada Task Force on Renewable Energy and Energy Efficiency (Task Force) approved 869 applicants for participation in program year 2009/10. The number of applicants continues to increase over the previous years. Applications for public buildings exceed the program cap with a significant waiting list and schools applied for almost the entire two Megawatts of authorized capacity. An application was also submitted by the Nevada State Office of Energy for the State Capitol Building.

The number of solar contractors and consultants in Nevada continues to grow as a result of the SolarGenerations program and the quality of the installations is getting better as evidenced by the reduction in the issues discovered during final inspections. In addition training classes for building officials and inspectors have resulted in an increased level of confidence in various building departments. Building officials now quickly and routinely review and approve project plans. Training continues to be a high priority for all jurisdictions in the state as evidenced by new programs offered by Truckee Meadows Community College and the University of Nevada Reno.

Geothermal Energy

Geothermal development began resurgence in Nevada within last year few years. During 2006, the utilities completed negotiation and filed for PUCN approval of long-term power purchases from six new geothermal plants that will total over 120 MW when completed. In addition, as part of their long term strategy of promoting geothermal development in Nevada, the utilities are pursuing acquisition of geothermal leases and other development assets, and entered into joint development arrangements with ORMAT geothermal company that involves the utilities investing in geothermal projects.

Based on its existing portfolio Nevada ranks as the **number one** state in geothermal energy use measured in watts per capita, and second in percent of kWh sales. The state's leadership in geothermal development should continue into the future as projects currently in the development pipeline are completed.

Wind Energy

Consistent with the renewable energy development plans laid out in Nevada Power's 2006 Integrated Resource Plan (IRP) filing to help ensure a robust pipeline of wind projects, the utilities are negotiating joint development arrangements with several wind developers. The utilities are also in the process of acquiring the rights to sites with a potential capacity of 200 MW, installing anemometers, and conducting analyses to determine the potential viability of those sites.

WindGenerations Program

In 2007, the Nevada State Legislature created the Wind Energy Systems Demonstration Program. In the summer of 2008, NV Energy launched the WindGenerations program to implement this new program. WindGenerations is operated almost identically to the SolarGenerations program described above.

As of the end of January 2009, 106 applications have been approved by the Task Force and many of these projects are underway as of the preparation of this report. The application process is still open as the program is not oversubscribed in any category.

Many municipalities throughout the state have passed ordinances to encourage and facilitate the installation of wind power systems. Many municipalities however, are still evaluating the requirements. The program has provided training and has additional training scheduled to assist governing bodies in developing codes and ordinances governing wind energy installations. The Task Force, along with NV Energy are continuing to reach out to all municipalities throughout the state to encourage the development of these renewable energy friendly ordinances.

Hydro Energy

HydroGenerations Program

In 2007, the Nevada State Legislature also created the Waterpower Demonstration Program. In the summer of 2008, NV Energy launched the HydroGenerations program to implement this new program. HydroGenerations is aimed exclusively at agricultural uses throughout the state. NV Energy has reached out to all its' irrigation customers throughout the state and is expanding their effort to identify all of their customers who are eligible for this incentive program.

In the fourth quarter of 2008, 6 applications were approved by the Task Force. Waterpower systems are very involved in the design and permitting phase, so no projects are complete as of the report preparation period. Several projects are currently in the design phase and show great promise for completion in 2009.