



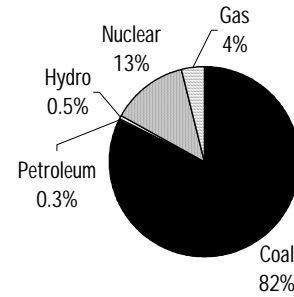
Renewing Missouri

A National Renewable Energy Standard Will Benefit Missouri'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%, Missouri 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 Plains States.

Current Electricity Mix. Missouri is heavily reliant on coal and nuclear power to generate its electricity. Virtually all of the coal, nuclear fuel, and natural gas is imported into the state, exporting dollars and jobs in the process. Renewable energy sources such as wind and bioenergy currently provide a negligible amount of the state's electricity. In 2000, Missouri exported about 5% of the electricity generated in the state.

Missouri's Electricity Mix, 2000^a



^a Numbers may not add to 100% due to rounding.

Missouri's Renewable Energy Potential

Resource	Generation (billion kWh)	% of 2000 Electricity Sales
Wind	81.3	112%
Bioenergy	28.1	39%
Landfill Gas	0.7	1%
Total	110.1	152%

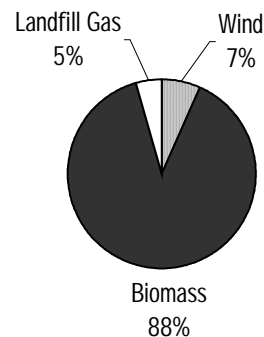
Renewable Energy Potential. Missouri has the technical potential to generate over 1.5 times its current electricity needs from renewable energy. The resources with the greatest potential in Missouri are bioenergy and wind. Emerging renewable technologies such as solar photovoltaics also have the potential to play a smaller but important part in the state's electricity supply. Not all of Missouri'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, Missouri would produce the equivalent of 3% of its electricity use from renewable energy (not including hydro) in 2010 and 23% in 2020. By 2020, renewable generation in Missouri would be more than the national standard. The vast majority of the development would come from Missouri's plentiful bioenergy sources. If electricity generation grows at the same rate as electricity use in the state, renewable energy would provide 21% of Missouri's electricity generation in 2020.

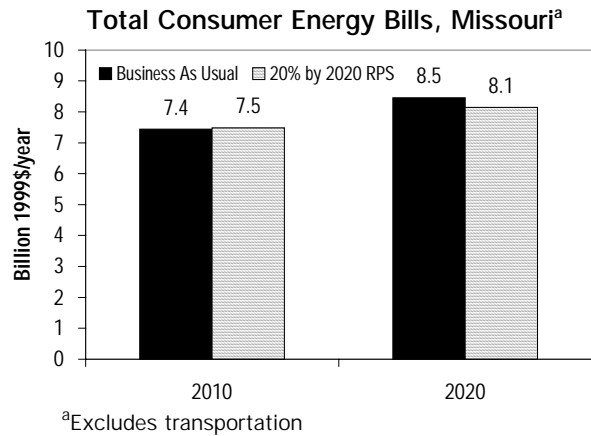
Economic Development. Renewable energy development would bring significant economic benefits to Missouri. Between 2002 and 2020, a 20% national standard would produce

- \$1.6 billion in new capital investment in Missouri
- \$62 million in new property tax revenues for local communities
- \$4 million in lease payments to farmers, ranchers, and rural landowners from wind power¹

Renewable Energy Mix in Missouri under 20% RPS



Consumer Costs and Benefits. A national standard of 20% would reduce energy costs to Missouri consumers. Total annual consumer energy bills (not including transportation) would be 0.5% higher than under business as usual in 2010, but \$310 million or nearly 4% lower in 2020. The present value of total consumer savings would be \$175 million between 2002 and 2020. A reduction in natural gas prices more than offset any incremental costs of meeting the renewable energy standard in the state.



Environmental Benefits. The increased use of renewable energy in Missouri would help reduce air pollution in the state and surrounding region. Power plant emissions of carbon dioxide, which is fueling global warming, would be 28% lower in the Plains 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 consumer savings and economic development benefits, significantly reduces natural gas prices, generates a similar amount of environmental benefits, and provides additional diversity benefits compared to the 20% standard alone. Increasing both energy efficiency and renewable energy is the best option for Missouri.

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, Missouri would realize greater cumulative savings on consumer energy bills, but would achieve less diversity, capital investment, and 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 Missouri.

Impact of National RPS Proposals in Missouri

In 2020:	20% RPS	Combined Policies of S. 1333 ^a	10% RPS
Cumulative New Capital Investment	\$1.6 billion ^b	\$2.9 billion ^c	\$0.1 billion
Cumulative Consumer Energy Bill Savings ^d	\$0.2 billion	\$2.2 billion	\$0.5 billion
Changes in Annual Consumer Energy Bills ^d	-\$0.3 billion -4%	-\$1.1 billion -13%	-\$0.2 billion -2%
Changes in Annual CO ₂ Emissions from regional power plants	-28%	-28%	-8%

- 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 All dollars presented in 1999\$. Cumulative results are in net present value using a 5% real discount rate.