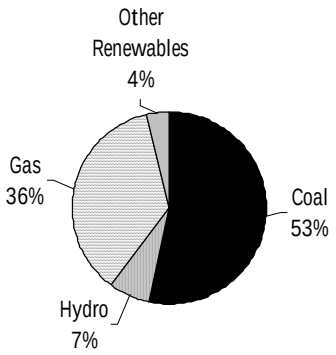
Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

Renewing Nevada

A National Renewable Energy Standard Will Benefit Nevada's Economy

America's energy choices affect our national security, our economy, our family budgets, and our environment. UCS examined a national policy to increase the United States' use of renewable energy to 20% of electricity supplies by 2020, called a renewable portfolio standard (RPS). This fact sheet shows that under a national standard of 20%, Nevada has the potential to meet a significant portion of its electricity needs with renewable energy while generating substantial economic and environmental benefits for the state. See our briefing *Renewing Where We Live* for more information on the benefits of a renewable energy standard for the Mountain States.

Nevada's Electricity Mix, 2000



Current Electricity Mix. Nevada is heavily reliant on coal and natural gas to generate its electricity. All of the coal and natural gas is imported from other states, exporting dollars and jobs in the process. Geothermal energy provides a fairly small amount of the state's electricity. In 2000, Nevada exported about 21% of the electricity generated in the state.

Nevada's Renewable Energy Potential

Resource	Generation (billion kWh)	% of 2000 Electricity Sales
Solar	>28.1	>100%
Wind	23.7	84%
Geothermal	22.9	82%
Bioenergy	0.5	2%
Landfill Gas	0.4	1%

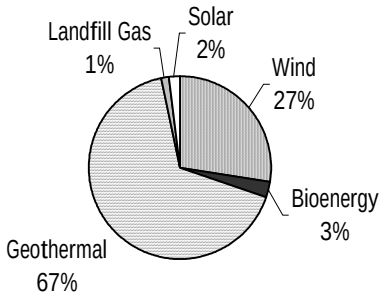
Renewable Energy Potential. The resources with the greatest potential in Nevada are solar, wind, and geothermal energy. Nevada has excellent solar resources that could theoretically provide all of the state's electricity use. In addition, Nevada has the technical potential to generate nearly twice its current electricity needs from wind, geothermal, and other renewable energy sources. Not all of Nevada's renewable potential will be developed due to economic, physical, and other limitations.

Renewable Energy Development. The UCS analysis found that under the 20% national standard, Nevada would produce the equivalent of 48% of its electricity use from renewable energy (not including hydro) in 2010 and 71% in 2020. By 2020, renewable generation in Nevada would be more than 3.5 times the national standard. If electricity generation grows at the same rate as electricity use in the state, renewable energy would provide 56% of Nevada's electricity generation in 2020. Nevada's leading state renewable energy standard of 15% by 2013 will help attract renewable energy developers to the state.

Economic Development. Renewable energy development would bring significant economic benefits to Nevada. Between 2002 and 2020, a 20% national standard would produce

- $2.8 billion in new capital investment in Nevada
- $213 million in new property tax revenues for local communities
- $18 million in lease payments to farmers, ranchers, and rural landowners from wind power
- $3.6 billion in additional revenues from the export of renewable energy credits[1]

Renewable Energy Mix in Nevada under 20% RPS



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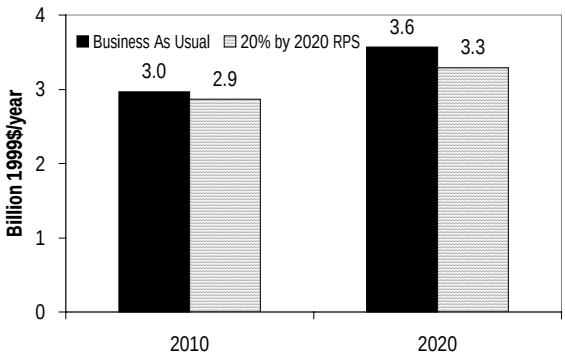
Consumer Costs and Benefits. A national standard of 20% would reduce energy costs to Nevada consumers. Total annual consumer energy bills (not including transportation) would be $100 million or 3% lower than under business as usual in 2010 and $279 million or nearly 8% lower in 2020. The present value of total consumer savings would be over $1 billion between 2002 and 2020. Revenues from renewable energy credit exports and a reduction in natural gas prices more than offset any incremental costs of meeting the renewable energy standard in the state.

Total Consumer Energy Bills, Nevada[a]



[a]Excludes transportation

Environmental Benefits. The increased use of renewable energy in Nevada would help reduce air pollution in the state and surrounding region. Power plant emissions of carbon dioxide, which is fueling global warming, would be over 40% lower in the Mountain States by 2020 than without the renewable energy standard. Other pollutants that harm human health would also be reduced by a national standard of 20% by 2020.

Additional Renewable Energy and Energy Efficiency Policies Increase Benefits

UCS examined the impact of increasing energy efficiency along with a renewable energy standard. The Renewable Energy and Energy Efficiency Act of 2001 (S. 1333) combines a 20% standard, net metering, and a public benefits fund. Combining these policies greatly increases economic development, consumer savings, and environmental benefits, significantly reduces natural gas prices, and provides additional diversity benefits compared to the 20% standard alone. They would also allow Nevada to capture a larger share of its solar energy potential. Increasing both energy efficiency and renewable energy is the best option for Nevada.

A 10% Renewable Energy Standard Would Have Fewer Benefits

UCS also looked at what would happen under a renewable energy standard of 10% by 2020, similar to a provision in the Senate's Energy Policy Act of 2002 (S. 1766), introduced by Senators Daschle (D-SD) and Bingaman (D-NM). Under a 10% standard, Nevada would achieve less diversity and savings on consumer energy bills and fewer environmental benefits than under a 20% standard. The added diversity, economic development, environmental, and long-run consumer benefits make the 20% renewable energy standard the preferred option for Nevada.

Impact of National RPS Proposals in Nevada

In 2020:	20% RPS	Combined Policies of S. 1333[a]	10% RPS
Cumulative New Capital Investment	$2.8 billion[b]	$4.1 billion[c]	$2 billion
Cumulative Consumer Energy Bill Savings[d]	$1 billion	$1.9 billion	$0.9 billion
Changes in Annual Consumer Energy Bills[d]	-$279 million -8%	-$641 million -18%	-$196 million -5.5%
Changes in Annual CO_2 Emissions from regional power plants	-41%	-53%	-18%

Notes
a. Includes 20% RPS, 2 c/kWh public benefits fund charge, and net metering.
b. All dollars presented in 1999$.
c. Includes investments in energy efficiency.
d. Excludes transportation.

The Union of Concerned Scientists is a nonprofit partnership of scientists and citizens combining rigorous scientific analysis, innovative policy development, and effective citizen advocacy to achieve practical environmental solutions. For more information, visit our web site at www.ucsusa.org/energy.

[1] Results presented are in 1999$. Cumulative results are in net present value using a 5% real discount rate.