Nevada

Status of Energy Report

Governor's
OFFICE OF ENERGY

2012–13

Governor's
OFFICE OF ENERGY

BRIAN SANDOVAL
Governor

STACEY CROWLEY
Director

♦ ♦ ♦

NRS 701.160 *Submission of reports*. The Director shall prepare a report concerning the status of energy in the State of Nevada and submit it to:
1. The Governor and the Commissioner on or before July 1 of each year; and
2. The Director of the Legislative Counsel Bureau for transmittal to the next regular session of the Legislature on or before July 1 of each even-numbered year.

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755 North Roop Street
Suite 202
Carson City, Nevada 89701
(775) 687–1850

Governor Brian Sandoval at the Copper Mountain 2 Solar Photovoltaic project in Boulder City, March 2013

FROM THE DIRECTOR

Thank you for taking time to read through our 2012-2013 Status of Energy Report. We are proud of the Office of Energy's accomplishments over the past year. The information provided in this report includes energy information through the end of 2012 and updates to our programs through the date of the report, or June 2013. Some of the highlights include:

- Sixteen large scale renewable energy and transmission projects are receiving valuable tax abatements for investing over $3.9B into the state and providing well over 2500 construction jobs.
- The Governor charged the New Energy Industry Task Force with developing recommendations to promote necessary transmission to facilitate the development of additional renewable energy in the state. With over 15 months of hard work, the recommendations span issues from the Renewable Portfolio Standard, to regional resource sharing, to the renewable energy and energy efficiency goals for the municipal utilities and cooperatives.
- Energy consumption in state-owned building continued to decline, now 10.2 percent less than the 2005 baseline. The office also developed a set of strategies to further our progress to meet the state goal of 20% reduction in grid-based energy purchases by 2015.

As the Director, I have the privilege of participating in most of the exciting discussions shaping energy policy and programs in the state. Our hard working staff has become experts in their related topics and has assembled talented teams that bring in additional expertise and long-term partnerships, such as those with the Nevada System of Higher Education, other state agencies and local governments focused on energy efficiency and the advancement of the clean energy industry in the State. We also rely on the support of our utilities and industry leaders to demonstrate best practices, gather information and provide valuable resources.

The end of this fiscal year was also marked by our state's 77th Legislative Session, where several bills advanced energy policy forward in the state. Namely, Senate Bills (SB) 123, SB 142, SB 252, Assembly Bills (AB) 33, AB 239 and AB 428. This is not the exhaustive list, but the legislation in these bills will direct the state to a more energy efficient and clean energy-fueled future. Among the policies are:

- The accelerated retirement of our aging coal generation facilities and the plan to replace them with more efficient and cleaner generation.
- The revision of our Renewable Portfolio Standard to allow additional renewable generation to be added to our portfolio sooner.
- Refinements to our renewable incentive programs to better respond to market conditions.
- Nevada took two strong steps in energy efficiency by incentivizing the renovation of existing buildings to a high performance standard and by requiring school districts to consider energy performance contracting when they take on certain capital improvement projects.

OUR MISSION

To ensure the wise development of the State's energy resources in harmony with local community economic needs and Nevada's natural resources to lead the nation in renewable energy production, energy efficiency and conservation, and exportation.

We strive for this by facilitating cooperation between key stakeholders, leading initiatives to stimulate economic development and attracting every energy related business venue; including energy education, retro-fitting, manufacturing, site development, generation and production, interstate and intrastate transmission, materials transportation, and energy-related recycling.

- Recognition of the counties' role in state incentive programs as well as their role in the siting and permitting of industry-scaled renewables and transmission to meet the future needs for a robust energy grid.

Although we accomplished quite a bit, there is much to do. Many of our grant programs will continue to develop over the next year and we are continually looking for ways to leverage resources and grow strategic partnerships to achieve more with less. Most notably, we will be embarking on an over-due update to the Comprehensive State Energy Plan which will incorporate Governor Sandoval's energy goals and continue to support the priorities of his administration.

It is a pleasure to work for Governor Sandoval. He provides strong leadership, a clear vision for our energy future and unending support from his office to our team in order to facilitate the continued success of Nevada's clean energy industry.

Sincerely,

STACEY CROWLEY, Director
scrowley@energy.nv.gov
(775) 687–1850, ext. 7302

LEED GOLD: The Schluter Systems facility in Storey County received a 10-year tax abatement in 2013.

OFFICE ACCOMPLISHMENTS

2012

► The Office of Energy worked with the Building Codes Assistance Project to form an Energy Codes Collaborative in Nevada. The Collaborative was created to gain key stakeholder input and support for achieving compliance with energy codes by 2017. The 2009 International Energy Conservation Code was adopted as the minimum standard in Nevada, and it went into effect July 1, 2012

► Nevada exceeded a goal of a 25 percent decrease in per capita energy consumption in 2010 with a 26.6 percent reduction. In 2011 further reductions were achieved for a total reduction of 28 percent from the 1990 base year.

► Energy consumption in state-owned buildings served by NV Energy has gone down by 10.2 percent from the 2005 base year. Energy consumption in state-owned buildings served by the coops, general improvement districts, and municipal utilities in the state has declined by approximately 3 percent from 2010 to 2012.

► Between 2011 and 2012, the amount of renewable energy in Nevada increased by 19 percent from 3,217,758 MWh to 3,822,968 MWh.

► In compliance year 2012, NV Energy successfully met and exceeded the Renewable Portfolio Standard credit requirements which state that 15 percent of retail sales come from renewable energy resources and 5 percent of that amount comes from solar resources. In southern Nevada, Nevada Power exceeded both the 2012 RPS requirement and the 2012 solar RPS requirement, achieving 19.7 percent and 19.3 percent, respectively. In northern Nevada, Sierra exceeded both the RPS requirement and the solar RPS requirement ending the year at 29.2 percent and 14.4 percent, respectively.

► The office received a $715,000, three-year Department of Energy grant to accelerate the use of energy savings performance contracting in order to achieve comprehensive retrofits in state and local government facilities. The program is being built on the proven foundation of the DOE's best practices for programs and projects.

2013

► The office successfully completed phase one of Rooftop Solar Initiative in February 2013 and has partnered with Arizona in applying for $4 million for phase two funding.

► The New Energy Industry Task Force met at least once per month, and in March 2013, the Task Force approved final recommendations to facilitate the timely development of transmission facilities and renewable energy resources in the state.

► As of late June 2013, 342 homeowners have upgraded their homes through the EnergyFit Nevada program, making them more comfortable, reducing energy consumption, and saving money through rebates offered by the Energy Office.

Energy consumption in state-owned buildings served by NV Energy has gone down by 10.2 percent from the 2005 base year. Energy consumption in state-owned buildings served by the coops, general improvement districts, and municipal utilities in the state has declined by approximately 3 percent from 2010 to 2012.

Table of Contents

Energy Usage in 2012

This chapter presents energy data for calendar year 2012. The next chapter, entitled Energy Office Programs, brings current the status of all active programs within the Energy Office from July 2012 through June 2013.

ELECTRIC ENERGY CONSUMPTION

Electric energy consumption in Nevada consists of customers of the investor-owned utility (NV Energy), rural electric cooperatives (co-ops), municipal utilities (munis), general improvement districts (GIDs), Shell Energy of North America (Shell Energy), Colorado River Commission of Nevada (CRC), Solar Star NAFB LLC, and the Western Area Power Administration (WAPA). As shown in Figure 1, NV Energy provides 85 percent of the state's electrical power. Eight percent is provided by the co-ops, munis, and GIDs. Three percent is provided by Shell Energy, which currently supplies purchased power to Barrick Mines (i.e., Goldstrike, Turquoise Ridge, and Cortez). The CRC makes up the remaining 4 percent and provides power to the Southern Nevada Water Authority and a group of industrial companies in Clark County. The remaining small percentage (less than 0.2 percent) is provided by Solar Star, which provides power to Nellis Air Force Base, and WAPA's Southwest Desert Region, which provides power to the Las Vegas Paiutes, Ely Shoshone, Duckwater Shoshone, Yomba Shoshone, Nevada Test Site, and Nellis Air Force Base.

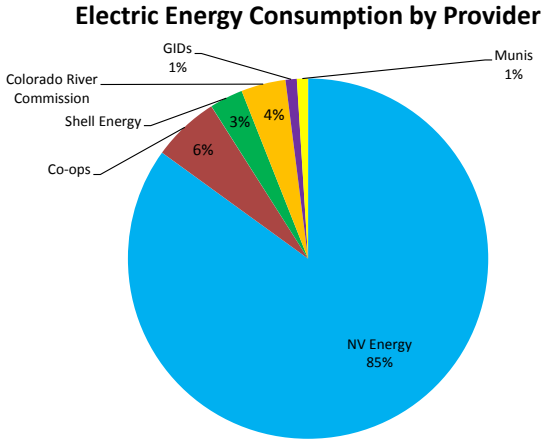


FIGURE 1

Sources: EIA Form 826 and 861, NV Energy, Public Utilities Commission of Nevada, Fallon Municipal Electric, Harney Electric Cooperative, Plumas-Sierra Rural Electric Cooperative, Overton Power District #5, Lincoln County Power District No. 1

Megawatt hours of energy consumed in 2012 are presented in Table 1. For reference, maps showing the service areas of NV Energy, the GIDs, munis, and co-ops are presented on pages 11 and 12. As shown on the map prepared by the Nevada Rural Electric Association (NREA), the service area of several of the service providers extends into neighboring states; however, the electric energy consumption figures presented in the table are estimated for Nevada only.

As shown in Figure 2, to generate electricity, the state uses several sources including natural gas, coal, hydroelectric (from small and large sources), and renewables. As shown, most of our electricity (72 percent) is generated by natural gas with coal providing the next largest segment at 11 percent, renewables at 10 percent, and hydroelectric at 7 percent. (It should be noted that the renewable percentage identified in Figure 2 does not correlate with the percentage identified under the discussion of NV Energy's Renewable Portfolio Standard (RPS) on page 15. This discrepancy is due to the fact that RPS carryover credits and credits from energy efficiency and conservation are not accounted for in Figure 2.)

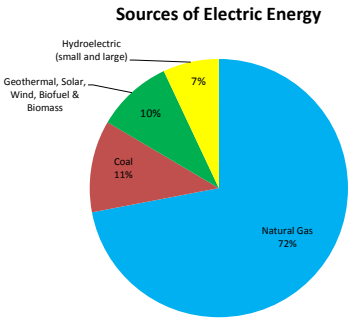


FIGURE 2

Source: Preliminary EIA Form 923 (Power Plant Operations Report) for 2012

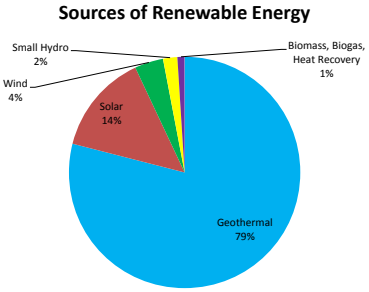


FIGURE 3

Source: Preliminary EIA Form 923 (Power Plant Operations Report) for 2012

As shown in Figure 3, renewable energy comes from several different sources – geothermal, solar, wind, hydroelectric (from small sources), biofuel, and biomass. Renewable energy is defined in NRS 704.7811 as biomass, geothermal, solar, wind, and waterpower. Waterpower is further defined as power derived from standing, running or falling water which is used for any plant, facility, equipment, or system to generate electricity if the generating capacity is not more than 30 megawatts. The term renewable energy does not include coal, natural gas, oil, propane, any other fossil fuel, or nuclear energy. A large majority (79 percent) of our renewable energy comes from geothermal sources. Solar is the next most prolific producer of renewable energy

TABLE 1
2012 Electric Energy Consumption
(In megawatt hours)

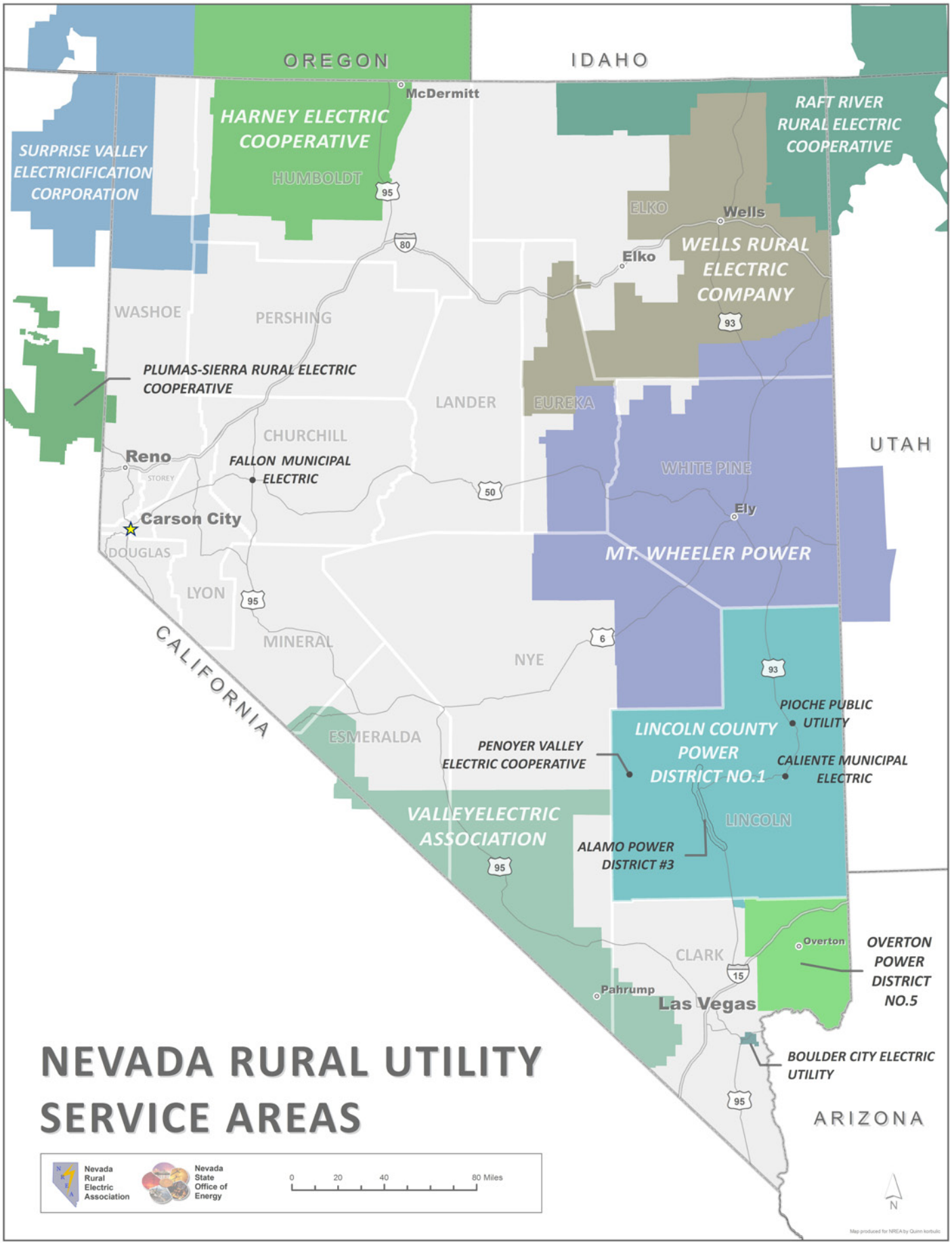
Provider	MWh
NV Energy	
Sierra Pacific	7,937,359
Nevada Power	21,480,659
Subtotal	29,418,018
Municipal Utilities	
Boulder City Electric Utility	151,228
Fallon Municipal Electric	75,749
Subtotal	226,977
Cooperatives	
Harney Electric	129,809
Mt. Wheeler Power	513,642
Wells Rural Electric Co.	832,398
Raft River Rural Electric	53,486
Plumas-Sierra Rural Electric	4,201
Surprise Valley Electrification	105
Valley Electric Association	439,682
Subtotal	1,973,323
GIDs	
Overton Power District #5	350,677
Lincoln County Power District[1]	80,668
Subtotal	431,345
Western Area Power Administration (WAPA)[2]	29,912
Solar Star NAFB LLC[3]	32,449
Shell Energy of North America	955,000
Colorado River Commission of Nevada	1,495,971
TOTAL	**34,562,995**

[1] Lincoln County Power District includes Alamo Power District #3, Pioche Public Utility, Caliente Municipal Electric, and Penoyer Valley Electric Cooperative

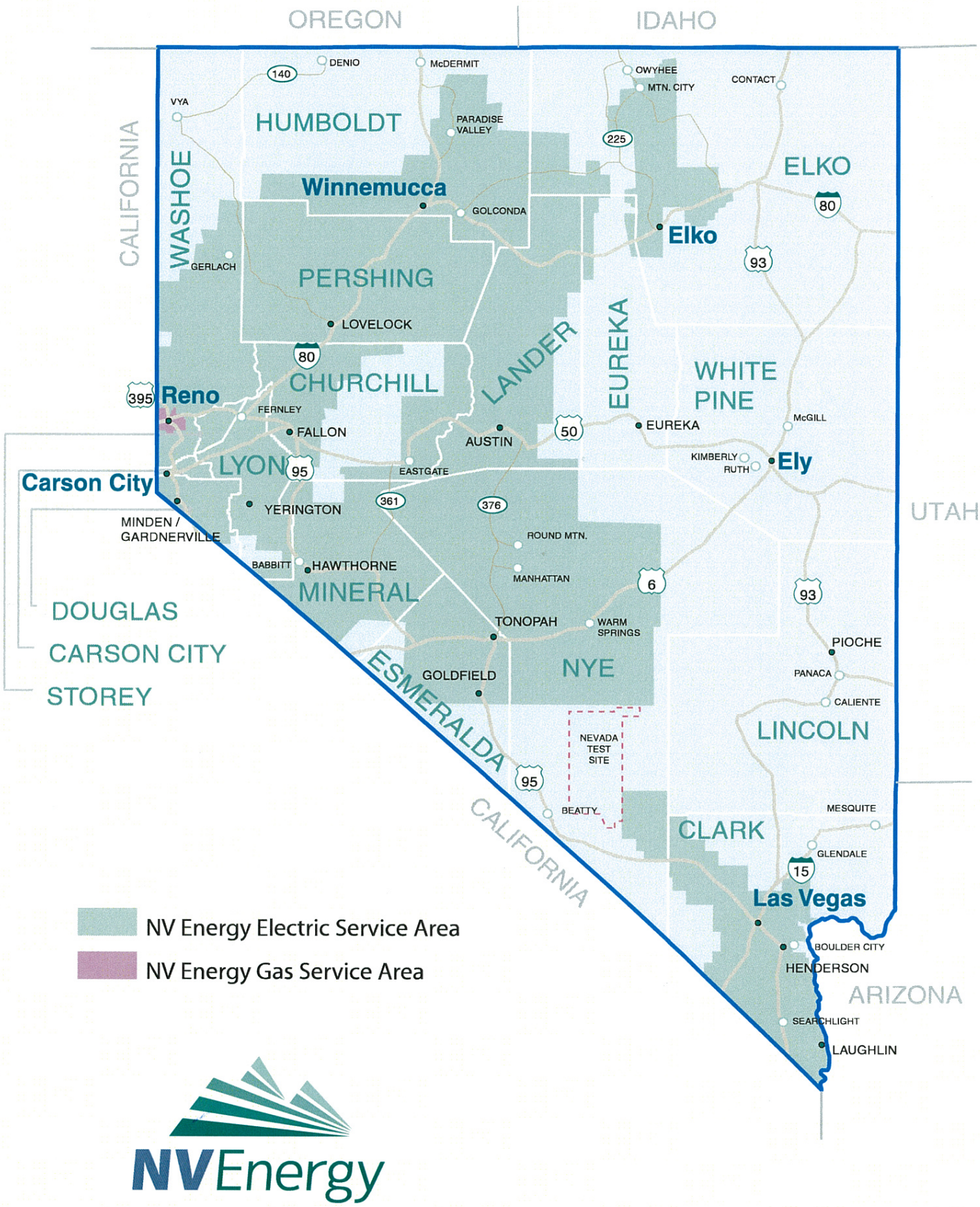
[2] WAPA Southwest Desert Region provides power to four reservations, the Nevada Test Site, and Nellis Air Force Base. This figure is for 2011 because 2012 data is not available.

[3] Solar Star provides power to Nellis AFB. This figure is for 2011 because 2012 data is not available.

Sources: EIA Form 826 and 861, NV Energy, Public Utilities Commission of Nevada, Fallon Municipal Electric, Harney Electric Cooperative, Plumas-Sierra Rural Electric Cooperative, Overton Power District No. 5, Lincoln County Power District No. 1



Source: Nevada Rural Electric Association



Source: NV Energy

at 14 percent of the total. Wind, small hydro projects, and biomass account for the remaining 7 percent.

PER CAPITA ENERGY CONSUMPTION

Reducing per capita energy consumption is an important goal for the Office of Energy and, in fact, this goal has been adopted as one of the Office's performance measures. The performance measure anticipates a 0.5 percent per year reduction from 2012 to 2015. Given recent trends, this goal appears quite attainable.

This goal is given added importance by the federal government which ties DOE SEP Formula funding to achieving the requirement. Federal requirements mandate that state plans include ". . .a goal consisting of an improvement of 25 percent or more in the efficiency of use of energy in the state in the calendar year 2012, as compared to the calendar year 1990." As shown in Table 2, Nevada exceeded that goal in 2010 with a 26.6 percent reduction, and in 2011 further reductions were achieved for a total reduction of 28 percent from the base year. (Calendar year 2011 is the most recent year that data are available.)

ENERGY USAGE IN STATE-OWNED BUILDINGS

The Nevada Revised Statutes (NRS 701.215) require the Director to prepare a state energy reduction plan which directs state agencies, departments, and other entities in the Executive Branch to reduce grid-based energy purchases for state-owned buildings by 20 percent by 2015. Since this requirement was added to NRS in 2005, it has been assumed that 2005 is the base year from which the reductions will be calculated. Further, since grid-based energy is specifically referenced, only electric energy consumption has been tracked.

TABLE 2
Per Capita Energy Consumption 1990-2011
(Millions of BTU)

Year	Population	BTU/Person	
1990	1,236,130	323	
2000	2,066,831	303	
2001	2,132,498	293	
2002	2,206,022	288	
2003	2,296,566	284	
2004	2,410,768	289	
2005	2,518,869	287	
2006	2,623,050	291	
2007	2,718,337	284	
2008	2,738,733	272	
2009	2,711,206	261	
2010	2,724,634	237	***A 26.6% reduction!***
2011	2,721,794	232	***A 28% reduction!***
2012	2,750,217	Not Yet Available	

Sources: Nevada State Demographer, U.S. Energy Information Administration

To achieve the remaining 9.8 percent reduction, which is roughly equivalent to 34,000,000 kWh/yr, the Office of Energy is actively pursuing several strategies.

Information on energy consumption in state-owned buildings was not tracked in the past; however, the information was obtained for the *2011-2012 Status of Energy Report,* which was submitted to the Legislative Commission on July 1, 2012. Now, a procedure is in place with NV Energy to continuously track energy consumption in state-owned buildings. NV Energy provides service to 93 percent of the buildings owned by the state. The remaining 7 percent are served by 11 municipal utilities, co-ops, and general improvement districts. The records kept by these small utilities vary in terms of how far back the data is available. Data for all 11 utilities can only be compared for the past three years (i.e., 2010-2012); therefore, it is not possible to determine the reductions that have been achieved since the 2005 base year. The few years of data that can be compared does show declining energy consumption (i.e., approximately 3 percent from 2010 to 2012).

Energy consumption in state-owned buildings served by NV Energy has gone down by 10.2 percent. As shown in Figure 4, usage in 2005 was 18.28 kilowatt hours per square foot and usage in 2012 was 16.42 kilowatt hours per square foot. This is a fairly sizeable reduction; however, it will be difficult to achieve an additional 9.8 percent reduction in the few years remaining between now and the end of 2015.

To achieve the remaining 9.8 percent reduction, which is roughly equivalent to 34,000,000 kWh/yr, the Office of Energy is actively pursuing several strategies. Our Office has been working closely with our partner state agencies, principally the Public Works Division and the Nevada System of Higher Education, to come up with viable strategies for achieving the necessary reductions. The recommended strategies for FY14-15 are presented below and on the following page.

- Create a Statewide Energy Team.
- Initiate an employee energy conservation and education program.
- Implement the Statewide Energy Efficiency Program as described in the FY2013-15 CIP.

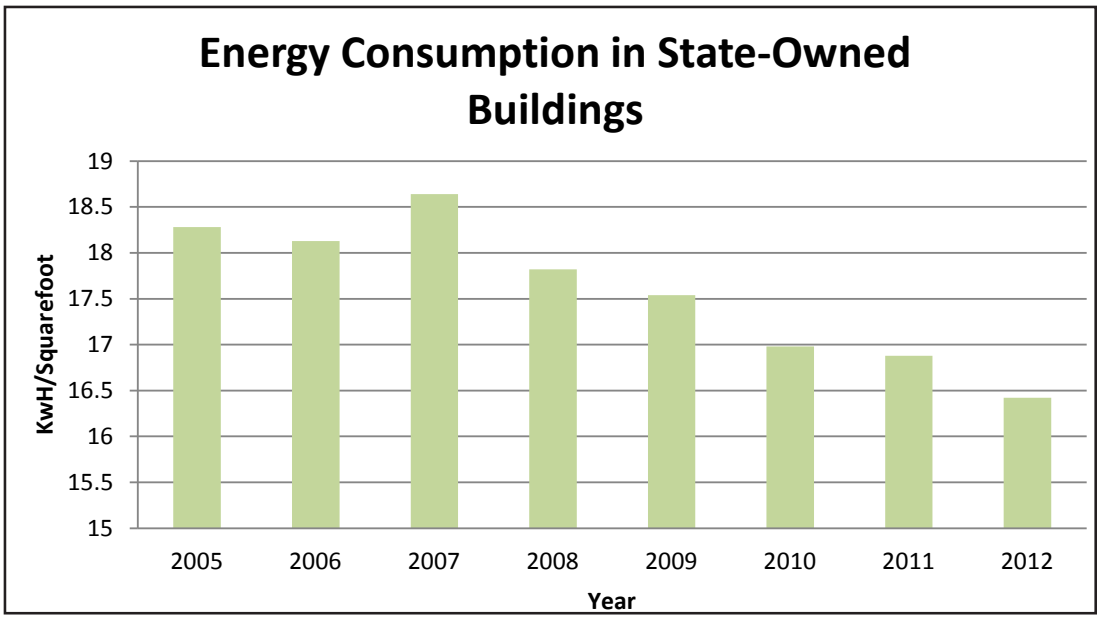


FIGURE 4

Sources: NV Energy, State Public Works Division

- Implement energy savings performance contracting in public facilities.
- Implement NV Energy strategy for improving energy efficiency and installing renewable energy projects for state-owned buildings.
- Reduce energy consumption in larger state-owned buildings by implementing NV Energy's energy optimizer pilot program using Building IQ Software.

RENEWABLE ENERGY GENERATED

Working closely with the staff of the Public Utilities Commission of Nevada, our office is tracking renewable energy generated in Nevada, whether that energy is used in Nevada or exported to neighboring states. As shown in Table 3, in 2010, an estimated 3,041,160 MWh were generated in Nevada from all renewable sources. In 2011 that figure increased to 3,217,758 MWh, an increase of 6 percent from the prior year. In 2012, approximately 3,822,968 MWh were generated, which is a 19 percent increase over the prior year.

TABLE 3
Renewable Energy Generated in Nevada
(megawatt hours)

	2010	2011	2012
Renewable Energy Generated	3,041,160	3,217,758	3,822,968
% Increase from Prior Year		6%	19%

Sources: EIA Form 923 (Power Plant Operations Report) for 2012, Public Utilities Commision of Nevada, Valley Electric Association, Fallon Municipal Electric

RENEWABLE PORTFOLIO STANDARD

In 1997, the Nevada Legislature enacted into law the Nevada Renewable Portfolio Standard (RPS), which mandates that a share of the energy delivered to Nevada retail customers come from renewable energy resources. Renewable resources, as defined under the NAC, include geothermal, solar, wind, small hydro, biomass, and recovered energy from waste heat sources. For calendar year 2012, the RPS required that not less than 15 percent of electricity sold to Nevada retail customers must come from renewable energy resources, and not less than 5 percent of that amount must be generated or acquired from solar resources. Additionally, not more than 25 percent of that amount may be met through energy efficiency measures. Of the energy efficiency measures, at least 50 percent of that amount must be saved from energy efficiency measures installed at service locations of residential customers. The energy efficiency measures achieved a savings of 2,390,440 MWh based on calculations prepared from data contained in NV Energy's Portfolio Standard Annual Report for Compliance Year 2012.

The RPS increased in 2011 from a 12 percent requirement to a requirement of 15 percent of total retail energy sales from renewable resources. The RPS increases

NV Energy successfully met and exceeded the RPS credit requirements which state that 15 percent of retail sales come from renewable energy resources and 5 percent of that amount comes from solar resources.

again to 18 percent in 2013 and 2014, 20 percent in 2015 through 2019, 22 percent for the years 2020 through 2024, and finally to 25 percent for 2025 and beyond. The solar requirement increases in 2016 so that no less than 6 percent of the RPS is met with solar resources.

Based on information contained in NV Energy's Renewable Portfolio Standard Annual Report for Compliance Year 2012, NV Energy successfully met and exceeded the RPS credit requirements which state that 15 percent of retail sales come from renewable energy resources and 5 percent of that amount comes from solar resources. In southern Nevada, Nevada Power exceeded both the 2012 RPS requirement and the 2012 solar RPS requirement, achieving 19.7% and 19.3%, respectively. (Refer to Figure 5.) Calendar year 2012 was the highest growth year in Nevada

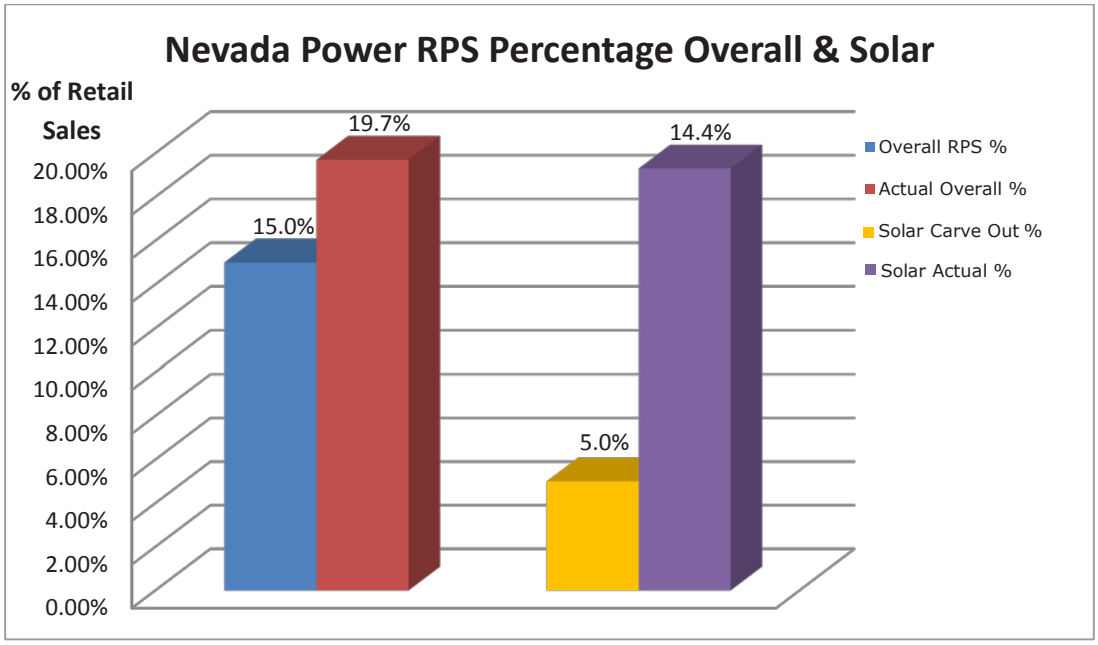


FIGURE 5

Sources: NV Energy Renewable Portfolio Standard Annual Report for Compliance Year 2012

Power's renewable energy history with eight new projects, all in Nevada, that totaled 341 MW (nameplate) of renewable energy declaring commercial operation status. In northern Nevada, Sierra exceeded both the RPS requirement and the solar RPS requirement ending the year at 29.2% and 14.4%, respectively. (Refer to Figure 6.) Sierra's customers have been benefiting from locally-generated geothermal energy and the development of small hydro-powered plants developed in the early 1990s. The RPS outlook for NV Energy is favorable based on current assumptions and current law, with both the north and south service areas on target to meet RPS compliance requirements for several years.

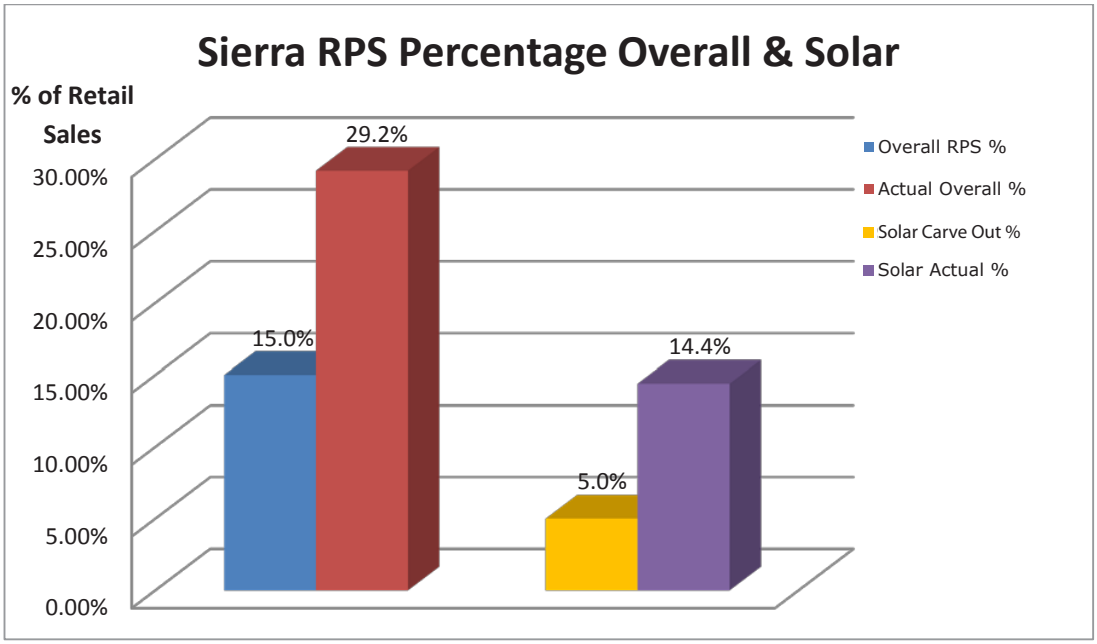


FIGURE 6

Sources: NV Energy Renewable Portfolio Standard Annual Report for Compliance Year 2012

RENEWABLEGENERATIONS PROGRAM

SolarGenerations Program – According to NV Energy's December 2012 report, 2012 was a productive year for the solar electric program. A total of 147 projects were completed, representing 7.2 megawatts installed and over $32 million in rebates paid. Projects completed were dispersed across all program categories with schools, public, and residential all completing approximately 50 projects each. The Solar Hot Water program also enjoyed a productive year with 24 projects completed and $80,117 in rebates paid.

WindGenerations Program – Calendar year 2012 was the largest and most productive year in the program's history, with 80 percent of the megawatts installed over the life of the project installed during 2012. A total of 71 projects were completed, representing 7.1 megawatts installed and over $18 million in rebates paid.

HydroGenerations Program – No hydro projects were completed in 2012. Several projects are progressing through permitting and design. It is anticipated that many of these projects will proceed to construction in 2013.

A detailed summary of NV Energy's RenewableGenerations program for solar (electric and hot water), wind, and hydro can be found online: *http://issuu.com/nvenergyrenewablegenerations/docs/monthlyreport_december2012*

The Solar Hot Water program also enjoyed a productive year with 24 projects completed and $80,117 in rebates paid.

TRANSPORTATION FUEL CONSUMPTION

Transportation fuels fall into the categories of fossil fuel and alternative fuel. Fossil fuels include gasoline, jet fuel, diesel (dyed and clear), and aviation gas. The federal definition of alternative fuels includes natural gas, electricity, liquefied petroleum gas (propane), methanol, ethanol, and certain blends. The taxable fuel consumption by source is presented in Figure 7. (Non-taxable fuel has not been monitored.) Fuels that satisfy NAC 486A (State Alternative Fuel Requirements) include federally reformulated gasoline (RFG) or equivalent, low sulfur diesel (15 ppm), blends of 20 percent biodiesel with 80 percent petroleum diesel, A-55 formulated with naphtha, hybrid electric vehicles, and "certified vehicles" (i.e., gasoline vehicles with a federal ultra low-emission vehicle ULEV rating).

Table 4 presents taxable fuel consumption by fuel type in millions of gallons. Biodiesel is not identified separately because it is not segregated from taxable diesel sales and, therefore, is not easily separated.

TABLE 4
Transportation Fuel Consumption
(Millions of gallons)

Source	Gallons	Percent
Gasoline	974.9	48%
Jet Fuel	415.9	20%
Diesel (clear and dyed)	562.8	27%
Ethanol	103.5	5%
LPG(Propane)	1.8	>.1%
Aviation Gas	1.7	>.1%
TOTAL	2,060.6	100%

Sources: Nevada Department of Taxation, Nevada Department of Motor Vehicles

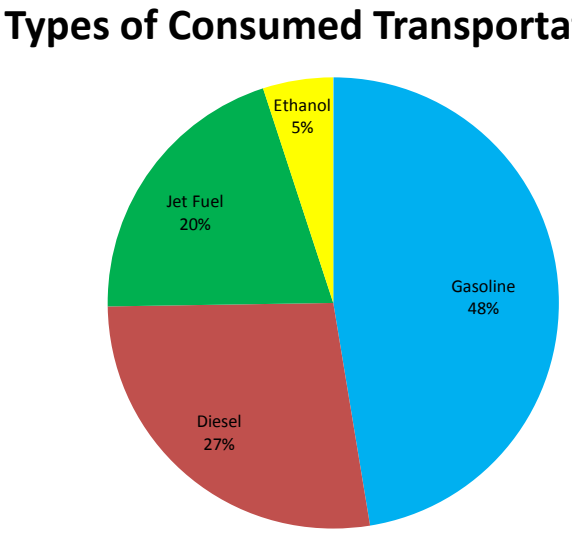


FIGURE 7

Sources: Nevada Department of Taxation, Nevada Department of Motor Vehicles

Office of Energy Programs

The Office of Energy has a number of active programs geared to improve the energy efficiency of Nevada homes, increase the use of renewable sources of energy, and enhance the tracking of energy use in the state. This section highlights the office's current programs and results achieved to date.

Our office administered seven grant awards from the federal Department of Energy (DOE) in FY13, bringing over $8,038,960 new dollars into the state. The awards are:

Grant	Duration	Amount
• SunShot: Nevada Rooftop Solar Initiative	2/15/12-2/14/13	$765,000
• SEP Competitive Grant: Fee Based Self-Funded Public Building Energy Retrofit	9/26/12-9/30/15	$715,000
• SEP Competitive Grant: Enhancing Commercial Building Retrofits through Streamlined Standards and Policy Incentives	9/30/11-9/29/14	$746,048
• Nevada Retrofit Initiative (Energy Fit Nevada)	10/1/10-9/30/13	$5,000,000
• State Energy Program (SEP) Formula Grant	7/1/12-6/30/13	$247,000
• American Reinvestment and Recovery Act (ARRA) Grant: Energy Assistance Planning	8/14/09-6/30/13	$438,573
• SEP Special Projects: Geothermal Outreach	10/1/04-10/15/12	$127,339
Total		**$8,038,960**

NEVADA ROOFTOP SOLAR INITIATIVE

Project Manager: Robert Nellis

The Nevada Rooftop Solar Initiative is a two-phase grant program funded by the Department of Energy. The initiative is designed to increase and strengthen Nevada's residential and commercial rooftop-solar photovoltaic market by:

- Standardizing codes, inspections, and ordinances,
- Developing an efficient process to implement rooftop solar installations from concept to completion, and
- Building upon existing programs and efforts to develop revolving loan programs.

The main goal of the program is to streamline the permitting and interconnection process for rooftop-solar systems so that installations can be completed within two months of approval. The project also aims to make solar electricity cost competitive with other forms of energy – as well as to ultimately see 5 percent of all single family homes and businesses in Nevada using rooftop-solar systems by 2020.

ROOFTOP SOLAR: The office successfully completed phase one of the Nevada Rooftop Solar Initiative in February 2013 and has partnered with Arizona in applying for $4 million for phase two funding.

PROGRESS

In anticipation of fewer rebates being made available through the utility to incentivize solar projects in Nevada, the office has been working with NV Energy to streamline the process for obtaining rooftop solar permits. The office has also been coordinating with Clark County, City of Las Vegas, City of North Las Vegas, City of Henderson, and City of Reno to simplify their solar permitting processes for small rooftop systems. Part of the solution being developed includes a web-portal that will allow for the utility, local permitting jurisdictions, and contractors to manage the permitting process through newly developed software called PowerClerk Interconnect. PowerClerk Interconnect will enable better communication between contractors, inspectors and permitting jurisdictions to track a solar permit from start to finish through one point of contact.

The office successfully completed phase one of the initiative in February 2013 and has partnered with Arizona in applying for $4 million for phase two funding.

NEW ENERGY INDUSTRY TASK FORCE

Project Manager: Sue Stephens

In November 2011, Governor Brian Sandoval issued an executive order charging the New Energy Industry Task Force with facilitating the timely development of transmission facilities and renewable energy resources in the state. The Executive Order also created a non-voting Advisory Committee made up of other energy-related stakeholders. The Task Force is a body created by legislature and the authority is found in Nevada Revised Statute (NRS) 701.500. The Office of Energy Director serves as the chair of the Task Force, and includes members of industry, utility, transmission development, environmental interests, as well as representation from the PUCN, Nevada System of Higher Education, the Bureau of Land Management, Consumer Protection, and other stakeholders.

The Task Force and Advisory Committee, pursuant to Executive Order 2011-18, were asked to:

- Facilitate the timely development of transmission and renewable energy resources in this State
- Identify appropriate transmission corridors in this State
- Promote the regionalization of transmission facilities
- Coordinate with utilities, the PUCN and other stakeholders on cost allocation strategies
- Develop the business case to develop our resources with lowest possible risk to ratepayers

The specific deliverables to be presented to the Governor, as stated in the Executive Order, include:

- A business case for the production and transmission of renewable energy for native and regional load requirements
- Recommendations for policy or regulatory changes that support the goals of the Task Force

- Recommendations on the direction of the State as it pertains to long term regional transmission and cost allocation planning in compliance with FERC Order 1000.

COPPER MOUNTAIN 2
Solar Photovoltaic project in Boulder City, March 2013.

PROGRESS

The Task Force and subcommittees received presentations from experts around the country which provided background on relevant aspects of clean energy and transmission facing our state and the West. The information, which includes meeting agendas, minutes and presentations are all available on the Office of Energy's website at *www.energy.nv.gov*. The work of the group was intended to support state energy policy and provide thoughtful recommendations to the Governor on ways to facilitate a sustainable and vibrant clean energy future for Nevada. These were all public meetings, complying with Nevada's open meeting law policies and procedures.

A summary of the recommendations is presented below:

A. RECOMMENDATIONS AFFECTING LEGISLATION
• Amend NRS 701 so that all providers of electric and gas service in Nevada report goals, programs and status updates annually to the Office of Energy.
• Clarify the 2.4 multiplier to solar renewable energy credits (RECs) as stated in NRS 704.7822 so that it is clear that it is for net metered systems only and reduce the multiplier over time to 1.0 by January 1, 2016 ("grandfather in" existing systems of all sizes).
• Amend NRS 701A.340 to allow geothermal projects to be considered on equal footing when applying for renewable energy tax abatements.
B. RECOMMENDATIONS FOR THE PUCN
• Evaluate the methodology used in the NV Energy Large and Small Standby Riders (LSR and SSR) to determine if modifications to the LSR and SSR tariffs are needed to promote the reduction of peak power requirements.
• Evaluate the impact, costs, and benefits of shifting the compliance cap for net-metered systems from 2 percent of nameplate power (MW) to 2% of peak energy capacity (MWh).
• Investigate the ability of NV Energy customers to purchase renewable energy from utility scale renewable projects or mechanisms on the utility side of the meter and remain a bundled customer of the utility, and evaluate the costs and benefits of net-metered systems to the grid.
• PUCN to open an investigatory docket to determine whether retail customers could benefit economically from mutually beneficial resource exchanges and sharing arrangements with neighboring states.
• PUCN to open a rulemaking docket to revise renewable energy zones designated in NAC 704.880 and consider new information and data that has become available since these zones were designated in 2009.
C. OTHER RECOMMENDATIONS
• State to develop a strategic plan for education and curriculum on clean energy topics for K-12 and Higher Education.

The public facilities retrofit grant program is being built on the proven foundation of the DOE's best practices for programs and projects.

PUBLIC FACILITIES RETROFIT GRANT

Project Manager: Sue Stephens

The Office of Energy received a $715,000, three-year Department of Energy grant in October 2012 to accelerate the use of energy savings performance contracting (ESPC) in order to achieve comprehensive retrofits in state and local government facilities. The program is being built on the proven foundation of the DOE's best practices for programs and projects. The program includes the following:

- An education/outreach campaign to increase awareness of ESPC
- The establishment of approved processes for procurement and contracting documents
- Pre-qualifications of a pool of energy service companies (ESCOs) committed to abide by program requirements
- The creation of the means for government building owners to get ongoing education and technical assistance to implement successful projects
- Collection of data to track program metrics and verify savings
- Public-private partnerships to leverage mutual interests
- The establishment of the Energy Office as the lead provider of information and services on ESPC in the state via a fee-based program.

PROGRESS

Since receiving the award, the Office of Energy has developed a project team that includes nationwide industry experts on ESPC. In addition, the office:

- Initiated three potential pilot projects
- Created an outreach plan for local governments
- Generated interest from several energy services companies to expand their businesses in Nevada
- Committed to establishing a public-private partnership with the Nevada State Chapter of the nationwide Energy Services Coalition
- Established a website showcasing local case studies, a five-steps guide, and links to nationally recognized sources
- Drafted a Request for Qualifications to establish a pool of qualified ESCOs.

The major goal of the grant is the creation of a fee-based ESPC program for the Office of Energy. On July 1, 2013, Nevada will become the first state since 2010 to enact legislation to establish such a program. SB142, introduced in the 2013 Legislative session, provided the necessary vehicle. The bill amends Nevada Revised Statutes by authorizing the Office of Energy to provide local governments with education and support relating to ESPC and to charge and collect a fee for providing such support. It also permits a local government to include the fee in their performance contract, and it allows the Office of Energy to charge a fee for providing assistance in evaluating certain proposals and presentations from ESCOs.

GREEN BUILDING TAX ABATEMENTS

Project Manager: Kevin Johnson

Leadership in Energy and Environmental Design (LEED) is the rating system used to measure energy efficiency and other environmental attributes in buildings and was developed by the US Green Building Council. Information on the rating system can be found at *www.usgbc.org*. The Office of Energy administers the green building property tax abatement program, which is based on the ability of projects to earn at least a LEED Silver Level. The program was instituted in 2007 as an incentive for business owners to improve the energy efficiency of new and existing buildings. The abatement ranges from 25 to 35 percent of property tax for five to 10 years depending on the building's LEED rating level.

Since its inception, more than 30 LEED buildings in Nevada, primarily in Washoe and Clark counties, received tax abatements through the green building tax abatement program.

PROGRESS

Since its inception, more than 30 LEED buildings in Nevada, primarily in Washoe and Clark counties, received tax abatements through this program. The buildings range in size, type and location and include new construction, core and shell, and renovation of existing buildings. Recent legislation passed during the 2013 Legislative Session, Assembly Bill 33, revised the program in the following ways:

- The tax abatement period for existing building renovations moves from one to five years
- The minimum number of points under the "Optimize Energy Credit" increased to be eligible for the abatement
- It allows the Director to consider other equivalent rating systems to be included in the program.

Additional legislation, Assembly Bill 239, modified the approval process for tax abatement applications so that approval of the appropriate County Commission is needed before the State can consider approving an abatement application.

Information regarding the success of the program, how to apply and a list of the approved projects can be found on our website at *http://energy.nv.gov/Programs/Green_Building_(LEED)_Tax_Abatements/*.

LEED SILVER: The Olive Garden restaurant in Carson City received a six-year tax abatement in 2012.

The Office of Energy recently approved two new projects for approximately $1.1 million, which include a 450 kW photovoltaic system and a wind turbine manufacturing project. The two projects together are expected to create or retain approximately 15 jobs in Nevada.

REVOLVING LOANS FOR CLEAN ENERGY PROJECTS

Project Manager: Robert Nellis

More than $8 million was funded under the federal American Recovery and Reinvestment Act of 2009 to provide short-term, low-cost loans to developers of renewable energy, energy efficiency, and conservation projects in Nevada. These loans serve as a bridge financing option to provide funding for various startup costs associated with these projects. Once projects reach mature levels, and financing is in place, the loans are repaid.

PROGRESS

The original $8.2 million in funding was built up to more than $12.8 million prior to the expiration of the grant, mainly due to moving unspent ARRA funds from other programs into the loan fund. According to the DOE, Nevada was the first state to have 100 percent of its ARRA revolving-loan funds allocated, indicating efficiency by the Office of Energy, as well as the industry's interest in developing projects in Nevada. The program is now self-funded, and more than $16 million in loans have been made since the fund's inception.

The Office of Energy recently approved two new projects for approximately $1.1 million, which include a 450 kW photovoltaic system and a wind turbine manufacturing project. The two projects together are expected to create or retain approximately 15 jobs in Nevada. Additional funding is being sought to grow the program, and applications are accepted on an on-going basis. Application information is available at *www.energy.nv.gov.*

COMMERCIAL RETROFIT GRANT

Project Manager: Sue Stephens

The Office of Energy received a $746,048 Department of Energy grant in December 2011 to improve Nevada's regulatory and policy environment for implementing energy efficiency projects in existing commercial buildings. The goal of the program is to shift the way that commercial retrofit projects are evaluated, implemented and financed, from both an energy-savings and financial return perspective, and to create a plan for implementation that will increase the number of retrofit projects accomplished each year.

PROGRESS

Approaches and best practices of other utilities, states and nations have been examined, barriers have been identified, existing policy and legislation have been reviewed, and preliminary recommendations have been developed. Throughout this process, stakeholder input was received, discussed and incorporated into a report with findings and recommendations.

Under a sub-grant, the University of Nevada Reno's Business Environmental Program team is performing econometric modeling and identifying significant

barriers to commercial building energy efficiency retrofits in the state and proposing solutions. The Office of Energy is holding regular meetings with key partners, including the Governor's Office of Economic Development, NV Energy, the Bureau of Consumer Protection, SWEEP (Southwest Energy Efficiency Project), Nevada's rural electric utilities, and other stakeholders to discuss the project's preliminary findings and recommendations. A plan for formal adoption and implementation of proposed revised and new policies and/or regulations will be finalized in early 2014.

ENERGYFIT NEVADA

Project Manager: Kevin Hill

The Energy Office received a three-year, $5 million Department of Energy grant in 2010 for EnergyFit Nevada, a program aimed at increasing comfort and energy savings in Nevadan's homes while reducing energy consumption. Homeowners can learn more at EnergyFitNevada.org and sign up for the program. Low-interest loans (2.3 percent) are available to fund recommended upgrades, and if the home shows a minimum 20 percent increase in energy efficiency, the homeowner can receive a minimum $1,000 rebate. The program's goal is to upgrade 1,250 single family residences in Nevada by October, 2013.

As of late June 2013, 342 homeowners have upgraded their homes, making them more comfortable, reducing energy consumption, and saving money through rebates offered by the Energy Office.

PROGRESS

COORDINATION: Regular coordination occurs with numerous partners, including: University of Nevada, Reno; University of Nevada, Las Vegas; HomeFree Nevada; Truckee Meadows Community College; the City of Las Vegas; and the U.S. Department of Energy.

MARKETING: Marketing outreach efforts have been created to encourage homeowners to sign up for the program. Efforts include news media coverage, advertising campaigns, special events and tradeshows, and door-to-door campaigns.

- Sales messaging courses are conducted for new and existing program contractors in order to have a consistent message for homeowners signing up for the program.

State of Nevada

Executive Department

A Proclamation by the Governor

WHEREAS, October is national Home Performance with ENERGY STAR month; and

WHEREAS, Home Performance with ENERGY STAR is a national program designed to promote home energy efficiency and ensure that homeowners benefit from energy efficiency improvements that are properly implemented; and

WHEREAS, the benefits of residential energy efficiency improvements include not only increased comfort and health, but also reduced energy costs, reduced reliance on fossil fuels, reduced pollution from power sources, and job creation in an emerging residential energy efficiency industry; and

WHEREAS, the EnergyFit Nevada program assists homeowners in improving the health, comfort, and energy efficiency of their homes using certified energy auditors and contractors; and

WHEREAS, HomeFree Nevada is the Home Performance with ENERGY STAR sponsor for the State of Nevada and is working with federal grant funds provided to the Nevada State Office of Energy to implement the EnergyFit Nevada program;

NOW, THEREFORE, I, BRIAN SANDOVAL, GOVERNOR OF THE STATE OF NEVADA, do hereby proclaim October 22, 2012 as

ENERGYFIT NEVADA DAY

In Witness Whereof, I have hereunto set my hand and caused the Great Seal of the State of Nevada to be affixed at the State Capitol in Carson City, this 17th day of October, 2012.

By the Governor — Governor

Secretary of State

By — Deputy

- The EnergyFit Nevada marketing plan was updated in 2013 to focus efforts more efficiently.
- Advertising efforts include radio spots on Nevada public radio stations, television advertisements, and printed and online advertisements.
- One news story about EnergyFit Nevada led to more than 100 program sign-ups.
- Governor Brian Sandoval, the City of Reno, City of Henderson, City of Las Vegas, City of Sparks and Washoe County have made proclamations for EnergyFit Nevada Day.
- EnergyFit Nevada has partnered with numerous organizations, including: Green Chips, Clean Energy Project, Nevada Conservation League, Workforce Connections, homeowners associations, Nevada Rural Electric Association, and many others.

UPGRADES: As of late June, 2013, 342 homeowners have upgraded their homes, making them more comfortable, reducing energy consumption, and saving money through rebates.

RENEWABLE ENERGY TAX ABATEMENTS

Project Manager: Suzanne Linfante

The state has approved 16 tax abatement applications, which include large scale solar PV, solar thermal, biomass, geothermal, and wind projects throughout the state.

The Renewable Energy Tax Abatement program provides meaningful incentives to large scale renewable energy developers in the State. The authority lies in NRS 701A.360 through 701A.450 and came under the Office of Energy's jurisdiction in July 2011. The program awards partial sales and use tax and partial property tax abatements to eligible renewable energy producers with projects larger than 10 MW and that meet employment and wage criteria. The Office of Energy administers the program and reviews the abatement applications, conducts public hearings to determine eligibility, and reviews annual compliance audits after abatements have been granted. The projects receive a discounted sale and use tax for the first three years of the project and a reduced property tax for 20 years. Revenues from the property taxes gets divided and 55 percent goes to the county in which the project resides and 45 percent to the Renewable Energy Fund. Recent legislation approved during the 2013 Legislative Session, Assembly Bill 239, made several changes to the program. Those changes are summarized below.

- The Director may charge a fee for the processing of the applications
- The affected county must approve or deny the project within 30 days after receiving the application
- The project owner must pay the construction workers at least 175 percent of the state average wage and the definition of wage is defined as listed in NRS 338
- Any projects approved after the effective date of the bill will no longer split the revenues. All revenues will go to the county and not to the Renewable Energy Fund

ENEL GREEN Power solar/ geothermal plant near Fallon.

PROGRESS

The state has approved 16 tax abatement applications, which include large scale solar PV, solar thermal, biomass, geothermal, and wind projects throughout the state. Information on the program, how to apply and a list of current approved projects can be found on our website at *http://energy.nv.gov/Programs/Renewable_Energy_Tax_Abatements/*.

STATE ENERGY PROGRAM FORMULA GRANT

Project Manager: Pete Konesky

The State Energy Program formula grant is an annual source of federal funds from the U.S. Department of Energy (DOE). The program's goal is to improve the reliability and maintain the affordability of energy supplies available to Nevada's residents and businesses consistent with the need to protect the state's environment and human health. The state received $274,000 from DOE in 2012 plus a match of $65,162 from state funds. Funding requests include money for managing the building codes program, reducing fossil fuel use, renewable energy projects, and monitoring the office's revolving loan program (page 24). The following programs have been completed or are ongoing under the State Energy Program formula grant.

BUILDING ENERGY CODES

Project Manager: Emily Nunez

Energy code activities are funded through the formula grant; however, when American Recovery and Reinvestment Act funds were available, energy code

activities expanded. The primary objectives of the program were to adopt the 2009 International Energy Conservation Code (IECC) in Nevada as the state's minimum standard, to provide outreach and training to stakeholders, and to develop a plan to ensure compliance with the code by 2017. The 2009 IECC has been adopted by many states to ensure minimum design and construction requirements for energy efficiency.

PROGRESS: The 2009 IECC was adopted as the minimum standard in Nevada and went into effect July 1, 2012. A copy of the regulation is available online: *http://energy.nv.gov/Programs/Building_Energy_Codes/*. The office is required to adopt the latest version of the IECC every third year and is developing a plan to ensure compliance by 2017. Regulation hearings will begin in the near future to adopt the 2012 IECC by December 31, 2013 with an effective date of July 1, 2014. The office continues to work with local governments to ensure they understand the value of implementating the code in their jurisdictions, as required by NRS 701.220.

DOZENS of energy code trainings have been held statewide with local government building officials in order to meet the state's minimal standard for building energy codes.

The Office of Energy provided eight training sessions on the residential and commercial provisions of the 2009 IECC. Trainings were held in southern and northern Nevada and provided training to approximately 100 building code officials and members of the building industry. $24,000 in scholarships to EduCode and training to approximately 57 individuals were also provided.

The Office of Energy worked with the Building Codes Assistance Project to form an Energy Codes Collaborative in Nevada. The Collaborative was created to gain key stakeholder input and support for achieving compliance with energy codes by 2017. The Collaborative meets on a quarterly basis, and meetings are available by telephone and video conferencing. The office continues to seek additional funding to provide future trainings for all stakeholders affected by new codes.

RENEWABLE ENERGY, CONSERVATION AND USE

Project Manager: Pete Konesky

This program promotes the use of renewable energy and energy conservation, reviews energy trends, coordinates with federal and state agencies to reduce energy costs, and works to improve Nevada's economy.

PROGRESS:

- A sub-grant of $15,000 was given to the Eastern Nevada Landscape Coalition in March 2012 for bio-char made from pinyon-juniper. Pinyon-juniper has encroached onto productive rangelands and can be a severe fire hazard. Bio-char made from pinyon-juniper is being used as a soil amendment, which enhances wildlife habitat and rejuvenates soils at mine sites. The bio-char may also be used for energy crop production in the future. Additional funding has been provided to the Nevada Division of Forestry for the project.

Ormat Steamboat
Geothermal facility in Reno

- In July 2012, a sub-grant of $5,000 was given to the Valley Electric Association to upgrade the electrical service on modular homes so electric, back-up water heaters could be installed in support of solar hot water heaters the utility was installing. Approximately 10 homes were converted.
- A sub-grant of $21,250 was given to the Nevada Division of State Parks in May 2013 for photovoltaic panels for nighttime lighting at Lake Tahoe Nevada State Park, Sand Harbor.

TRANSPORTATION FUEL

Project Manager: Pete Konesky

There are two laws that affect transportation fuel in the state. NRS 486A covers state and local government fleets in Clark and Washoe counties and requires 90 percent of new vehicle purchases to use an alternative fuel. The federal law defined in the Energy Policy Act requires EPA non-attainment areas for ozone (Clark County) to comply with the federal definition of alternative fuels, and 75 percent of new state-owned vehicles purchased must use an alternative fuel. (The Las Vegas non-attainment area is in compliance with this requirement.) Nevada's transportation fuel efforts are designed to decrease the state's dependence on imported fossil fuels in order to improve urban air quality and decrease risk to the state economy in the event of pipeline supply disruptions. Additional objectives include promoting the increased availability and use of alternative fuels, and increasing market demand for alternative transportation fuels that can be produced domestically or within Nevada.

PROGRESS: In 2012, the Office of Energy supported the National Governor's Association memorandum of understanding for the use of natural gas as a transportation fuel. Numerous activities concerning transportation fuel are underway:

- Regular communication is occurring with adjacent states on fuel issues.
- An Electric Vehicle Infrastructure Readiness Task Force was created with more than 100 stakeholders dedicated to supporting electric vehicle charging station infrastructure.
- Two Clean Cities Coalitions in Nevada are working to reduce consumption of fossil fuels for transportation and facilitating alternative fuel infrastructure.
- The office provided a sub-grant to the Nevada Venture Accelerator to conduct a code training in Reno and Las Vegas in May 2013. The training helped educate inspectors, equipment suppliers, and code officials on the requirements for the installation of electric vehicle charging stations. This was done in conjunction with NV Energy. Twelve were in attendance in Reno, and 44 attended in Las Vegas.

ENERGY ASSURANCE PLAN

Project Manager: Pete Konesky

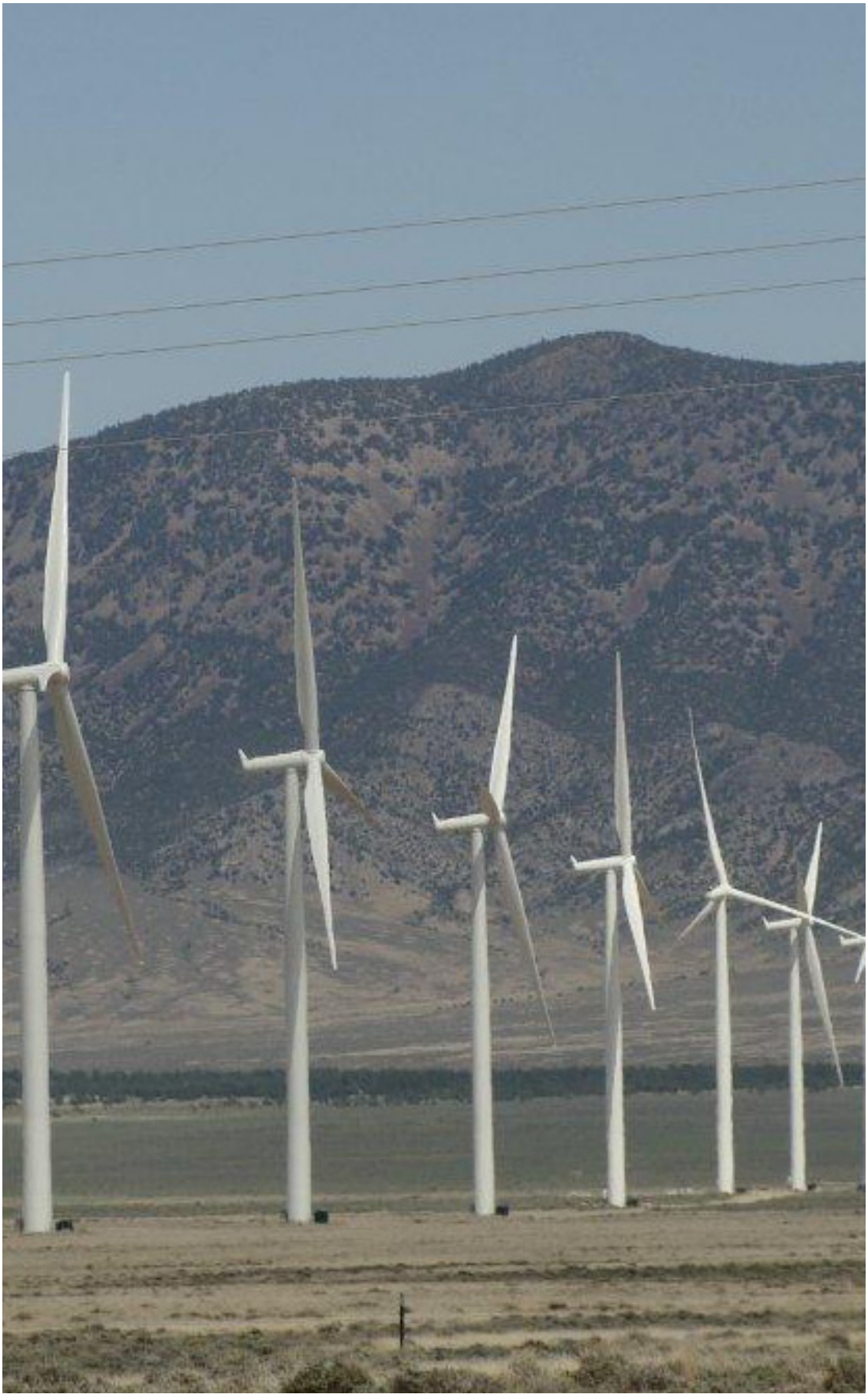
The Office of Energy was granted $438,573 including administrative costs to update and implement the state's Energy Assurance Plan, which outlines the structure for monitoring and overseeing energy demand and supply in case of a disruption or an emergency. The plan provides the ability to intervene, when directed, to ensure a reliable supply of electricity, natural gas, motor vehicle fuel, propane, and other heating products are available to the citizens of Nevada. The work plan includes developing new energy-use and disruption-tracking systems, incorporating "smart grid" technology, and outfitting a room capable of handling the personnel required to respond to any energy contingency that may develop through implementing the plan.

PROGRESS

Visual and connective technologies were installed to enhance the Office of Energy's effectiveness in responding to energy contingencies. The office prepared a process for tracking the duration, response, restoration, and recovery time of energy supply disruption events and notified all Nevada energy-supplying entities of the energy disruption tracking process and requested their participation.

The office received comments from the Department of Energy on the office's draft Energy Assurance Plan, noting that the initial plan sufficiently documented guidelines for responding to an energy emergency. The office supported the Division of Emergency Management (DEM) by taking part in various emergency exercises put on by DEM. The office took part in the "Urgent Solidarity" exercise, provided input to the State Comprehensive Emergency Management Plan (SCEMP) update, supported the "Operation Conjunction, Junction" exercise plan and received training in cyber security put on by the Center for Infrastructure Assurance and Security. In addition, the office developed a "Continuity of Operations Plan" (COOP) and received training from the Federal Emergency Management Program on how to develop a COOP. Ten office staff members have received ICS (Incident Command System) 100 & 200 training, and four have received ICS 300 training. These trainings help office personnel be better prepared for a potential energy crisis in Nevada.

The updated Energy Assurance Plan is available online: *http://energy.nv.gov/Media/Documents_and_Reports/*.



Spring Valley Wind Project in White Pine County.

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