



A 20 Percent National Renewable Electricity Standard Will Create Jobs and Save Consumers Money

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 Similar policies have already been enacted in 22 states and the District of Columbia.

The U.S. Senate has passed a 10 percent by 2020 national standard three times since 2002—most recently in June 2005. Congress has also considered a national standard of 20 percent by 2020.

In September 2004, the Union of Concerned Scientists (UCS) used the Energy Information Administration's (EIA) National Energy Modeling System computer model to examine the costs and benefits of a 20 percent by 2020 national standard.² We modified the model using more optimistic assumptions for renewable energy technology costs and performance that are more in line with projections by the Department of Energy's national laboratories.³ Our analysis found that a 20 percent standard would reduce electricity and natural gas prices and provide significant economic and environmental benefits for America.

Benefits of a 20 Percent by 2020 National Renewable Electricity Standard

Job Creation

- 355,000 new jobs—nearly twice as many as generating electricity from fossil fuels

Economic Development

- \$72.6 billion in new capital investment
- \$16.2 billion in income to farmers, ranchers, and rural landowners
- \$5.0 billion in new local tax revenues

Consumer Savings

- \$49 billion in lower electricity and natural gas bills

Healthier Environment

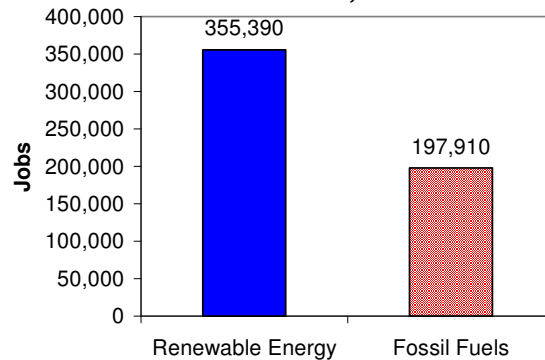
- Reductions in global warming pollution equal to taking nearly 71 million cars off the road
- Less air pollution, damage to land, and water use

New Jobs and Income

Our analysis found that under a 20 percent national standard, America would increase its total homegrown renewable power capacity nine times over present levels—from about 20,000 megawatts (MW) in 2005 to 180,000 MW by 2020. This development would be powered primarily by America's strong wind, bioenergy, and geothermal resources.

Renewable energy development would create high-paying jobs and other economic benefits in the United States. By 2020, the 20 percent national standard would generate more than 355,000 jobs in manufacturing, construction, operation, maintenance, and other industries—nearly twice as many as fossil fuels, representing a net increase of 157,480 jobs. Renewable energy would also provide an additional \$8.2 billion in income and \$10.2 billion in gross domestic product in the United States' economy in 2020.

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



*Under a 20 percent by 2020 renewable electricity standard.

Economic Benefits for Rural Communities

Many of the jobs identified above—including 30,000 jobs in agriculture—would be created in rural areas where the renewable energy generating facilities would be located. By 2020, the 20 percent national standard

would also provide a tremendous boost to the U.S. economy in other ways:

- \$72.6 billion in new capital investment
- \$15 billion in payments to farmers and rural areas for producing biomass energy
- \$5 billion in new property tax revenues for local communities
- \$1.2 billion in wind power land lease payments to farmers, ranchers, and rural landowners⁴

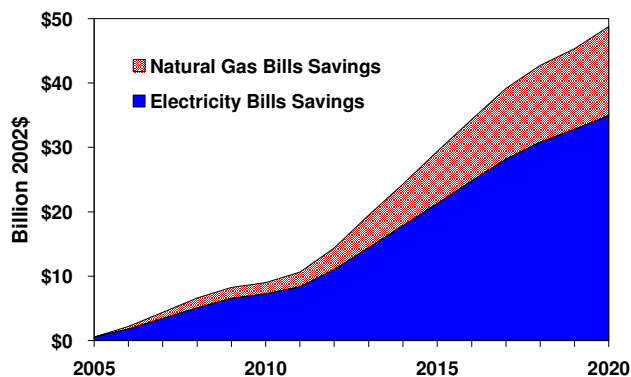
Consumer Savings

We also found that the 20 percent national standard would increase competition in the marketplace, reducing long-term energy costs for homes and businesses by gradually lowering natural gas and electricity prices.

Average consumer electricity prices would be lower than business as usual in every year of the forecast, with an average annual reduction of 1.8 percent. Similarly, average consumer natural gas prices would be lower than business as usual in nearly every year of the forecast, with an average annual reduction of 1.5 percent.

Nationally, the 20 percent standard would save consumers \$49.1 billion on their electricity and natural gas bills by 2020. All sectors of the economy would benefit, with commercial, industrial, and residential customers' total savings reaching \$19.1 billion, \$17.4 billion, and \$12.6 billion, respectively.

Cumulative Natural Gas and Electricity Bill Savings*



*Under a 20 percent by 2020 renewable electricity standard. Excludes transportation. Source: UCS analysis.

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 (CO₂) emissions, which cause global warming by trapping heat in the atmosphere. The 20 percent national standard will reduce CO₂ emissions by 434 million metric tons per year by 2020—a reduction of 15 percent below “business-as-usual levels”, equivalent to taking nearly 71 million cars off the road. And by reducing the need to extract, transport, and consume fossil fuels, a national renewable electricity standard would limit the damage done to our water and land and conserve our natural resources for future generations.

A Cleaner, Safer Energy Future

A national renewable electricity 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. Even under a 10 percent national standard, both UCS and EIA analysis shows Americans would see all of these important benefits, but at lower levels than what would occur under a 20 percent standard.⁵ A 20 percent national renewable electricity 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 more information, visit the UCS Clean Energy web site at www.ucsusa.org/clean_energy.

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

² An update to our 2004 analysis is currently underway, and is scheduled for release in Summer 2007.

³ UCS evaluated a 20 percent by 2020 national standard proposal by Senator Jeffords (I-VT) and the tax credits for renewable energy that were supported by the Senate energy bill conference committee in November 2003. More information about UCS's modeling approach can be found at www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=1505 and in the October 2001 report *Clean Energy Blueprint*, available online at www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=44.

⁴ Results are presented in cumulative net present value 2002\$ using a seven percent real discount rate. Job results are for the year 2020.

⁵ For more information, see *Renewing America's Economy: A 10 Percent National Renewable Electricity Standard Will Save Consumers Money and Create Jobs*, available online at www.ucsusa.org/clean_energy/renewable_energy_basics/renewing-americas-economy.html