



A 10 Percent National Renewable Electricity Standard Will Save Consumers Money and Create Jobs

A national renewable electricity standard would require electric utilities to supply a minimum percentage of their electricity from renewable sources such as wind, solar, geothermal, and bioenergy.¹ The U.S. Senate has passed a 10 percent by 2020 national standard three times since 2002—most recently in June 2005.

The Senate's 10 percent national standard is modeled after standards already enacted in 22 states and the District of Columbia. This standard would reduce electricity and natural gas prices and provide significant economic and environmental benefits for America, according to studies by the U.S. Department of Energy's (DOE) Energy Information Administration (EIA) and the Union of Concerned Scientists (UCS).

Benefits of a 10 Percent by 2020 National Renewable Electricity Standard

Consumer Savings

- \$22.6 billion to \$37.7 billion in lower electricity and natural gas bills

Job Creation

- 190,000 new jobs—nearly twice as many as generating electricity from fossil fuels

Economic Development

- \$41.5 billion in new capital investment, \$5.7 billion in income to farmers, ranchers, and rural landowners, and \$2.8 billion in new local tax revenues

Healthier Environment

- Reductions of global warming pollution equal to taking up to 32 million cars off the road, plus less haze, smog, acid rain, mercury contamination, and water use

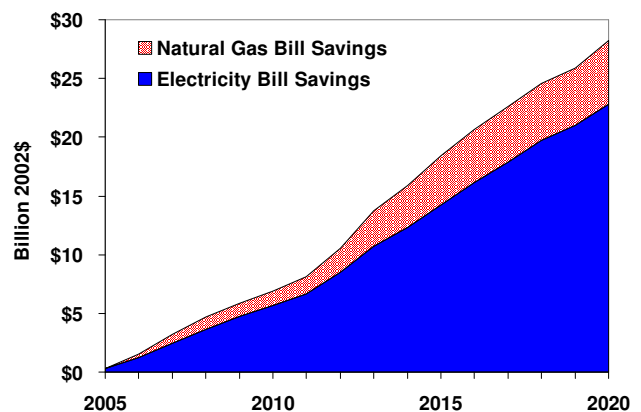
Consumer Savings

A June 2005 EIA study examined the costs and benefits of the national 10 percent renewable electricity standard passed by the U.S. Senate.² In September 2004, UCS also used EIA's model to examine a similar 10 percent national standard, but with more optimistic assumptions for renewable energy technology costs and performance that are more in line with projections by DOE's national laboratories.^{3,4} Both studies found that the 10 percent by 2020 standard would increase competition in the marketplace, reducing long-term energy costs for homes and businesses by gradually bringing natural gas and electricity prices down.

UCS found that average consumer electricity prices would be lower than business as usual in every year of the forecast, with an average annual reduction of 1.7 percent. Average consumer natural gas prices would be virtually the same or lower than business as usual in nearly every year of the forecast, with an average annual reduction of 0.5 percent. Nationally, the 10 percent standard would save consumers \$28.2 billion on their electricity and natural gas bills by 2020, with the savings continuing to grow to \$37.7 billion by 2025.⁵

Even with more pessimistic assumptions for renewable energy technologies, the EIA study still found that the 10 percent national standard would lower electricity and natural gas prices, saving consumers \$22.6 billion by 2025.

Cumulative Natural Gas and Electricity Bill Savings*



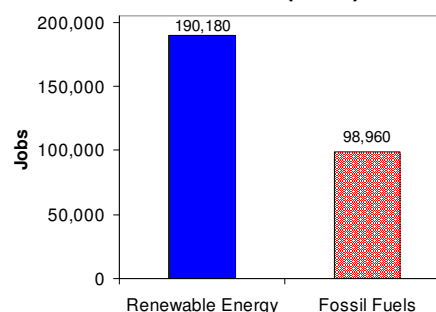
*Under a 10 percent by 2020 renewable electricity standard. Excludes transportation. Source: UCS analysis.

New Jobs and Income

The UCS analysis also found that under a 10 percent by 2020 national standard, America would increase its total homegrown renewable power capacity by more than five times over present levels—from about 20,000 megawatts (MW) in 2005 to 109,000 MW by 2020. This development would be powered primarily by America's strong wind, bioenergy, and geothermal resources, producing enough electricity to meet the needs of 73 million typical U.S. homes.⁶

Furthermore, increased renewable energy development would create high-paying jobs and other economic benefits in the United States. By 2020, the 10 percent standard would generate more than 190,000 jobs in manufacturing, construction, operations, maintenance, and other industries—nearly twice as many as fossil fuels, representing a net increase of 91,220 jobs. Renewable energy would also provide an additional \$5.1 billion in income and \$5.9 billion in gross domestic product in the United States' economy in 2020.

Job Creation, Renewable Energy* vs. Fossil Fuels (2020)



*Under a 10 percent by 2020 renewable electricity standard. Source: UCS analysis.

Economic Benefits for Rural Communities

Many of the jobs identified above would be created in rural areas where the renewable energy generating facilities would be located. By 2020, the 10 percent national standard would also provide a tremendous boost to the U.S. economy in other ways:

- \$41.5 billion in new capital investment
- \$4.9 billion in payments to rural areas resulting from biomass energy production
- \$2.8 billion in new property tax revenues for local communities
- \$755 million in lease payments to farmers and rural landowners resulting from wind power generation

Public Health and Environmental Protection

Increased renewable energy use would reduce toxic air pollution from power plants that threaten people's health by burning coal, oil, and natural gas. It would also reduce carbon dioxide emissions, which cause global warming by trapping heat in the atmosphere. UCS and EIA analyses show that carbon dioxide emissions would be reduced 166 million to 215 million metric tons nationally by 2020—a reduction of up to 7.2 percent below “business as usual” levels, equivalent to taking 32 million cars off the road. And by reducing the need to extract, transport, and consume fossil fuels, a national renewable standard would limit the damage done to our water and land and conserve our natural resources for future generations.

A Cleaner, Safer Energy Future

The 10 percent national standard would make America's energy supply more reliable and secure. It would use local energy sources to create high-skilled U.S. jobs, improve rural economies, and put energy dollars back into the pockets of consumers. The advantages of renewable energy are so strong, in fact, that analyses by both UCS and EIA show that increasing the national standard from 10 percent to 20 percent by 2020 would significantly boost all of these benefits. A national standard is a common-sense step away from our dependence on an unstable, dirty fossil fuel supply, and toward a future built on clean, renewable energy.

For additional information, visit the UCS Clean Energy website at www.ucsusa.org/clean_energy.

¹ The renewable electricity standard is also known as a renewable portfolio standard or RPS.

² Letter to Senator Bingaman from the U.S. Energy Information Administration's (EIA), June 15, 2005. Results are cumulative NPV 2003 dollars (seven percent real discount rate), using the Annual Energy Outlook (AEO) 2005 version of the National Energy Modeling System (NEMS).

³ UCS used a modified version of EIA's NEMS developed for AEO 2004 to examine the costs and benefits of increasing renewable energy use by way of a national renewable electricity standard of 10 percent by 2020 and renewable energy tax credits (passed by the U.S. Senate in July 2003 as part of the comprehensive energy bill HR 6). More information about this modeling approach can be found in the October 2001 UCS report *Clean Energy Blueprint*, which is available at www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=44.

⁴ An update to our 2004 analysis is currently underway, and is scheduled for release in Summer 2007.

⁵ Results are presented in cumulative net present value 2002\$ using a seven percent real discount rate. Job results are for the year 2020.

⁶ Assumes a typical non-electric heating household using 500 kilowatt-hours per month.