State of Nevada
Governor's Office of Energy

2020 Status of Energy Report

Governor's Office of Energy

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Cover Photo: Nevada Electric Highway ribbon cutting at Mesquite, NV, January 29, 2020. In the photo from left to right, Doug Cannon (CEO NV Energy), Kristina Swallow (NDOT Director), David Bobzien (GOE Director), NV Gov. Steve Sisolak, Mendis Cooper (CEO Overton Power District, and Mark Yardly (Owner of the Eagles Landing Travel Plaza in Mesquite) (Source: GOE)
Background Photo: Spring Valley Wind (Source: GOE)

Governor's Office of Energy: Mission

The mission of the Governor's Office of Energy (GOE) is to ensure the wise development of Nevada's energy resources in harmony with local economic needs and to position Nevada to lead the nation in renewable energy production, energy conservation, the exportation of energy and transportation electrification. The Governor's Office of Energy implements the laws of the state as defined in the Nevada Revised Statute, Chapters 701 and 701A; manages energy-related programs; facilitates cooperation between key stakeholders; advises the Governor on energy policy; and collaborates with our local, regional, and federal partners to ensure a reliable and sustainable energy system.

State Fiscal Year 2020 - Revenues

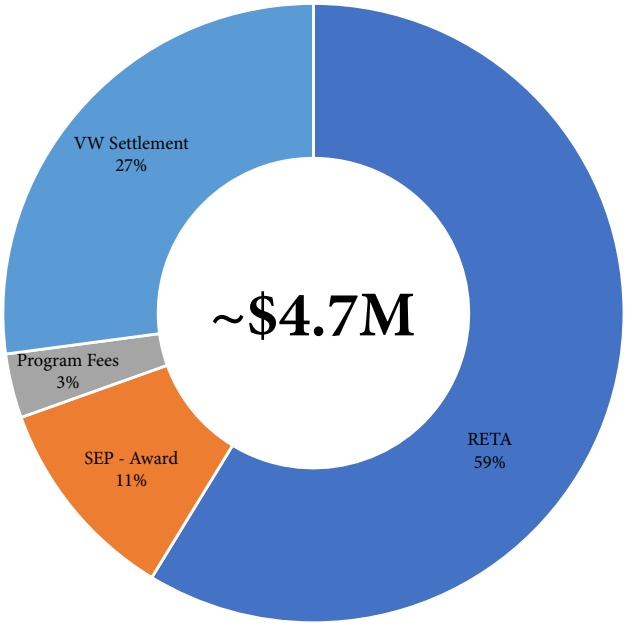


Figure 1 - Governor's Office of Energy Revenue (SFY 2020)

State Fiscal Year 2020 - Expenditures

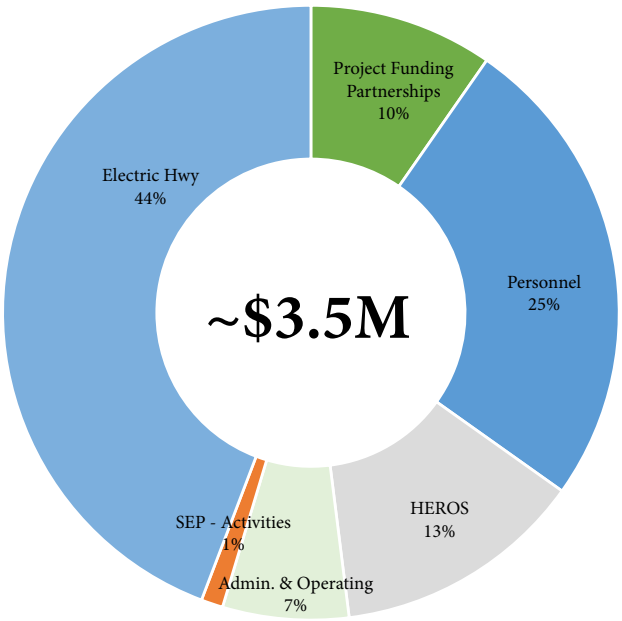


Figure 2 - Governor's Office of Energy Expenditures (SFY 2020)

Revenues:

- Renewable Energy Tax Abatements (RETA) - Income from renewable projects built before 2013; 55% taxes are abated, other 45% are paid, and those are split 45%-55% between the Governor's Office of Energy and the County respectively.
- U.S. DOE State Energy Program (SEP) Formula Grant Award - Annual source of income from federal government.
- Program Fees - Fees generated from the Green Building Tax Abatement (GBTA) and RETA programs (application and compliance fees)
- VW Settlement - Funds that are from the Volkswagen settlement governed by the Nevada Beneficiary Mitigation Plan, managed by the Department of Conservation and Natural Resources.

Expenditures:

- Personnel - Staff salaries, fringe benefits and travel.
- Home Energy Retrofit Opportunity for Seniors (HEROS) - Funds spent that went directly towards energy efficiency projects.
- Administration & Operating - Building utilities, rent, etc.
- U.S. DOE SEP Activities - Grants issued for renewable energy, energy efficiency or transportation electrification projects, or on staff time in support of projects.
- Electric Hwy - Funds that are spend on the Nevada Electric Highway program.
- Project Funding Partnerships - Grants issued for renewable energy, energy efficiency or transportation electrification projects.

Funding Note:

- The difference in revenue to expenditures of $1.2M was due to multiple staff vacancies as well as the effects of the COVID-19 pandemic which resulted in a hold on expenditures.

Energy in Nevada

2019 Nevada Electric Energy Consumption

Electric energy consumption in Nevada consists of customers of the major providers listed below. NV Energy (Sierra Pacific Power Co. and Nevada Power Co.) provides 88 percent of the state's electrical power; 6 percent by electric cooperatives; and the remainder by businesses, general improvement districts, municipal utilities, and others. While some of the service areas of several power providers extend into neighboring states, the electric energy consumption estimates presented in the table below are for Nevada only. The chart below represents only bundled service.

	MWh
Investor Owned	**28,700,861**
Nevada Power Co. (Bundled)[1]	19,505,109
Sierra Pacific Power Co.(Bundled)[1]	9,195,752
Cooperatives	**1,986,702**
Harney Electric Coop, Inc.[1]	101,324
Mt. Wheeler Power, Inc.[1]	548,837
Plumas-Sierra Rural Elec. Coop[1]	4,580
Raft Rural Elec. Coop Inc.[1]	50,426
Surprise Valley Electrification[1]	118
Valley Electric Assn., Inc.[1]	544,892
Wells Rural Electric Co.[1]	736,525
Political Subdivision	**479,528**
Aha Macav Power Service[1]	23,041
Overton Power District No. 5[1]	397,504
Lincoln County Power District No. 1[2]	45,241
Alamo Power District No. 3[2]	13,742
Municipal	**245,052**
Boulder City[1]	151,086
City of Fallon[2]	87,171
City of Pioche[2]	6,795
Colorado River Comm. of NV (Bundled)[1]	**618,564**
Western Area Power Administration[1]	**26,812**
Behind the Meter	**259,595**
Greenbacker Renewable Energy Corp.[1]	360
Greenskies Renewable Energy, LLC.[1]	7,847
SolarCity Corporation[1]	125,106
Spruce Finance[1]	1,021
SunEdison LLC[1]	273
Sunnova[1]	23,176
SunPower Capital, LLC[1]	7,888
Sunrun Inc.[1]	67,529
Vivint Solar, Inc.[1]	26,395
EIA Net Bundled Adjustment	**120,482**
Total 2019 Nevada Bundled	**32,437,596**

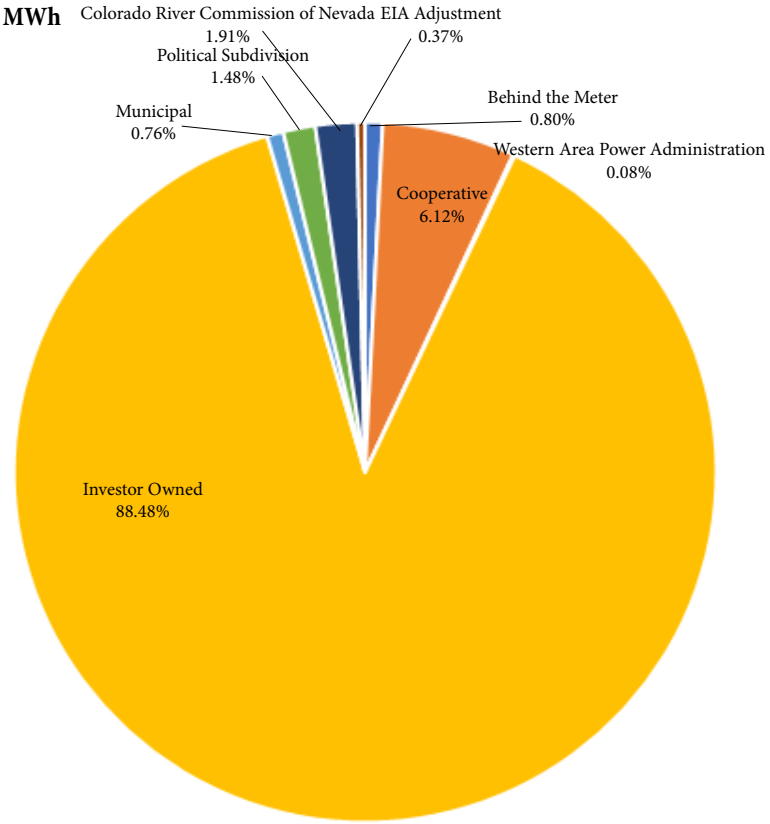


Figure 3 - Electric Energy Consumption by Provider

Energy Only Providers	**9,597,554**
Nevada Power Co. (Delivered)	2,612,572
Sierra Pacific Power Co. (Delivered)	1,713,132
Exelon Generation Company[1]	146,018
Macquarie Energy LLC	53,618
Morgan Stanley Capital Grp. Inc.	690,050
Shell Energy North America (US), L.P.	1,601,569
Silver State Energy Association[1]	969,534
Tenaska Power Services Co.[1]	1,570,053
Colorado River Comm. of Nevada (Delivered)[1]	664,433
Colorado River Comm. of Nevada	21,922
EIA Energy Only Adjustment[1]	**-507,974**
Total 2019 Nevada Delivered (MWh)	**9,089,580**

[1]Source: U.S. Energy Information Administration (EIA) 2019 Form 861 (Utility Sales)
[2]Source: EIA 2019 Form 891 (Short Form)

Nevada's Electric Energy Generation Portfolio

As shown in Figure 4, Nevada uses several sources to generate electricity including natural gas, renewables, coal, and a small amount from petroleum. The combination of energy resources a utility uses to create electricity is known as a resource mix, or portfolio. Currently, more than two-thirds of the state's electricity is produced by natural gas fired power plants; renewables comprise most of the remaining amount; Nevada continues to phase out its remaining coal power plants which now is less than 10% of produced electricity. Nevada has seen a significant increase in renewable energy production, and continues to develop its abundant renewable energy resources such as geothermal and solar for use both within the state and for exporting. Nevada has more than tripled its renewable energy production since 2011.

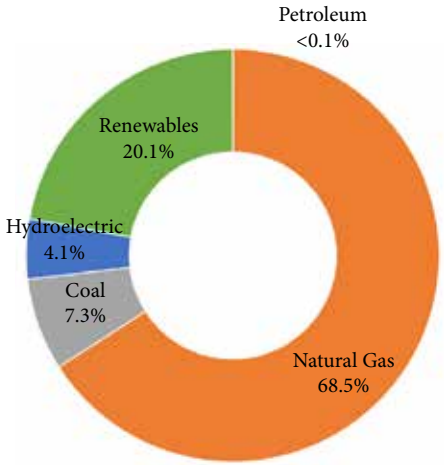


Figure 4 - Net Electricity Generation by Source (4,477 thousand MWh)
Source: EIA; Data, August 2020

Nevada's Renewable Portfolio Generation

The Governor's Office of Energy closely tracks the renewable energy generated in Nevada, whether that energy is used in Nevada or exported to neighboring states. Renewable energy is defined in NRS 704.7811 as biomass, geothermal, solar, wind and waterpower.

Capacity vs. Generation

The charts below depict Nevada's renewable nameplate capacity, expressed in megawatts (MW) and renewable electricity generation, expressed in megawatt-hour (MWh) numbers. Awareness of the difference between nameplate capacity and electricity generation is critical to improving reliability, lowering costs, and enhancing the integration of renewable resources. Nameplate capacity is the maximum rated electric output a generator can produce under specific conditions. Generation is the amount of electricity a generator produces over a specific period of time. The difference is due to the fact that many generators do not or cannot operate continuously at their full nameplate capacity.

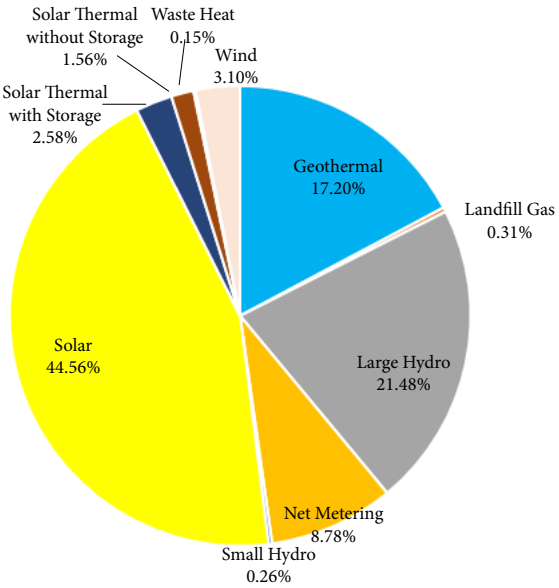


Figure 5 - 2019 Capacity (4,839.4 MW)
Source: EIA 2019 From 860

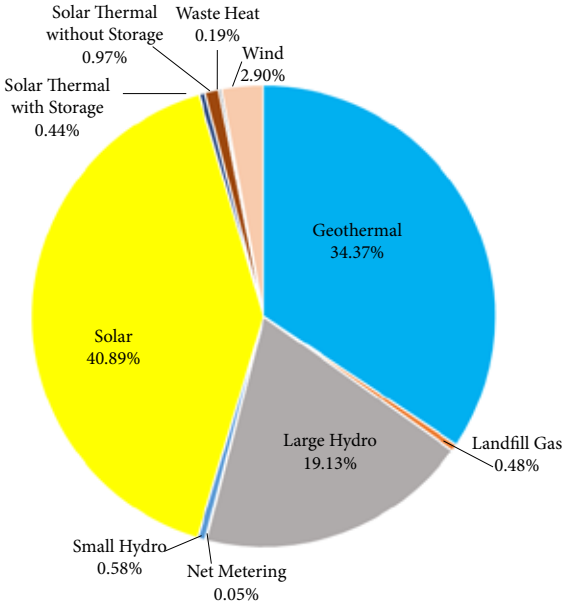


Figure 6 - 2019 Renewable Generation (11,372,435 MWh)
Source: EIA 2018 From 923; Note: net metering value represents the amount of energy sold back to the grid.

Energy in Nevada

Nevada's Climate Action

Background and Emissions Status

Climate change refers to the changes happening to our planet. Changes include rising sea levels; shrinking glaciers; accelerating ice melt in polar regions; and shifts in flower/plant blooming times. These changes are all consequences of the warming, which is caused mainly by the burning of fossil fuels and releasing heat-trapped gases into the air.[1]

These impacts from climate change are seen statewide. Las Vegas has been identified as the fastest-warming city in the United States with an increase in temperature of 5.76 degrees since the 1970's.[2] With this increase in temperature comes an expected increase in heatwaves, and heat-related deaths stressing the productivity of the Southern Nevada economy. A report from the Union of Concerned Scientists warns that absent global action to reduce carbon emissions, Las Vegas will likely experience 96 days of heat above 100F by the end of the century, including 60 days of temperatures above 105F and seven "off the chart" days, i.e. those that would break the current heat index.[3] The Reno-Tahoe region is also feeling the impacts of climate change, with rising temperatures in Reno and ecological impacts to Lake Tahoe.[4]

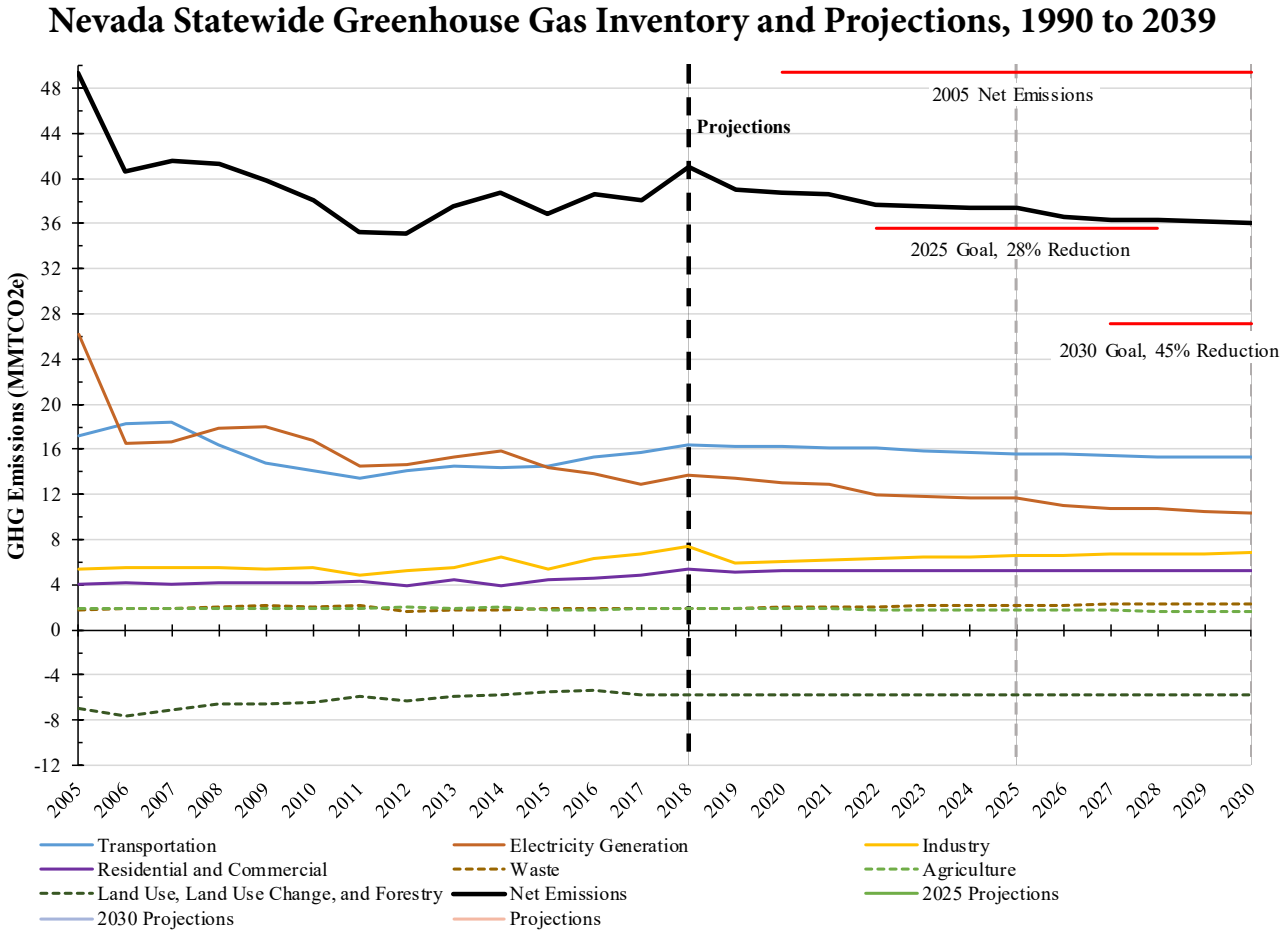


Figure 7 - This chart from the Nevada Division of Environmental Protection's green-house gas inventory, depicts projected reductions in greenhouse gas emissions under current policies and the size and status of the reported sectors. Absent innovative and robust policies, current predictions by Nevada's air regulators conclude Nevada will not meet its carbon reduction goals.
(Source: https://ndep.nv.gov/uploads/air-pollutants-docs/ghg_report_2020.pdf).

[1]Source: NASA: https://climate.nasa.gov/faq/12/whats-the-difference-between-climate-change-and-global-warming/
[2]Source: Climate Central Research: https://assets.climatecentral.org/pdfs/April2019_Report_EarthDay.pdf?pdf=AmericanWarming-Report
[3]Source: Union of Concerned Scientists: https://www.ucsusa.org/resources/killer-heat-united-states-0#ucs-report-downloads
[4]Source: Reno Gazette Journal: https://www.rgj.com/story/life/outdoors/2017/08/10/how-climate-change-harms-lake-tahoe-and-how-stop/558083001/

Nevada's Climate Action

Energy in Nevada

Additionally, these effects have disproportionate impacts on Nevada's most vulnerable communities: communities of color, low-income communities and indigenous populations. In major cities, including Nevada's major urban areas, low-income neighborhoods are likely hotter than more affluent areas, subjecting these at-risk populations to even greater climate change impacts.[1]

In 2019, Nevada's action to reduce carbon emissions economy-wide included:

- Joining the U.S. Climate Alliance in March of 2019[2];
- Passing Senate Bill 254 (2019)[3];
- Governor Sisolak's signing Executive Order 2019-22 (EO)[4]; and
- Completion of a greenhouse gas inventory with identification of policy options for further emission reductions.[5]

In 2020, as directed in Governor Sisolak's Executive Order 2019-22, Nevada produced its first-ever comprehensive State Climate Strategy ("Climate Strategy")[6] and issued its 2020 Supplemental Report to its Nevada Statewide Greenhouse Gas Emissions Inventory and Projections, 1990-2040 (2020 GHG Report). The Climate Strategy, discussed in the following pages, and 2020 GHG Report are available online at https://climateaction.nv.gov/our-strategy/ and https://ndep.nv.gov/uploads/air-pollutants-docs/ghg_report_2020.pdf.

The 2020 GHG Report, prepared in accordance with SB 254, tallies current and projected emissions across multiple economic sectors, including: Transportation, Electricity Generation, Industry, Residential and Commercial Construction, Waste, Agriculture and Land Use, Land Use Change and Forestry.

Nevada Net GHG Emissions Comparison with Nevada's Emission Reduction Goals (MMTCO2e and Percent)

	2005	2025	2030
Net Emissions	49.397	37.387	36.063
Projected Emissions Reductions	-	12.01	13.334
Projected Percent Reduction	**-**	**24%**	**27%**
SB 254 Emissions Goals	-	35.566	27.168
SB 254 Emissions Reductions	-	13.831	22.229
SB 254 Percent Reduction	-	28%	45%
SB 254 Percent Deficit	-	4%	18%
Estimated Additional Emissions Reductions Required	**-**	**1.821**	**8.895**

(Above): This chart from the Nevada Division of Environmental Protection's green-house gas inventory, p. ES-6. (Source: https://ndep.nv.gov/uploads/air-pollutants-docs/ghg_report_2020.pdf).

[1]Source: NPR: https://www.npr.org/2019/09/03/754044732/as-rising-heat-bakes-u-s-cities-the-poor-often-feel-it-most
[2]Source: U.S. Climate Alliance: http://www.usclimatealliance.org/publications/2019/3/12/nevada-governor-steve-sisolak-joins-us-climate-alliance?rq=nevada
[3]Source: Nevada Legislature: https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6431/Text
[4]Source: Nevada Governor: https://gov.nv.gov/News/Executive_Orders/2019/Executive_Order_2019-22_Directing_Executive_Branch_to_Advance_Nevada_s_Climate_Goals/
[5]Source: NDEP: https://ndep.nv.gov/uploads/air-pollutants-docs/ghg_report_2019.pdf
[6]Source: Nevada Climate Initiative: https://climateaction.nv.gov/our-strategy/

Energy in Nevada

Nevada's Climate Action

The overwhelming majority of emissions cited in the 2020 GHG Report come from the combustion of fossil fuels in energy-consuming sectors. These sectors, accounting for 92 percent of Nevada's gross emissions, include transportation, electricity generation, industry, and the residential and commercial sectors. Currently, transportation is the largest source of emissions at 36 percent of statewide totals and emissions from electricity generation constitute 30 percent of statewide emissions. Addressing emissions will require ongoing collaboration between state agencies, local and tribal governments, and businesses to develop and implement innovative policies, as outlined in the Climate Strategy.

As policies supporting renewable energy development are implemented, electricity generation sector emissions continue to fall from their 2005 levels. However, the transportation sector remains the largest percentage of emissions and reducing these emissions will require innovative policies and a variety of technologies in low to no carbon fuels across all mobile sources of emissions: highway vehicles, aircraft, locomotive, and all manner of motorized non-road equipment and vehicles, including construction equipment, farm equipment, airport ground support equipment, and recreational vehicles.

Under current policies and science, Nevada will fall short of its GHG emissions-reduction targets.

Relative Contributions of Nevada's Gross GHG Emission by Sector: 2005, 2017, 2025, 2030

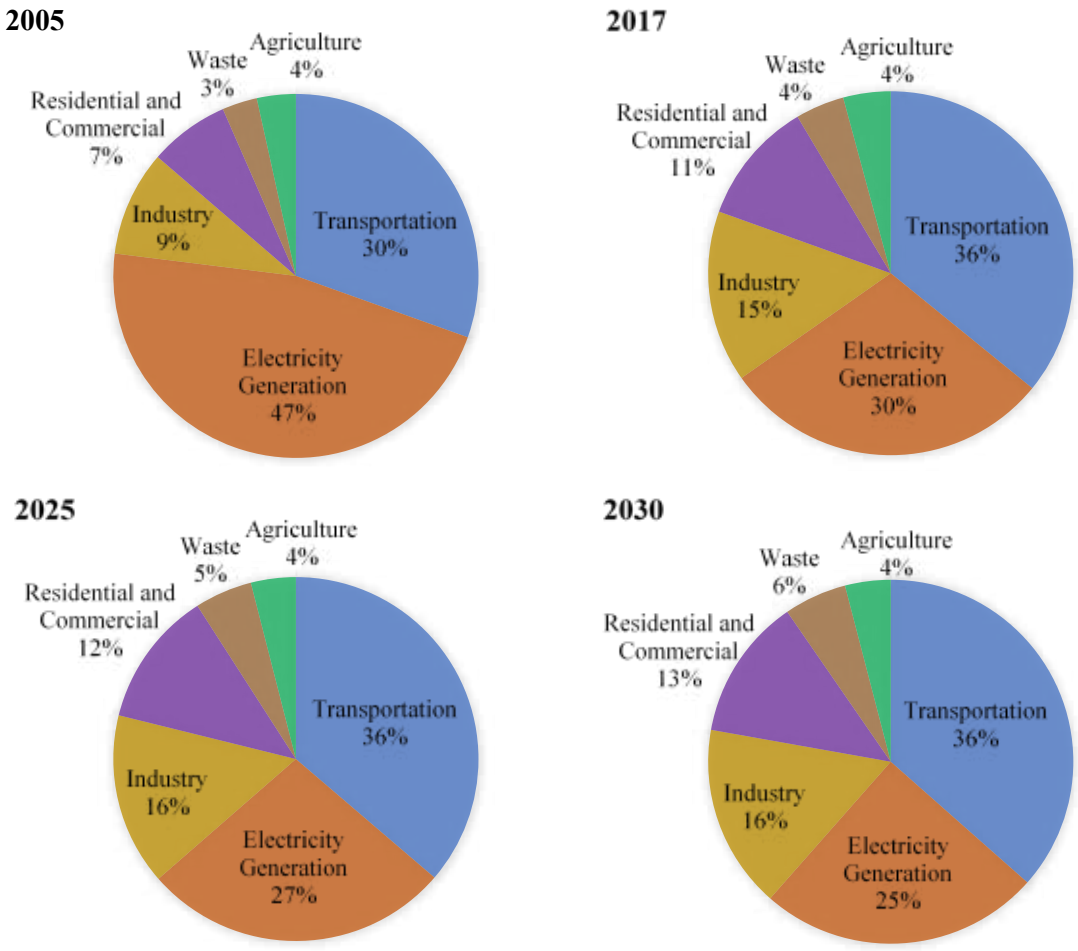


Figure 8 - This chart from the Nevada Division of Environmental Protection's green-house gas inventory, p. ES-6.
(Source: https://ndep.nv.gov/uploads/air-pollutants-docs/ghg_report_2020.pdf).

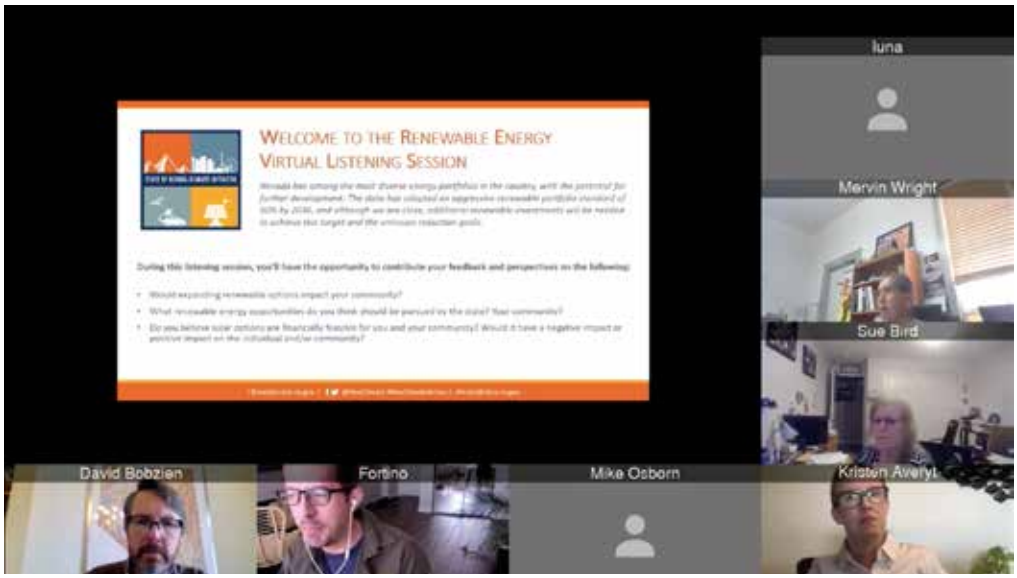
Nevada's Climate Action

Energy in Nevada

Nevada Climate Initiative and State Climate Strategy

In spring of 2020, the Nevada Climate Initiative (NCI) was launched, building on 2019's climate actions and resulting in the December 1, 2020 release of the Nevada State Climate Strategy (Climate Strategy). The Climate Strategy sets out three overarching goals: establish a GHG reduction framework for all economic sectors, set a climate adaptation and resilience foundation and establish a structure to allow ongoing climate action statewide.

The Climate Strategy was developed through the coordination and strategic direction of the directors of the Department of Conservation and Natural Resources and the Governor's Office of Energy, and collaboration across state agencies. It includes significant input from thousands of Nevadans through a climate survey, listening sessions on diverse topics, input gathered from subject-matter expert and stakeholder meetings and webinars. The NCI website includes not only the State Climate Strategy, but the recordings of all the listening sessions as well.[1] It was highlighted by the creation of interagency working groups, found under "Nevada's Climate Governance" on the NCI website, that included representatives from the Department of Conservation and Natural Resources and the Governor's Office of Energy, as well as:



- the departments and offices of Transportation, Economic Development Agriculture, Administration, Motor Vehicles, Corrections, and State Historic Preservation;
- UNLV, UNLV's Boyd School of Law, Desert Research Institute, and UNR
- the Divisions of Environmental Protection, Forestry and Natural Heritage, Outdoor Recreation, Administrative Services, Housing; and
- the Public Utilities Commission.

The strategy also recognizes the need for harmonization of local, regional, state and federal policies to ensure needed GHG reductions, including a framework for intergovernmental and interagency coordination, stakeholder and community engagement, executive leadership and staff, adaptive governance, science-based climate assessments, and dedicated resources.

[1]All the listening sessions have been archived and can be found at: https://climateaction.nv.gov/our-strategy/listening-sessions/

Energy in Nevada

Nevada's Climate Action

Nevada Climate Initiative and State Climate Strategy

The Climate Strategy evaluates policies and programs by emissions sector, including: transportation, electricity, industry, residential & commercial construction and land use and change. It offers policymakers opportunities to reduce emissions in a framework that makes sense for Nevada, including a set of Climate Mitigation Policy Evaluation metrics to assess each proposed policy's effectiveness and benefits for all Nevadans. The metrics include:

- GHG emission-reduction potential
- Climate justice considerations
- Budgetary and economic implications
- Implementation feasibility

Transportation

- Adopt low- and zero-emissions vehicle standards
- Implement clean truck program
- Adopt low-carbon fuel standards
- Implement state car allowance rebate system ("Cash for Clunkers")
- Close emissions inspection loopholes for classic cars license plates

Electricity

- Transition from fossil-fueled electricity generation to clean energy sources
- Require GHG reduction plans and prioritize decarbonization in utility integrated resource plans (IRPs)
- Prioritize energy efficiency and demand response programs

Industry

- Replace, capture, and recycle ozone-depleting substance substitutes

Residential & Commercial

- Adopt appliance and equipment efficiency standards
- Implement a statewide benchmarking program
- Require residential energy labeling and energy audits
- Adopt energy codes for net-zero buildings
- Expand the property-assessed clean energy (PACE) program
- Expand energy savings performance contracting (ESPC)
- Transition from residential and commercial use of gas

Land Use & Land Change

- Expand urban forestry programs

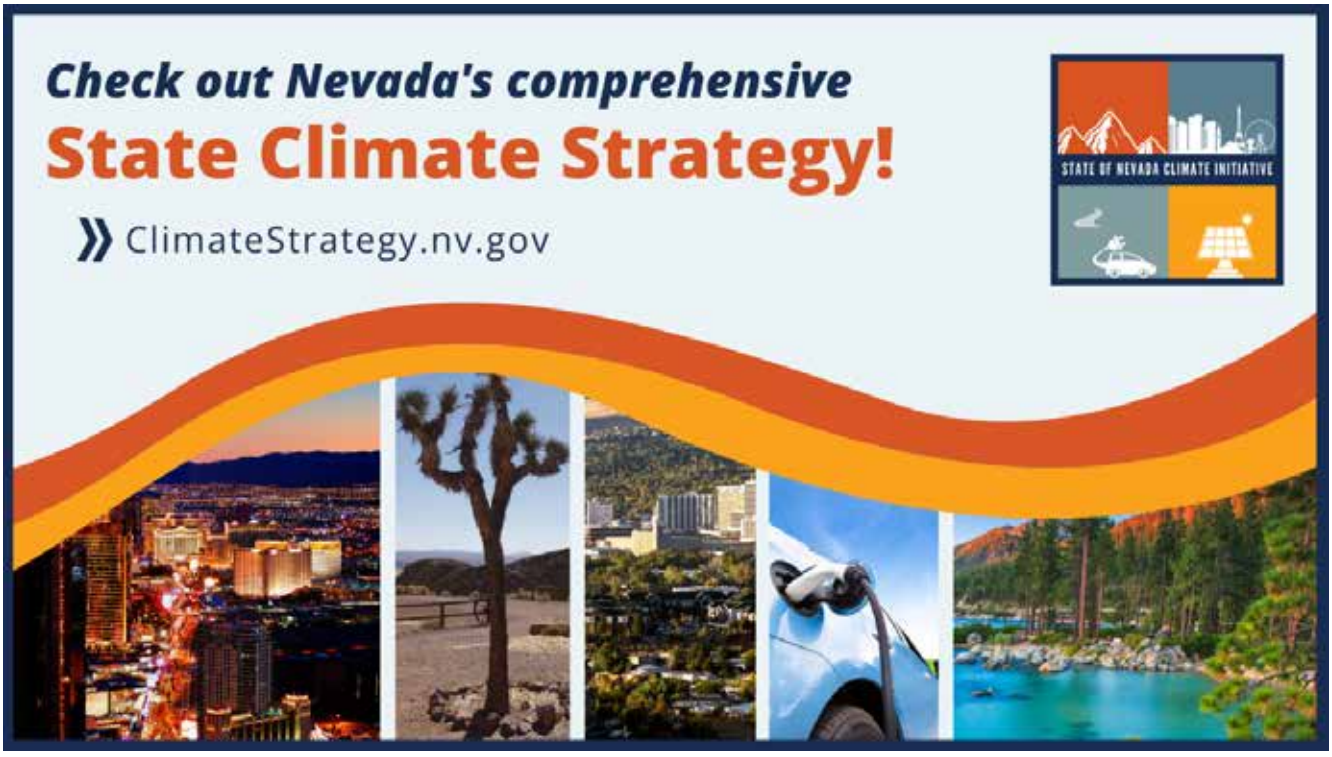
Nevada's Climate Action

Energy in Nevada

The Climate Strategy also provides opportunities for economic recovery and diversification as Nevada works to rebuild after the COVID-19 pandemic. The Climate Strategy itself is not a revenue-neutral proposition, but did find that meeting Nevada's emission reduction targets would prevent between $172 and $786 million in economic damages by 2030 and up to $4 billion by 2050. According to the 2020 GHG Report, "Climate-conscious economic development efforts and investments can spur the expansion of renewable energy, reduce emissions, build climate resilience, and expand the use of sustainable resources, all while creating valuable new jobs and skilled workforces." Additionally, the Climate Strategy highlights that economic diversification and development opportunities exist in clean energy technologies, energy efficiency and green buildings, alternative transportation, grid modernization and storage, and water conservation technologies and recycling.

"Climate-conscious economic development efforts and investments can spur the expansion of renewable energy, reduce emissions, build climate resilience, and expand the use of sustainable resources, all while creating valuable new jobs and skilled workforces." - 2020 GHG Report

The Climate Strategy concludes that mitigation-focused policies, programs, regulations and investment would be needed for Nevada to realize its 2050 net-zero GHG emissions target, with work continuing for this 2021 legislative session and beyond.



Energy in Nevada

Energy Usage by Sector

A majority of fossil fuels (jet fuel, gasoline, diesel fuel, aviation gas) are imported into Nevada. Transitioning to domestically produced sources like renewables can, among other benefits, offer cost savings to Nevadans powering their homes, businesses and vehicles. In particular, the transportation sector accounts for approximately one third of energy consumption and one half of energy expenditures. Transitioning Nevada's transportation infrastructure to electric vehicles will lessen the state's dependency on out-of-state resources and provide a fuel source that is not vulnerable to pricing fluctuations or pipeline supply disruptions. The figures below show the energy consumption and expenditures by sector in Nevada, as opposed to the previous charts on page 8 which show GHG emissions.

Energy Consumption

Energy consumption is the amount of energy used in a process, organization, or society. The chart below on the left shows the breakdown of energy consumption in Nevada by percentage. About 86 percent of the fuel for energy that Nevada consumes comes from outside the state (Source: EIA Quick Facts on Nevada).

Energy Expenditures

Energy expenditure is the amount of money used to purchase energy in order to power a process, organization, or society. The chart below on the right shows the breakdown of energy expenditures in Nevada by percentage. Almost half of all energy expenditures in Nevada is for transportation, which falls into both the fossil fuel category and alternative fuel category (natural gas, electricity, propane, methanol, ethanol, and certain blends).

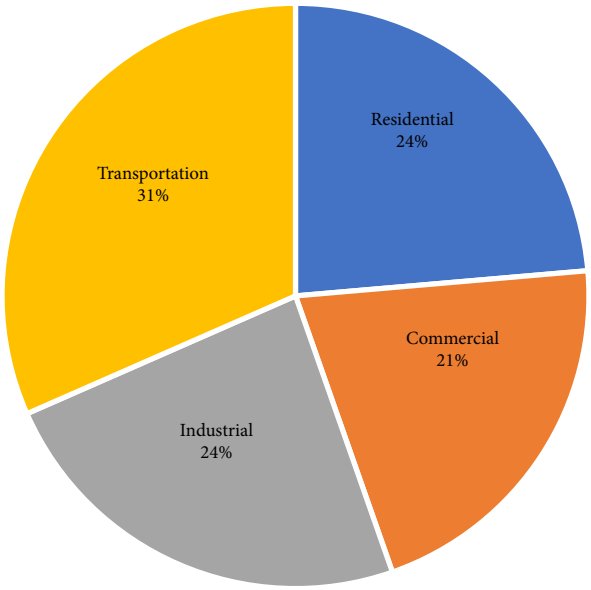


Figure 9 - Energy Consumption
Source: EIA Nevada Energy Consumption & Expenditures End-Use Sector 2018

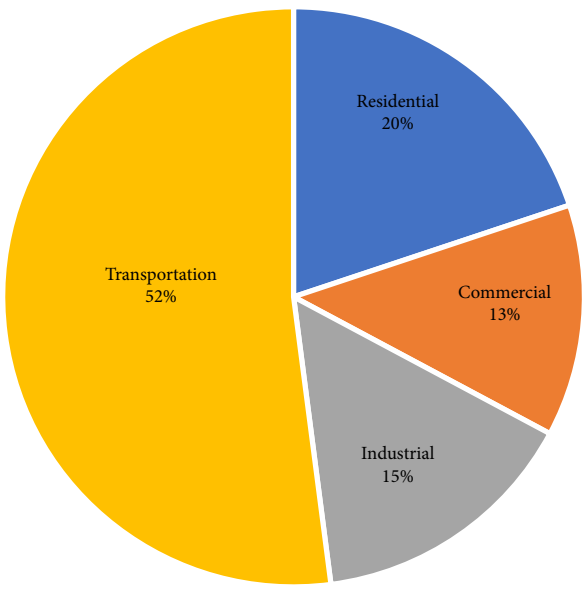


Figure 10 - Energy Expenditures
Source: EIA Nevada Energy Consumption & Expenditures End-Use Sector 2018

Renewable Portfolio Standard

Energy in Nevada

Nevada's Renewable Portfolio Standard (RPS), NRS 704.7801 was first adopted by the Nevada Legislature in 1997 and most recently amended in 2019. The RPS establishes the percentage of electricity sold to Nevada retail customers by providers of electric service, that must come from renewable sources.

Qualifying renewable sources include biomass, geothermal energy, solar energy, waterpower and wind. Specifically, providers of electric service are required to generate, acquire, or save with portfolio energy systems utilizing renewable resources or energy efficiency measures to meet the annual RPS percentage. It should be noted that the renewable energy generated in the state does not directly translate to RPS compliance. This difference is due to the fact that RPS carry-forward credits and credits from energy efficiency and conservation (through Demand Side Management [DSM]) are not accounted for in the generation data.

50% by 2030

SB 358 (2019) increased the RPS requirement to 50% by 2030. The percentage of renewable energy required by the RPS will increase every two years until it reaches 50% in 2030.

SB 358 tasked the Governor's Office of Energy with receiving RPS compliance reports from electric service providers subject to NRS 704.787[1]. These compliance reports are required to be submitted to the Governor's Office of Energy on or before July 1 of each year and must contain information delineated in NRS 704.7825. Submitted reports can be found at: http://energy.nv.gov/Resources/Renewable_Portfolio_Standard_Reporting/

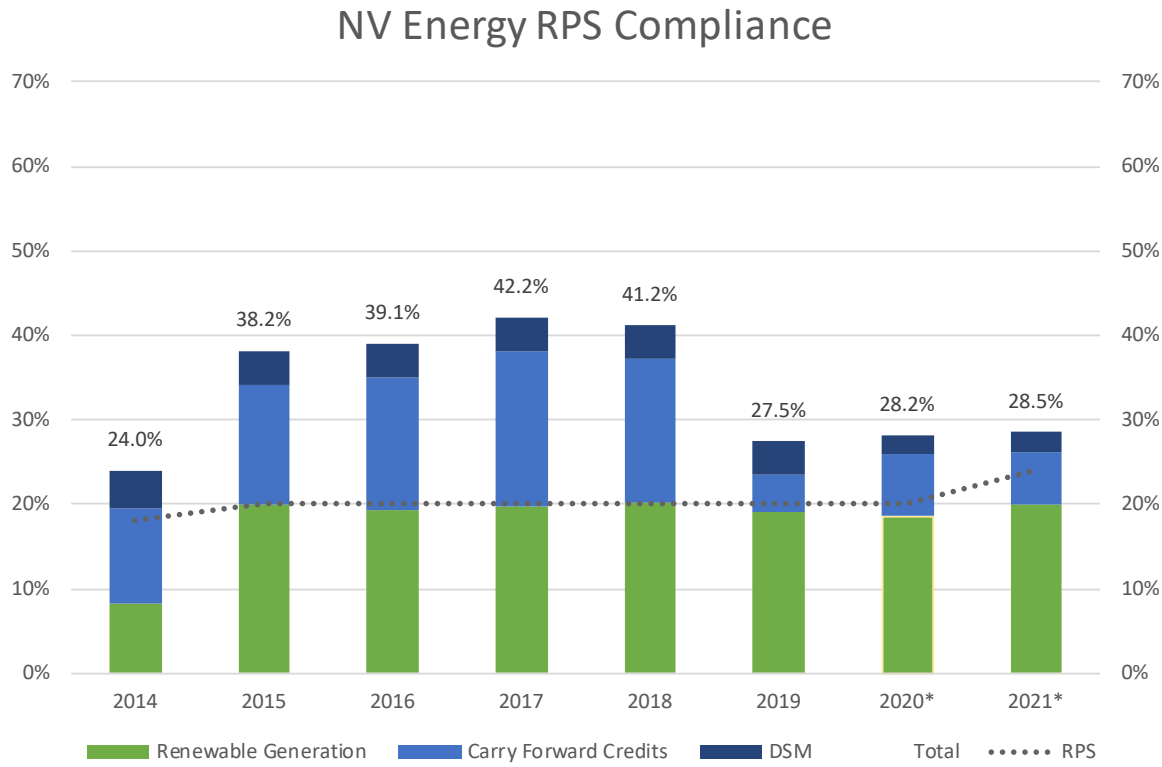


Figure 11 - NV Energy RPS Compliance

Source: NV Energy annual RPS compliance reports (2014-2019)

Notes: Carry-forward credits include both DSM and Generation; 2020 & 2021 is forecasted based on NV Energy's 2019 RPS compliance report.

[1]All other defined providers of electric service submit compliance reports to the Public Utilities Commission of Nevada (PUCN). These reports can be found as individual dockets for each provider on the PUCN's website: http://puc.nv.gov

Nevada's Renewable Energy Portfolio

Biomass / Biogas / Landfill		
	Power Plant Name	**Capacity (MW)**
1	Clark County Landfill Energy (DCO Energy LLC)*	12.0
2	Waste Management Lockwood LFGTE (WM Renewable Energy LLC)	3.2
	Subtotal (Biomass)	**15.2**

Geothermal		
	Power Plant Name	**Capacity (MW)**
3	Beowawe Power (Terra-Gen)	20.6
4	Blue Mountain (NGP/AltaRock)	63.9
5	Brady Complex (Ormat)*	21.5
6	Dixie Valley (Terra-Gen)	70.9
7	Don A. Campbell (I & II) (Ormat)*	47.5
8	Jersey Valley (Ormat)*	23.5
9	McGinness Hills (I & II) (Ormat)*	100.0
10	Patua Phase 1A (Cyrq)*	48.0
11	Salt Wells (Enel)*	23.6
12	San Emidio (U.S. Geothermal)	11.8
13	Soda Lake No I II (Cyrq)*	21.0
14	Steamboat Complex (Ormat)*	58.2
15	Stillwater (Enel)*	47.2
16	Tungsten Mountain (Ormat)*	37.0
17	Tuscarora (Ormat)*	32.0
18	Wabuska (Homestretch)	5.4
19	Desert Peak Power (Ormat)	26.0
20	Richard Burdette (Ormat)	30.0
21	Galena II & III (Ormat)	43.5
22	McGinness Hills III (Ormat)*	74.0
23	Whitegrass (Open Mtn Energy)	6.4
24	Soda Lake III* (Cyrq)*	26.0
	Subtotal (Geothermal)	**838.0**

Waste Heat		
	Power Plant Name	**Capacity (MW)**
25	Goodsprings Waste Heat Recovery (Nevada Power Co.)	7.5
	Subtotal (Waste Heat)	**7.5**

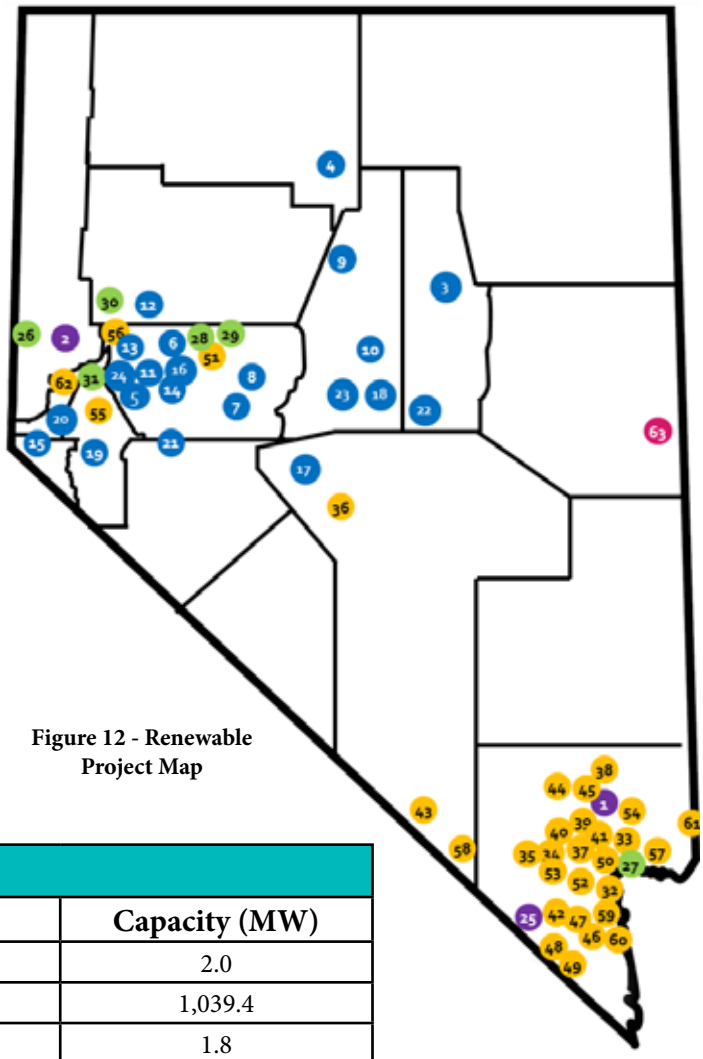


Figure 12 - Renewable Project Map

Hydroelectric		
	Power Plant Name	**Capacity (MW)**
26	Fleish (Truckee Meadows Water Authority)	2.0
27	Hoover Dam (NV Allocation)	1,039.4
28	Lahontan (Truckee-Carson Irrigation District)	1.8
29	New Lahontan (Truckee-Carson Irrigation District)	4.0
30	Verdi (Truckee Meadows Water Authority)	2.4
31	Washoe (Truckee Meadows Water Authority)	2.6
	Subtotal (Hydroelectric)	**1,052.2**

Source: EIA 2019 Form 860. Schedule 3.
* Indicates participation in the RETA program.

Nevada's Renewable Energy Portfolio

Solar		
	Power Plant Name	**Capacity (MW)**
32	Apex Solar (Southern Power Co.)*	20.0
33	Boulder Solar (Southern Power Co.)*	100.0
34	Boulder Solar II (AEP Renewables)*	50.0
35	Copper Mountain 1-4 (Sempra)*	560.6
36	Crescent Dunes (SolarReserve) [1]*	125.0
37	Ft. Churchill (Apple)	19.9
38	IKEA Las Vegas (IKEA)	1.0
39	Las Vegas WPCF (City of Las Vegas)	3.3
40	Luning Energy (Algonquin Power Co.)*	50.0
41	Mandalay Bay (I & II) (MGM)	6.9
42	Moapa Southern Paiute (First Solar)*	250.0
43	Mountain View (NextEra)*	20.0
44	Nellis Air Force Base (Solar Star NAFB)*	14.0
45	Nellis PV II (Nevada Power Co.)*	15.0
46	Nevada Solar One (Acciona Solar Power) [1]	75.7
47	Nevada Valley Solar Solutions II (VEA)*	15.0
48	Patua Geothermal (Cyrq)*	10.6
49	Playa Solar (Switch I & II) (EDF)*	179.0
50	River Mountains Solar (SNWA)	14.4
51	Searchlight Solar (Searchlight Solar)*	17.5
52	Silver State Solar North (Enbridge)*	52.0
53	Silver State Solar South (NextEra)*	250.0
54	Spectrum Solar (Southern Power Co.)*	30.0
55	Stillwater (Enel)*	22.0
56	Techren Solar (I & II) (Global Atlantic Fin. Co.)*	300.0
57	Western 102 (Barrick Goldstrike Mines)	1.0
58	Sunshine Valley Solar (First Solar)*	103.5
59	Solar Las Vegas MB2 (Invenergy)	2.0
60	Tungsten Mountain (Ormat)	7.3
61	Dignity (2) (Dignity)	3.1
62	Turquoise Liberty Solar (Turquoise Liberty)*	10.0
	Subtotal (Solar)	**2,357.3**

Net Metered	
Subtotal (Net Metered, All Technologies, MW)	**425**

Wind		
	Power Plant Name	**Capacity (MW)**
63	Spring Valley Wind Project (Pattern)	150.0
	Subtotal (Wind)	**150.0**
		Total 4,845.2

Energy in Nevada

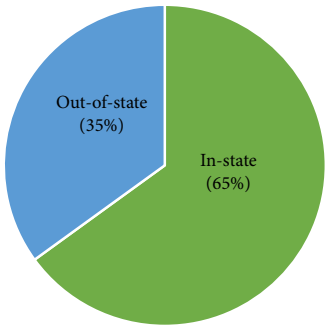


Figure 13 - Where the energy goes

Over one-third of the nameplate capacity of Nevada's renewable projects have Power Purchase Agreements (PPAs) out of the state.

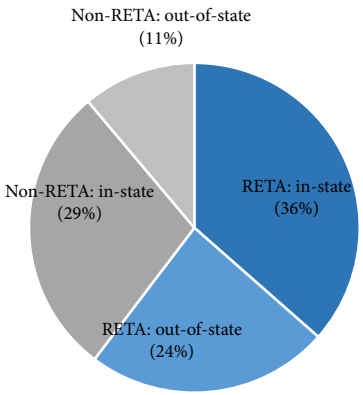


Figure 14 - Renewable projects and participation in the Renewable Energy Tax Abatement (RETA) Program relating to in/out of state PPAs

Note: refer to page 24 for more information on RETA.

Source: EIA 2019 Form 860. Schedule 3.
Net Metered: EIA 2019 Form 861M.
[1] Concentrated Solar Plant.
* Indicates participation in the RETA program.

Energy in Nevada

Nevada Rural Utility Service Areas

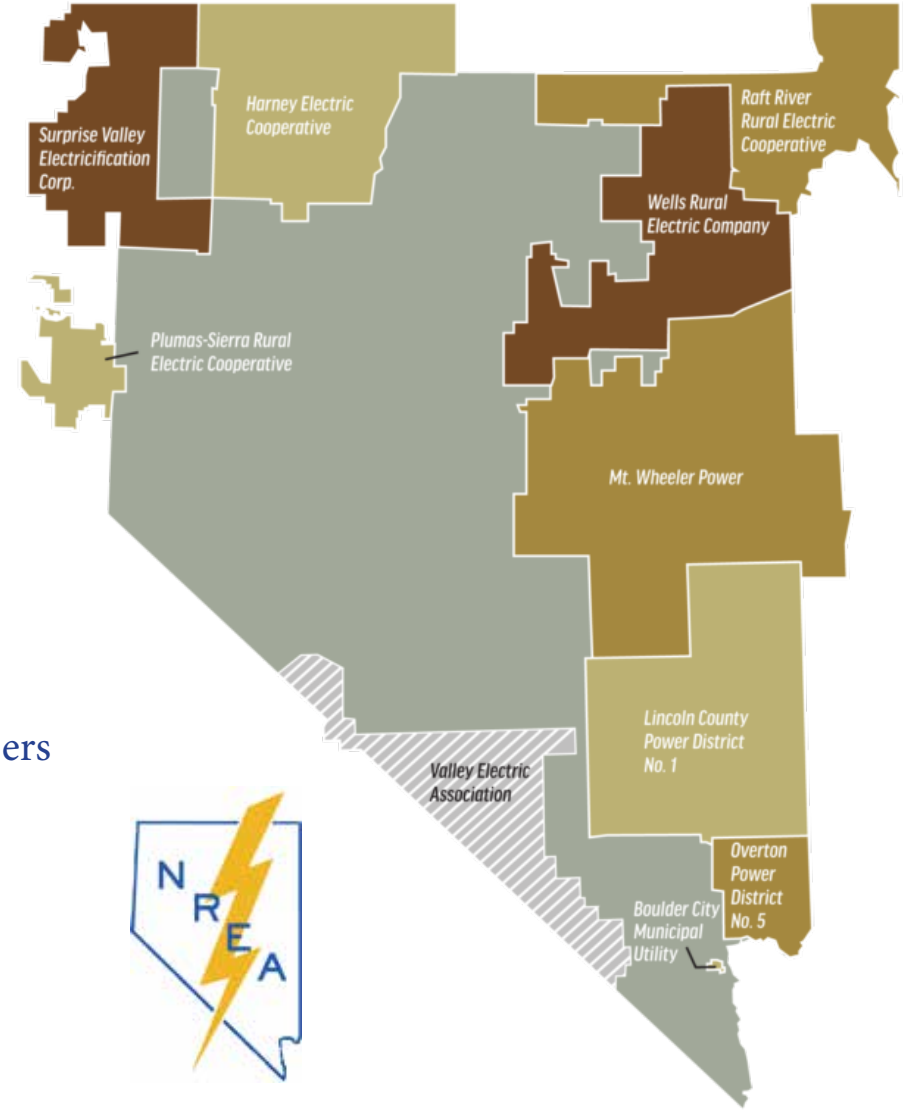
The Nevada Rural Electric Association (NREA) was founded in 1974 to represent the collective interests of one municipal utility, six rural electric cooperatives and two power districts and their consumers across Nevada. Five NREA members are based in Nevada while four serve consumers in Nevada but have headquarters in the adjacent states of Idaho, Utah, Oregon and California.

The NREA collaborates with national and regional affiliates and provides a forum within which rural utilities communicate and work together to achieve mutually beneficial goals. NREA's purpose is to power communities with safe, reliable and affordable electricity, and empower consumers to improve the quality of their lives.

NREA advocates for consumers with national and state legislators, agencies, local governments and like-minded associations about the importance of the services our utility members provide. NREA utility members also provide programs to educate the public and youth about public power and to promote participation in the democratic process of local board elections.

NREA General Members

- Alamo Power District No. 3, Alamo, NV
- Harney Electric Cooperative, Hines, OR
- Lincoln County Power District No. 1, Pioche, NV
- Mount Wheeler Power, Ely, NV
- Overton Power District #5, Overton, NV
- Plumas-Sierra Rural Electric Co-op, Portola, CA
- Raft River Rural Electric Company, Malta, ID
- Wells Rural Electric Company, Wells, NV



NREA Associate Members

- Boulder City Municipal Utility, Boulder City, NV
- Deseret Power, South Jordan, UT
- Surprise Valley Electrification Corporation, Alturas, CA

https://www.nrea.coop/

Utilities & Energy Service Providers

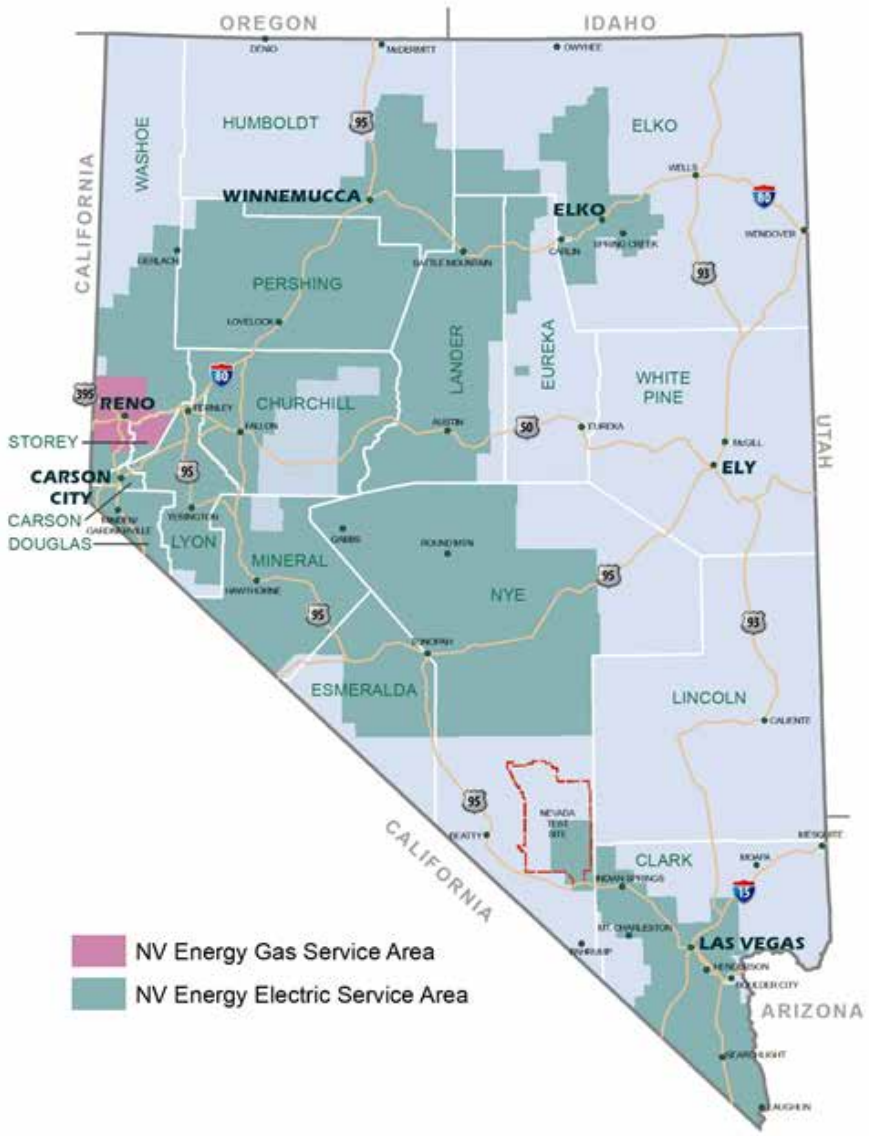
Electric energy consumption in Nevada consists of customers of the state's largest investor-owned utility (NV Energy), rural electric cooperatives, municipal utilities, and general improvement districts.

Energy in Nevada

NV Energy has served citizens in northern Nevada for more than 150 years, and southern Nevada since 1906. Today, NV Energy has a service area that covers nearly 46,000 square miles of one of the fastest growing states in the U.S., including the communities of Las Vegas, Reno-Sparks, Henderson and Elko. NV Energy provides a wide range of energy services to 1.3 million customers throughout the state and more than 50 million tourists annually. NV Energy also provides natural gas to more than 168,000 residents in the Reno-Sparks area.

Nevada Power, Sierra Pacific Power and Sierra Pacific Resources merged in July 1999. In 2008, the subsidiaries began doing business as NV Energy.

NV Energy, headquartered in Las Vegas, was acquired by Berkshire Hathaway Energy in 2013.

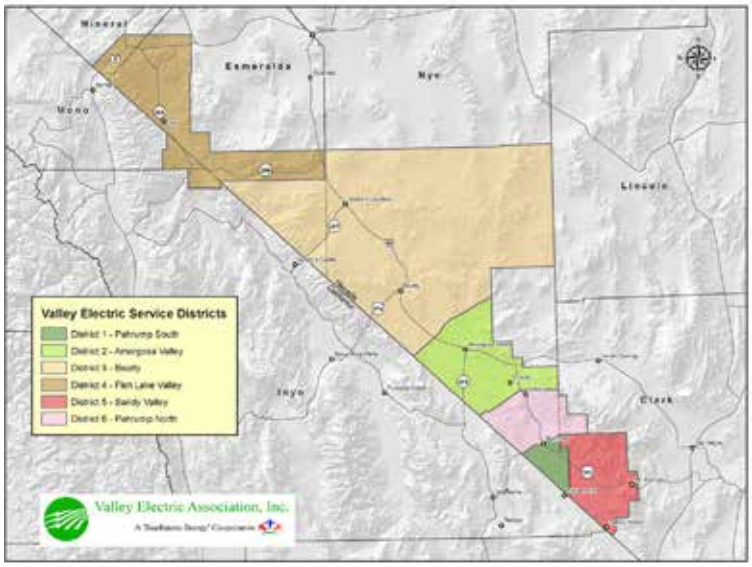


Source: NV Energy

Energy in Nevada

Valley Electric Association

Valley Electric Association, Inc. (VEA) is a member-owned electric cooperative headquartered in Pahrump, which provides service to more than 45,000 people within a 6,800-square-mile service area along the California-Nevada border. VEA's residential members are the co-op's largest single consumer group.



VEA was the first non-California utility to join the California Independent System Operator (CAISO) in 2013.

Valley Electric Association, Inc.
A Touchstone Energy® Cooperative

Southwest Gas

Based in Las Vegas, Southwest Gas Corporation was founded in 1931 and is a subsidiary of Southwest Gas Holdings Inc. With more than 2,200 employees, they serve more than 2 million customers located in Arizona, California and Nevada.

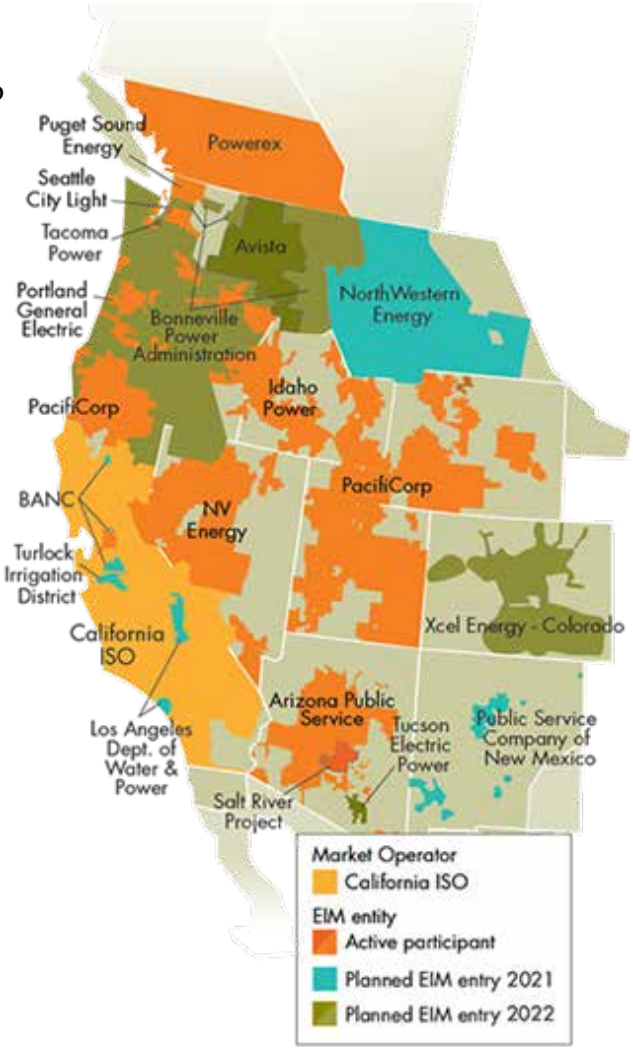
SOUTHWEST GAS

Electricity Markets

Energy in Nevada

Serviced by the California Independent System Operator (CAISO), many utilities in the West participate in a sub-hourly, real-time market, known as the Western Energy Imbalance Market (EIM), to balance supply and demand in five-minute and fifteen-minute intervals. NV Energy was the second utility to join the EIM in 2015 (following PacifiCorp in 2014).

The EIM footprint includes portions of British Columbia, Washington, Oregon, California, Nevada, Arizona, Idaho, Utah, and Wyoming, and will be expanding to include Montana and New Mexico. Since inception, the EIM has resulted in gross benefits of over $800 million, with Nevada customers having seen a benefit of $82 million. CAISO has initiated expansion of the EIM to add an "Extended Day Ahead Market (EDAM)," that would likely result in even more customer benefits.



As more and more western states and utilities pursue higher renewable portfolio standards, carbon policies, and aggressive climate goals, states need to work together to keep costs down and maintain reliability for customers. Nevada is currently engaged in electricity markets-related planning on multiple fronts:

- Governor's Office of Energy and other western states energy advisors are working with the Center for the New Energy Economy (CNEE) to facilitate a conversation among governors for regional cooperation on electricity issues such as transmission, resource adequacy, GHG accounting, and clean energy standards. Known as the Western Interconnection Regional Electricity Dialogue (WIRED) Initiative, the Governor's Office of Energy Director serves as co-chair of the transmission work group.

- Governor's Office of Energy and the Public Utilities Commission of Nevada represent Nevada, alongside ten other western states, on the lead team for the State-Led Market Options Study. Funded by the U.S. Department of Energy, the goal of the study is to provide a neutral forum and neutral analysis for Western states to independently and jointly evaluate options and potential impacts associated with new or more centralized wholesale energy markets.

- Nevada participates in the Body of State Regulators (BOSR), a forum for state regulators to learn about the EIM, EIM Governing Body and related Independent System Operator (ISO) developments that may be relevant to their jurisdictional responsibilities. The Body may express a common position in the ISO stakeholder process or to the EIM Governing Body on EIM issues; and its members are not restricted from taking any position before the Federal Energy Regulatory Commission (FERC) or any other forum concerning matters related to the EIM or the ISO.

Energy in Nevada

2020 Nevada Energy Policy Updates

General Service Lamps

In August 2020, the Director of the Governor's Office of Energy adopted regulation R100-19 pursuant to NRS 701.260 as amended under AB 54 (2019). Regulation R100-19 sets a minimum standard of energy efficiency of 45 lumens per watt of electricity consumed that must be produced by General Service Lamps sold in Nevada on and after January 1, 2021.

General Service Lamps refer to lighting applications traditionally served by incandescent lamps, also known as "A-type" bulbs. The majority of lighting in a residence is covered under the new standard and definitions.

Included in the new standard are:

- General Service Incandescent Lamps
- Compact Fluorescent Lamps
- General Service LED Lamps
- General Service Organic LED Lamps
- Reflector Lamps

These are the most commonly used lightbulbs, generally the pear-shaped bulbs. Common applications are table side lamps and light fixtures that are used daily.

"General service lamp" encompasses the list above, and is a lamp that has a medium, candelabra or intermediate screw base; is able to operate at a voltage of 12 volts or 24 volts, at or between 100 to 130 volts, at or between 220 to 240 volts, or of 277 volts for integrated lamps, or is able to operate at any voltage for nonintegrated lamps; has an initial lumen output of greater than or equal to 310 lumens (or 232 lumens for modified spectrum general service incandescent lamps) and less than or equal to 3,300 lumens; is not a light fixture; is not an LED downlight retrofit kit; and is used in general lighting applications.

According to the Appliance Standards Awareness Project, Nevada is predicted to save an average of 788 gigawatt hours, $85 million on electricity bills compared to 2017, and 280 thousand metric tons of CO2 by 2025 with the adoption of general service lamps standards. This will save Nevadans an average of $81.00 per household annually on their electricity bills.[1]

ACEEE Recognition

Each year, the Governor's Office of Energy reports on energy efficiency improvements in the state to the American Council for an Energy Efficient Economy (ACEEE) through an annual scorecard which ranks and compares the efforts of each state. The ACEEE 2020 State Energy Efficiency Scorecard highlighted Nevada's efforts to strengthen building energy code adoption, increase appliance efficiency standards, and the pursuit of low-emission vehicle and zero-emissions vehicle standards. Nevada was named as the 'most improved' state in 2020 due to these efforts, moving up five places on the scorecard compared to the 2019 report. [2]

[1]Appliance Standards Awareness Project: https://appliance-standards.org/sites/default/files/light_bulb_electricity_and_bill_savings_in_2025.pdf
[2]ACEEE: https://www.aceee.org/research-report/u2011

2020 Nevada Energy Policy Updates

Energy in Nevada

Clean Cars Nevada[1]

Governor Sisolak's Executive Order 2019-22 directed the administration to evaluate policies and regulatory strategies that will help Nevada meet the greenhouse gas (GHG) emissions targets consistent with Senate Bill 254 (2019) and Nevada's commitment to the Paris Accord through its membership in the U.S. Climate Alliance. Transportation now represents the largest source of GHG emissions in Nevada and innovative policies and programs will be needed to reduce the emissions from this sector. In recognition of this challenge, Nevada's Division of Environmental Protection, the state's air quality regulators, commenced a rulemaking process in June 2020 to assess adoption of low emission and zero emission standards for light duty vehicles, more commonly known as LEV/ZEV standards.

The proposed regulation seeks to reduce GHG and other criteria pollutant emissions in light duty vehicles by providing rules and standards, that generally mirror California's emission standards, for the fleets of vehicles sold annually by Nevada's motor vehicle manufacturers starting in 2025.

- The proposed LEV standard would adopt rules requiring motor vehicle manufactures to deliver vehicles for sale in the Nevada market that produce lower emissions of GHG and other harmful air pollutants like nitrogen oxides (NOx), particulate matter (PM) and carbon monoxide (CO).

- The proposed ZEV standard would set minimum sales goals for electric vehicles as a percentage of all vehicles available for sale in Nevada's market.

Electric Vehicles in Nevada

Nevada continues to invest in electric vehicle charging infrastructure along with steady growth of all electric vehicles entering into the market. While electric vehicles represent less than 1% of the total vehicle registration in Nevada, the graph below shows a solid trend of growth in the electric vehicle market while Nevada continues to invest in electric vehicle charging infrastructure.

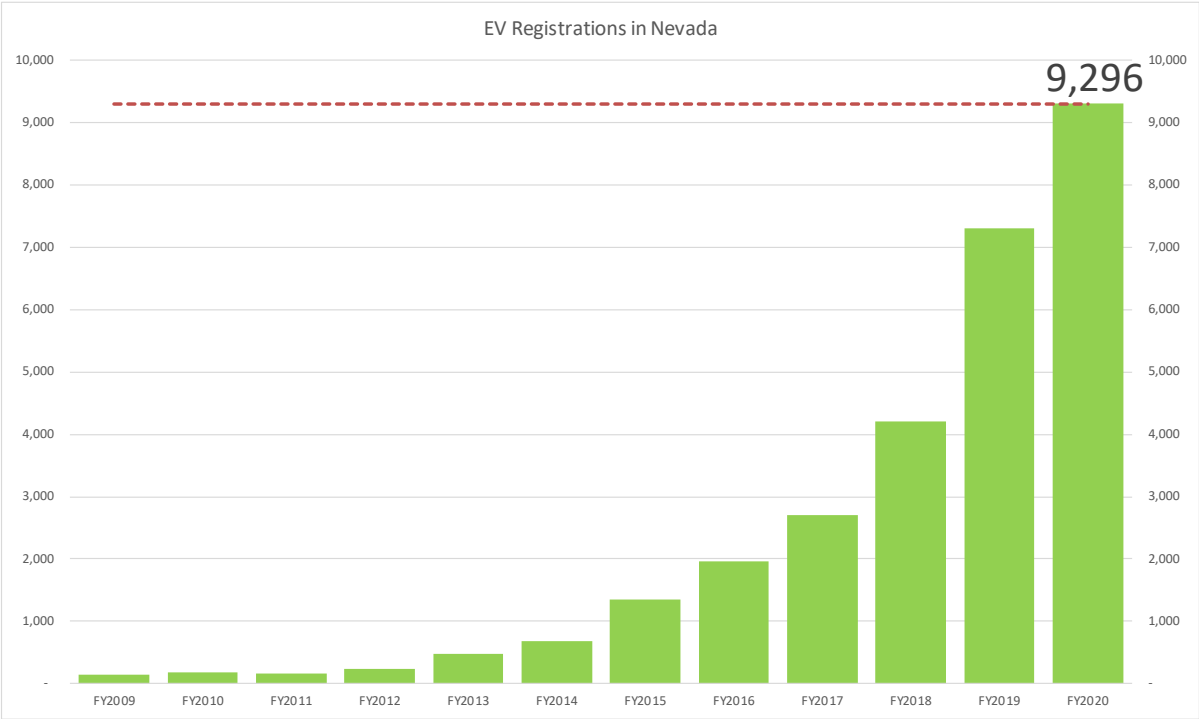


Figure 15 - Number of registered all electric vehicles in Nevada. (Source: Nevada DMV).

[1]Source: Nevada Division of Environmental Protection: https://ndep.nv.gov/air/clean-cars-nevada

Energy in Nevada

2020 Nevada Energy Policy Updates

REV West

Nevada, through the Governor's Office of Energy, continues to play a leadership role in the Regional Electric Vehicle Plan for the West ("REV West") partnership made up of eight intermountain west states including: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. The group, authorized by the eight governors through a Memorandum of Understanding (MOU), works to bring light-duty electric vehicle charging infrastructure to bear. Initiated in 2017, these eight intermountain west governors re-committed to REV West by executing an updated December 2019 MOU.

In December 2020, the group released a progress report highlighting its work since the MOU's launch:

- More than 100 DC fast-charging stations built by private and public sectors, with at least 75 additional stations in the planning phase;
- Collectively engaged the Federal Highway Administration for federal support through the Alternative Fuels Corridor program, leading to nearly 1,250 miles of designated electric charging corridors, and more than 7,500 miles of "corridor pending" highways;
- Electric Vehicle Policy Baseline for the Intermountain States report released in October 2018;
- Voluntary Minimum Standards for DC fast-charging stations released in December 2019;
- Leveraged U.S. State Energy Program funds and other sources to enhance coordination between State Energy Offices and transportation agencies on:
  - Addressing regulatory barriers to station development and signage;
  - Identifying infrastructure gaps;
  - Developing DC fast-charging station analysis maps for internal planning;
  - Exchanging model electric vehicle programs and sharing strategies for electric vehicle program design;
- Obtained funding from the U.S. Department of Energy under the Corridors for the West (CORWest) grant led by the Utah Clean Cities Coalition, which identifies barriers to electric vehicle adoption and supports infrastructure deployment in rural and remote areas, while engaging key stakeholders and increasing public awareness; and
- Enhanced state engagement with electric service providers as partners on infrastructure development.

Photo (Right): REV West Regional Planning Map highlighting existing DCFC stations and proximity to Interstate Highway corridors as of December 2020. (Source: Utah Department of Transportation).

Nevada Electric Highway

Governor's Office of Energy Programs

The Nevada Electric Highway (NEH) began as a partnership between the Governor's Office of Energy, NV Energy, and Valley Electric Association to expand the state's electric vehicle charging infrastructure by placing charging stations at cost-effective and strategic locations, initially along U.S. 95 between I-80 and Las Vegas. With the influx of the Volkswagen Mitigation Trust Settlement funds allocated to Nevada in 2018, the program grew to include I-80, I-15, US-50, US-93, and additional locations on US-95. The program is a partnership with the energy service providers in the state including, NV Energy, Valley Electric Association, Harney Electric Cooperative, Raft Rural Electric Cooperative, Wells Rural Electric, Mt. Wheeler Power Co., Lincoln County Power District No. 1 and Overton Power District No. 5.

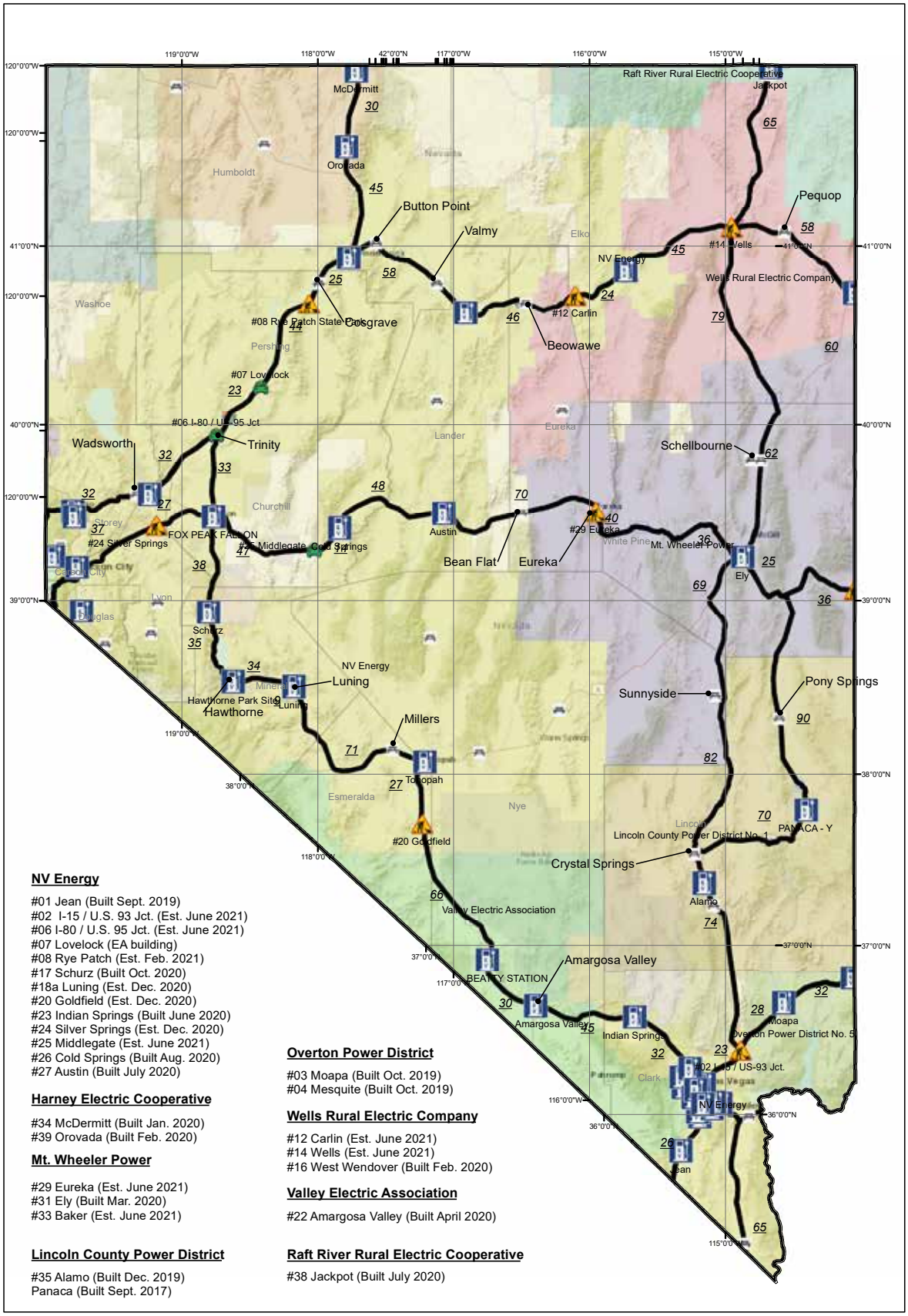
In 2020, the NEH program races towards its anticipated finish. There are a few projects still in motion, all of which are anticipated to be completed and operational by June 2021.

Completed/Active Projects

- Beatty (Feb. 2016)
- Fallon (Nov. 2016)
- Panaca (Sept. 2017)
- Hawthorne (May 2018)
- Tonopah (May 2019)
- Jean (Sept. 2019)
- Moapa (Oct. 2019)
- Mesquite (Oct. 2019)
- McDermitt (Jan. 2020)
- Alamo (Jan. 2020)
- Orovada (Feb. 2020)
- Ely (Mar. 2020)
- Amargosa Valley (Apr. 2020)
- Indian Springs (June 2020)
- Jackpot (July 2020)
- Austin (July 2020)
- Luning (Aug. 2020)
- Cold Springs (Aug. 2020)
- Schurz (Oct. 2020)
- West Wendover (Oct. 2020)
- Goldfield (Dec. 2020)
- Silver Springs (Est. Feb. 2021)
- Wells (Est. June 2021)
- Carlin (Est. June 2021)
- Baker (Est. June 2021)
- Eureka (Est. June 2021)
- Rye Patch (Est. June 2021)
- N. Las Vegas (Est. June 2021)
- Trinity (pending)
- Middlegate (pending)

Photo (Above): NV Energy's NEH project in Luning NV. (Source: NV Energy).

Photo (Above): Amargosa Valley NEH charging station at the NDOT rest stop in Lathrop Wells, NV. (Source: Valley Electric Association).



NV Energy

#01 Jean (Built Sept. 2019)
#02 I-15 / U.S. 93 Jct. (Est. June 2021)
#06 I-80 / U.S. 95 Jct. (Est. June 2021)
#07 Lovelock (EA building)
#08 Rye Patch (Est. Feb. 2021)
#17 Schurz (Built Oct. 2020)
#18a Luning (Est. Dec. 2020)
#20 Goldfield (Est. Dec. 2020)
#23 Indian Springs (Built June 2020)
#24 Silver Springs (Est. Dec. 2020)
#25 Middlegate (Est. June 2021)
#26 Cold Springs (Built Aug. 2020)
#27 Austin (Built July 2020)

Harney Electric Cooperative

#34 McDermitt (Built Jan. 2020)
#39 Orovada (Built Feb. 2020)

Mt. Wheeler Power

#29 Eureka (Est. June 2021)
#31 Ely (Built Mar. 2020)
#33 Baker (Est. June 2021)

Lincoln County Power District

#35 Alamo (Built Dec. 2019)
Panaca (Built Sept. 2017)

Overton Power District

#03 Moapa (Built Oct. 2019)
#04 Mesquite (Built Oct. 2019)

Wells Rural Electric Company

#12 Carlin (Est. June 2021)
#14 Wells (Est. June 2021)
#16 West Wendover (Built Feb. 2020)

Valley Electric Association

#22 Amargosa Valley (Built April 2020)

Raft River Rural Electric Cooperative

#38 Jackpot (Built July 2020)

Nevada Electric Highway

DC Fast Charging Station
GOE planned DC Fast Charging Station
NDOT Rest Area
DC Fast Charging Station In-Construction

0 50 100 200 Miles

Nevada Governor's Office of Energy

Updated 11/2020; v2.12

Renewable Energy Tax Abatement Program

Governor's Office of Energy Programs

{See NRS 701A.300-390 & NAC 701A.500-660}

The Renewable Energy Tax Abatement (RETA) Program awards partial sales and use tax and partial property tax abatements to renewable energy facilities. To be eligible, projects must employ at least 50% Nevada workers, pay 175% of Nevada's average wage during construction, and offer health care benefits to workers and their dependents. The Governor's Office of Energy reviews the applications, conducts public hearings to determine eligibility, and reviews annual compliance reports after abatements are granted.

The Governor's Office of Energy recently adopted regulations which align with statutory changes approved during the 2019 Legislative Session (SB 298, 2019). These changes ensure maximum benefits to Nevadans as well as broaden the use fees to benefit the state. The Agency was approved to increase administrative fees to better serve Nevada in expanding renewable energy development in projects such as:

- Renewable resource development
- Land use
- Regional market development
- Transmission planning

The Renewable Energy Tax Abatement Program is a crucial tool in attracting developers to Nevada because it provides an incentive for the construction of commercial power plants. These projects increase Nevada's tax revenue and lead to job creation in a growing industry.

Since the program's inception, Nevada's investment of $1 billion in tax abatements has attracted more than $9 billion in capital investments, payroll, and taxes paid. **The projects that have received an abatement from the Governor's Office of Energy created more than 10,000 jobs that paid an average wage of over $42 an hour. This represents a total of 54 renewable power plants and one transmission project in Nevada.**

Photo: Copper Mountain 5 (Source: Sempra Energy).

Projects granted a tax abatement in 2020:

COMPANY	TYPE	MW	PPA	ABATEMENT / INVESTMENT
Battle Mountain	Solar	100	NVE	$26,379,282 / $70,706,355
Dodge Flat	Solar	200	NVE	$15,876,266 / $105,112,512
Townsite	Solar	193	VEA	$24,705,774 / $134,640,020
Fish Springs	Solar	100	NVE	$7,595,064 / $53,122,163
Eagle Shadow Mtn	Solar	300	NVE	$17,601,260 / $356,062,543
Techren Solar	Solar	100	NVE	$3,009,000 / $44,105,138
Yellow Pine I	Solar	125	SVCE	$12,017,867 / $73,276,306
Dixie Meadows	Geothermal	19	SCPPA	$6,279,264 / $74,731,561

Governor's Office of Energy Programs

Renewable Energy Fund

{See NRS 701.545-595 & NAC 701.600-700}

The Governor's Office of Energy created a targeted grant program as a result of Senate Bill 536 (2019) and after receiving approval from the U.S. Department of Energy. This program is funded by repurposed American Recovery and Reinvestment Act (ARRA) funds which were previously utilized to administer the Revolving Loan Program. The repurposed funds will be available to all market sectors: residential, commercial, industrial and/or public. These funds and any subsequent recipients are subject to ARRA requirements such as NEPA, Davis Bacon, and Buy American. The newly created grant program will address goals and initiatives of the State of Nevada and these newly designated grant funds will be utilized by directly investing through an open competitive solicitation for projects which support:

- Renewable energy and energy efficiency
- Grid modernization and energy resilience
- Energy storage and innovative clean energy technologies
- Energy education and workforce development
- Climate change initiatives
- Transportation electrification and alternative fuels

Photo (Above): Railroad Valley Farms (Source: Railroad Valley Farms, LLC).

Nevada Clean Energy Fund (NCEF)

Governor's Office of Energy Programs

{See NRS 701B.930-995}

Established by Senate Bill 407 (2017), NCEF is an independent, nonprofit corporation to provide funding for, and increase significantly, the pace and amount of financing available for qualified clean energy projects in the state. Goals of the fund include:

- Improve the standard of living by promoting more efficient and lower cost clean energy projects that create high-paying, long-term jobs;
- Foster the development of transparent underwriting standards, standard contractual terms, and measurement and verification protocols for clean energy projects;
- Promote the creation of performance data that enables effective underwriting, risk management and pro forma modeling of financial performance of qualified clean energy projects to stimulate the development of secondary investment markets; and
- Achieve a level of financing support for clean energy projects in the state.

NRS 701B.930-995 specifies the composition of the NCEF's Board of Directors and sets forth its duties.

Nevada Clean Energy Fund Board of Directors (section 16 of SB 407)

(a) The Director of the Office of Energy – David Bobzien
(b) The Executive Director of the Office of Economic Development or his or her designee – Michael Brown
(c) The Real Estate Administrator of the Department of Business and Industry or his or her designee – Sharath Chandra
(d) The Commissioner of Financial Institutions or his or her designee – Sandy O'Laughlin
(e) One member appointed by the Governor from among a list of nominees submitted by the State Contractors' Board – Guy Snow
(f) One member appointed by the Governor from among a list of nominees submitted by labor organizations in this State - Jesse Newman
(g) One member appointed by the Governor from among a list of nominees submitted by the board of county commissioners of the county in this State with the largest population – Les Lazareck
(h) One member appointed by the Governor from among a list of nominees submitted by the board of county commissioners of the county in this State with the second largest population – Jason Geddes
(i) One member appointed by the Governor from among a list of nominees submitted by the boards of county commissioners of the counties in this State not described in paragraph (g) or (h) – Robert Johnston

The Coalition for Green Capital continues to provide pro bono consulting services to the NCEF to assist with the startup of the organization including business planning and staffing, fund-raising and operating support. This activity is funded with philanthropic grants provided to the Coalition for Green Capital.

NCEF held two 2020 Board of Directors meetings, one in February and one in September, after NCEF's work was temporarily paused at the request of the Governor's Finance Office due to the COVID-19 pandemic. In August 2020, the Interim Finance Committee authorized the Governor's Office of Energy to provide operational start-up funding to NCEF over the next two years in the amount of $400,000. During the September meeting, the board elected officers. The board has commenced the search for NCEF's first executive director, and expects to fill the position in early 2021.

Governor's Office of Energy Programs

Property Assessed Clean Energy (PACE)

{See NRS 271.265-271.630}

During the 2017 legislative session, the Governor's Office of Energy sponsored Assembly Bill 5 which enabled local governments to implement commercial PACE programs. PACE is a financing mechanism that supplies upfront costs for renewable energy and energy efficiency projects. It is a loan that is paid back over time through a voluntary special assessment and allows for the transfer of the loan obligation to the next owner.

Benefits of PACE

PACE funding covers 100% of a project's hard and soft costs and will often have guaranteed low interest rates for terms of up to 20 years. The long loan amortization enables positive cash flow resulting in annual energy savings that are larger than the annual repayment. PACE increases the value of properties, creates jobs, helps the state achieve its policy goals and boosts the local economy bringing private investment dollars to local communities.

State of Nevada Updates

The Governor's Office of Energy, along with the City of Las Vegas and City of Reno, have been selected to participate in the U.S. Department of Energy Commercial PACE Working Group. The goal of this working group is to develop tools and solutions to barriers facing state and local government. In order to create awareness and provide resources for local governments, the Governor's Office of Energy hosted a PACE webinar in 2018. The webinar provided an overview of PACE, a discussion on benefits to property owners and local governments and an overview of the first steps a local government must take when implementing PACE.

The City of Las Vegas launched the first Commercial PACE program in Nevada in September 2019. The program is administered by Sustainable Real Estate Solutions, Inc. (SRS). The program administrator is responsible for program management and quality assurance as well as property owner project application processing and support services to stakeholders. The City of Reno followed close behind and in October 2019 established a Commercial PACE program in Reno. The City of Reno has hired a third-party administrator to develop and administer the program. The City of Fernley adopted a resolution in September 2020 creating an energy improvement district for the purpose of implementing a C-PACE Program.

Home Energy Retrofit Opportunities for Seniors (HEROS) Program

Governor's Office of Energy Programs

The HEROS Program provides energy assessments of qualifying seniors' homes and installation of recommended weatherization measures. The Governor's Office of Energy funds the program and the Nevada Housing Division administers the program through its established delivery system of contractors.

The program reduces energy costs for savings by improving the energy efficiency of their homes. HEROS funding of up to $8,000 is offered at no cost to qualifying seniors who own their home. Since the program's inception in 2015, 1206 homeowners have received weatherization benefits. Each participant annually saved an average of 7,576 kilowatt hours (kWh) of electricity and 279 therms of natural gas in their home. This represents an annual savings of $1,241 on their utility bills which equates to a 64% savings.

Program Requirements

- Be age 60 years or greater
- Be an NV Energy customer
- Own and reside in the home
- Have an income at or below 200% of federal poverty guidelines

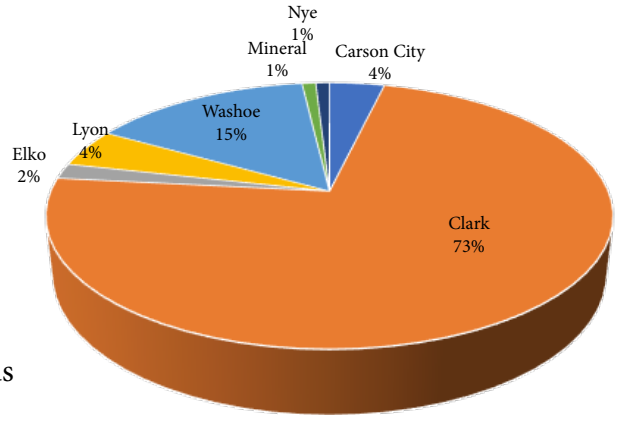


Figure 16 - HEROS Participation by County for SFY 2020

Benefits

- Helps seniors live in healthier, safer homes
- Weatherization diagnostic tests help identify dangerous carbon monoxide levels
- Makes home more comfortable thanks to better temperature distribution
- Makes home more efficient, resulting in lower monthly energy costs for each household

Contract Recommended Measures Include:

- Air and duct sealing
- Low flow shower head install
- Broken window repair
- Water heater replacement
- HVAC repair or replacement
- Solar screens (southern Nevada only)
- Attic insulation
- CFL or LED retrofits
- Floor insulation

Service Providers:

CSA HELP RNDC NEVADA RURAL HOUSING AUTHORITY

Governor's Office of Energy Programs

Performance Contract Audit Assistance Program

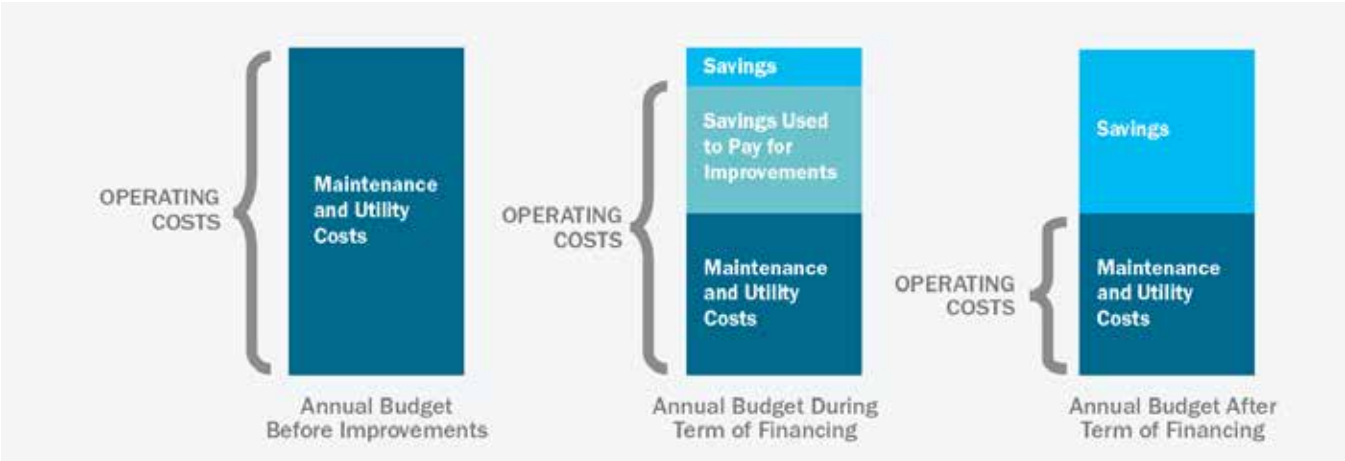
Performance contracting is an alternative financing mechanism to accelerate investment in cost-effective energy conservation measures and accomplish energy savings projects without up-front capital. It is a partnership between a building owner and an Energy Service Company (ESCO) that conducts an energy audit identifying improvements that will save energy. The ESCO guarantees that the improvements will generate cost savings sufficient to pay for the project over the term of the contract.

The Performance Contract Audit Assistance Program (PCAAP) funds a financial grade audit, which is the first step to determine if a project potentially provides the needed cost savings. Since PCAAP's inception in 2014, the Governor's Office of Energy has awarded $1.7 million to accelerate performance contracting, resulting in project investments totaling $100 million, while creating an estimated 730 jobs, and saving over 51 million kilowatt hours and 463,000 therms annually.

Upgrade Government Buildings: Performance contracting offers an opportunity to upgrade and modernize government facilities by replacing aging HVAC equipment and thermostats, installing indoor and outdoor LED lighting, improving plug load management systems, and improving water conservation. These improvements decrease operations and maintenance costs and simplify the management of municipal energy budgets. This is all accomplished with no up-front capital costs.

Financial Benefits: A few financial examples include but are not limited to: reduced taxpayer burden of growing energy budgets, incorporation of renewable energy, and job creation right here in Nevada. Also, the contractually guaranteed and measured savings reduce the risk of savings erosion over time. Finally, the use of a third-party financing mechanism ensures that energy efficiency improvements are completed and that the guaranteed reduced energy costs are achieved.

Quality Assurance: All contractors performing the Financial-Grade Operational Audit are Nevada licensed ESCOs pre-approved through the State Public Works Division. The ESCOs are also overseen by State Public Works Division pre-qualified third-party consultants for performance contracting projects. The Governor's Office of Energy has also developed model contract documents to guide municipalities through the process. Additionally, applicants must utilize e-Project Builder to store and track the performance contract progress and document best practices.



International Energy Conservation Code

Governor's Office of Energy Programs

{See NRS 701.220 & NAC 701.010-245}

The International Energy Conservation Code (IECC) is a model for the establishment of minimum design and construction requirements for energy efficiency. Internationally, code officials recognize the need for a modern, up-to-date energy conservation code addressing the design of energy-efficient building envelopes and installation of energy-efficient mechanical, lighting and power systems through requirements emphasizing performance. The IECC is designed to meet these needs.

This comprehensive energy conservation code establishes minimum regulations for energy-efficient buildings using prescriptive and performance-related provisions, and through broad-based principles makes possible the use of new materials and new energy efficient designs. The IECC is fully compatible with the Family of International Codes. It contains separate provisions to be applied to commercial buildings (IECC – Commercial Provisions) and low-rise (three stories or less in height above grade) residential buildings (IECC – Residential Provisions).

Pursuant to NRS 702.220 and NAC 701.185 (as amended by R153-17), the Governor's Office of Energy, every three years, adopts the most recent version of the IECC; the current adopted version is the 2018 IECC. The Governor's Office of Energy's commitment to reducing greenhouse gas emissions within the built environment is advanced through the IECC's updated energy efficiency measures. The Governor's Office of Energy will begin work on the adoption of the 2021 IECC later this year.

The Governor's Office of Energy participated in the development process for the 2021 IECC, including participation in appeals process. Appeals were brought to the International Code Council (ICC) on the proposed required installation of electric vehicle infrastructure in new residential and commercial construction (CE 217-I & CE 217-II). Governmental voting members, including the Governor's Office of Energy, had approved these measures which recognized a burgeoning area for modernization in construction as the EV market grows nationwide. A broad and diverse group of stakeholders provided support for CE 217-I and CE 217-II. While these two measures were not ultimately approved for inclusion in the 2021 IECC, the appeals process showed the need for robust discussions on how to modernize the IECC and integrate the best technologies to meet its goals.

The Governor's Office of Energy also played a part in shaping codes by serving on three ICC subcommittees, including:

- the ICC's Building Membership Council, Raise the Profile Subcommittee, which collaborates to raise awareness about the work of code professionals and career opportunities in the industry.
- the Community Building Best Practices & Innovation Subcommittee which collaborates on fostering innovation and growth in the community through best practices and new technologies.

Governor's Office of Energy Programs

Green Building Tax Abatement Program

{See NRS 701A.100-110 & NAC 701A.010-370}

The Governor's Office of Energy administers the Green Building Tax Abatement (GBTA) program based on criteria set forth in the Leadership in Energy and Environmental Design (LEED) or Green Globes rating systems from the Green Business Certification Inc. (GBCI) or the Green Building Initiative (GBI). The LEED and Green Globes rating systems are based on a set of standards for the environmentally sustainable design, construction, and operation of buildings.

The program began in 2007 as an incentive for business owners to improve the energy efficiency of new and existing buildings. In 2013, the state established new standards for how the program is administered and partial abatements are awarded.

To qualify for the partial tax abatement, applicants must earn a minimum number of points for energy conservation, which is determined by the Energy Star score or equivalent score, to meet the Silver Level or higher through the LEED rating system or two globes or higher through the Green Globes rating system.

The partial tax abatements range from 25% to 35% for a period of three to ten years (depending on the certification level) on the portion of the taxes (other than taxes for public education) imposed pursuant to Chapter 361 of the Nevada Revised Statutes. The percentage and term of the partial tax abatements can be found in Nevada Administrative Code 701A.280.

Projects Receiving Tax Abatements

In 2020, 22 buildings in Nevada received a Green Globes or LEED certification or equivalency, representing more than 11 million square feet of space.

There are currently 211 buildings participating in the GBTA program.

Photo (Left): High Rock 5300 Apartments, Sparks, NV. Green Globes certified. (Source: www.highrock5300.com).

Photo (Right): Kaktus Life Apartments, Las Vegas, NV. LEED certified. (Source: www.kaktus-life.com).

Lower Income Solar Energy Program

Governor's Office of Energy Programs

The Lower Income Solar Energy Program (LISEP) is a joint effort of NV Energy and the Nevada Governor's Office of Energy that offers incentives for solar photovoltaic (PV) systems that serve lower-income populations. The program was originally created in 2013 as a pilot program through Assembly Bill 428 and was made permanent through Senate Bill 145 in 2017.

Each phase of the program has a total $1,200,000 program budget ($1 million from NV Energy and $200,000 from the Governor's Office of Energy). The incentive levels are set at $2.20/watt for Lower-Income Housing and $2.50/watt for other entities that serve the lower income sector. Phase 5 started in July 2019, and Phase 6 started in July 2020. Each program year runs from July 1 - June 30 the following year.

To qualify for an incentive, the recipient must be an NV Energy customer whose primary business serves a significant population of lower income customers. This includes lower income housing, homeless shelters, food banks and other lower income services.

LISEP supports projects in major population centers and rural towns throughout Nevada, providing benefit to Nevadans in most need of assistance. More than 1,000 lower income households throughout the state are benefiting. LISEP recipients also include groups like the Boy's & Girl's Club of Southern Nevada (BGCSNV). Since installing solar at its Lied campus, the BGCSNV has realized significant utility bill savings that can be directly reinvested into the programs that help Southern Nevada youths reach their full potential. The approximate annual savings for the Boy's and Girl's Club is $25,000, and the funds from these savings support opportunities to give kids a place to feel safe. Reinvestment of these utility savings could cover year round services of before school (6.30 a.m. - 9.00 a.m.), after school (2.30 p.m. - 7.00 p.m.) and out of school hours (7:00 a.m. - 6:00 p.m.) for five Club Kids or 700 individual BGCSNV memberships.

Photo (Above): Flamingo Pines Senior Apartments - 66 apartment units of low income senior housing. Las Vegas, NV. (Source: NV Energy/Clearesult).

Governor's Office of Energy Programs

Partnerships & Projects Funded

Nevada Revised Statutes (NRS) 701 and 701A regulate and define the Governor's Office of Energy priorities and programs. NRS 701A.450 specifically creates the Renewable Energy Account, which is administered by the Director of the Governor's Office of Energy, and may be used to accomplish the initiatives and goals of the state related to renewable energy, energy efficiency and electric vehicles.

In addition, the Governor's Office of Energy receives funding from the U.S. Department of Energy's (DOE) State Energy Program (SEP) Formula Grant. The SEP Formula Grant is used to fund and promote clean energy programs and projects throughout Nevada.

National Energy Efficiency Day

Governor Steve Sisolak proclaimed October 7, 2020, as Energy Efficiency day in Nevada. Promoting and implementing energy efficiency measures across Nevada not only helps meet the state's climate goals but also ensures Nevada residents have safe, healthy and comfortable homes and workplaces with reduced energy costs.

The Governor's Office of Energy adopts policies to support and promote energy efficiency, and administers energy efficiency programs that offer Nevadans opportunities to reduce their energy costs and work and live in a safer and more comfortable built environment.

All Nevadans can learn more about how to contribute to the state's sustainability efforts by using energy more efficiently in our daily lives. October 7, 2020 marked the fifth annual Energy Efficiency Day nationwide.

Governor's Proclamation: https://gov.nv.gov/News/Proclamations/2020/Energy_Efficiency_Day_in_Nevada/

State of Nevada

Executive Department

A Proclamation by the Governor

WHEREAS, *a nationwide network of energy efficiency groups and partners has designated the first Wednesday in October as the fifth national annual Energy Efficiency Day; and*

WHEREAS, *energy efficiency continues to be the cheapest, quickest, and cleanest way to meet our energy needs and reduce utility bills for residential, business, and industrial customers; and*

WHEREAS, *smarter energy use reduces the amount of electricity we need to power our lives, which helps avoid power plant emissions that can harm our health, pollute our air, and warm our climate; and*

WHEREAS, *cutting energy waste saves U.S. consumers billions of dollars on their utility bills every year, up to $500 per household from appliance efficiency standards alone; and*

WHEREAS, *implementing energy efficiency and other clean energy policies and programs can help boost economic opportunities and job creation while continuing to move towards a sustainable future; and*

WHEREAS, *more than 2.4 million Americans were working in the energy efficiency sector prior to the pandemic in local, good-paying, clean energy jobs and increasing America's recovery efforts by ramping up our efficiency efforts will sustain and create more of these jobs in the future; and*

WHEREAS, *improved energy codes for homes and commercial buildings also can significantly reduce utility costs and create new jobs, and the State of Nevada supports increasing the minimum levels of efficiency for new buildings through adoption of a stricter code or the model 2021 International Energy Conservation Code (IECC); and*

WHEREAS, *the residents of Nevada can continue to contribute to the State's sustainability efforts by learning more about energy efficiency and practicing smarter energy use in their daily lives;*

NOW, THEREFORE, I, STEVE SISOLAK, GOVERNOR OF THE STATE OF NEVADA, do hereby proclaim October 7, 2020, as

ENERGY EFFICIENCY DAY IN NEVADA

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 1st day of October, 2020.

Partnerships & Projects Funded

Governor's Office of Energy Programs

New Electric Vehicle Charging Infrastructure Incentives with NV Energy

Starting in July 2020, NV Energy partnered with the Governor's Office of Energy to offer two new incentive categories for level 2 electric vehicle charging infrastructure. While funds last, qualifying entities in either the public/governmental sector or the lower-income section can receive 100% of level 2 electric vehicle charging infrastructure costs covered by this incentive. Funding for this program is provided by both NV Energy (75%) and Governor's Office of Energy (25%).

Incentive:
Level 2 charger: Max $10,000/port. 100% of project costs up to $40,000 (min two ports, max four ports)

For full program details, see NV Energy's website: https://www.nvenergy.com/cleanenergy/electric-vehicles

Virtual Ride and Drive

With restrictions on public events stemming from the COVID-19 pandemic, NV Energy shifted its electric vehicle education events from in person "Ride and Drive" events to interactive virtual events. The Governor's Office of Energy joined NV Energy for two separate events, EV 101 and EV 201, over four nights that offered informational opportunities for drivers in Las Vegas and Reno. Nevada's Franchised Auto Dealers Association also coordinated with its members statewide to provide resources for attendees looking to learn more about or purchase an electric vehicle.

The EV 101 events introduced electric vehicles and shared their many benefits, including cost savings, safety, emissions reductions, costs, advanced technology, and available federal tax incentives. The EV 201 events showcased the variety of electric vehicle models available to purchase and new models set for release in the future and how those models fit into a range of lifestyles, including questions of charging and range.

Photo (Above): NV Energy's Virtual Ride and Drive. (Source: NV Energy).

The Governor's Office of Energy presented during all four nights, providing information on the office's role in transportation electrification and the development of electric vehicle charging infrastructure through the Nevada Electric Highway, as well as the impact of reducing vehicle emissions to support Nevada's Climate Initiative and future programs for charging infrastructure development.

While the events were online, attendees were able to ask questions and interact with NV Energy and Governor's Office of Energy to learn about policies and programs, NV Energy's rates for electric vehicles and the publicly available information to locate charging on the road. Attendees also received resources to learn more about available EV models, charging locations, the Nevada Electric Highway and EV charging rates through NV Energy. https://nvenergy.thedrivenexperience.com/ev-resources/

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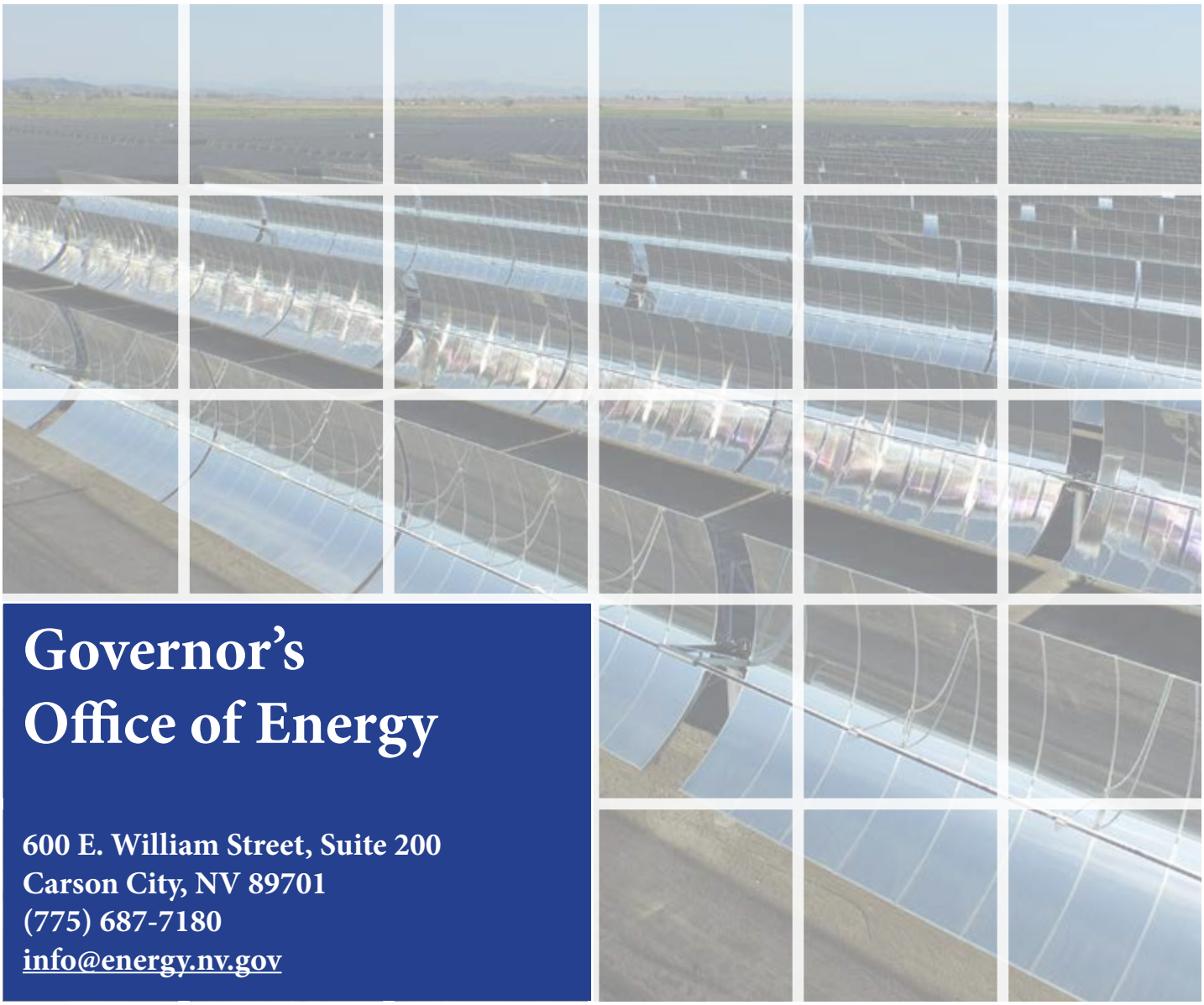

Governor's Office of Energy

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