



Renewing New York's Economy

2004 analysis

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, and bioenergy.¹ Similar policies have already been enacted in New York and 21 other states.

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 the Empire State.

Consumer Savings

Our analysis found that under a 20 percent national standard, New York would increase its total home-grown renewable power to 4,435 megawatts (MW) by 2020. The majority of this development would be powered by New York's strong wind and bioenergy resources. This level of renewable development would produce enough electricity to meet the needs of 2.7 million typical homes, provide nearly 13 percent of the electricity sales in the state that are covered by the national standard, and reduce the use of imported natural gas and coal.⁴ New York has the technical potential to generate nearly all of its current electricity needs from renewable energy.

The 20 percent by 2020 standard would increase competition in the marketplace, reducing long-term energy costs for homes and businesses by gradually lowering natural gas and electricity prices. By 2020, the savings in New York alone would amount to \$2.8 billion. Every sector of the state's economy would benefit, with commercial, industrial, and residential customers saving a total of \$1.47 billion, \$700 million, and \$650 million respectively by 2020.

New York Benefits from a 20 Percent by 2020 National Renewable Electricity Standard

Consumer Savings

- \$2.8 billion in lower electricity and natural gas bills

Economic Development

- \$2.2 billion in new capital investment
- \$171 million in new local tax revenues
- \$45 million in income to farmers and rural landowners

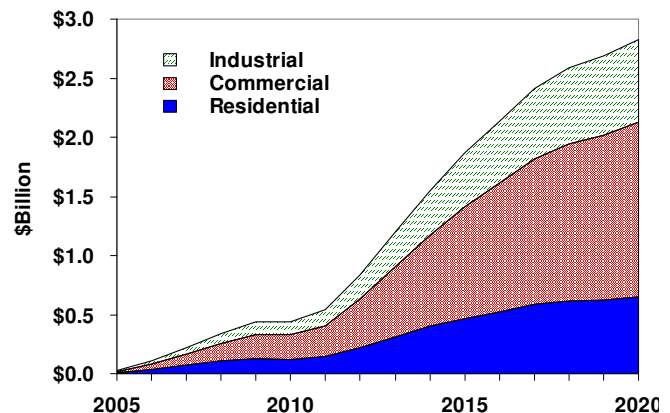
Job Creation

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

Healthier Environment

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

Cumulative Energy Bill Savings in New York*



*By sector, under a 20 percent by 2020 renewable electricity standard. Excluding transportation.

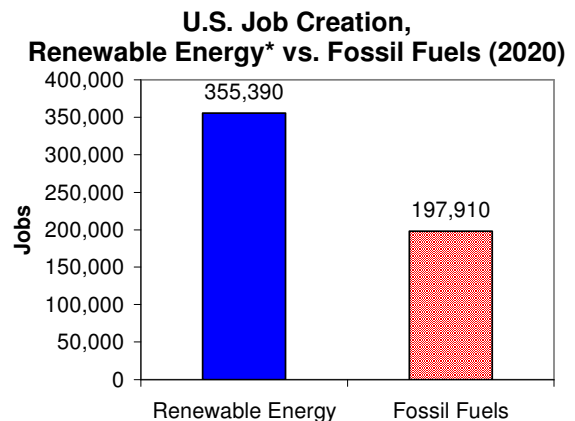
Economic Benefits for Rural Communities

Increased renewable energy development would also create significant economic benefits for New York, especially in rural communities where many of the renewable energy generating facilities would be located. By 2020, the 20 percent national standard would provide in New York:

- \$2.2 billion in new capital investment
- \$171 million in new property tax revenues for local communities
- \$45 million in lease payments to farmers and rural landowners resulting from wind power generation⁵

New Jobs for New Yorkers

Renewable energy development resulting from the 20 percent national standard would create high-paying jobs in New York and throughout the United States. By 2020, the 20 percent standard would generate more than 355,000 jobs nationally in manufacturing, construction, operations, 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.



A Renewable Energy Policy Project study found that a national commitment to build 50,000 MW of wind power would create 6,550 new manufacturing jobs and nearly \$2.2 billion in investment in New York.⁶ By comparison, our analysis found that a 20 percent national renewable standard would result in the new development of 126,000 MW wind power in the United States by 2020.

Public Health and Environmental Protection

Increased renewable energy use would reduce toxic air pollution from fossil fuel power plants. 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 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 New York's energy supply—and the energy supply of the entire United States—more reliable and secure. It would use local energy sources to create high-skilled jobs in New York, improve the state's rural economies, and put energy dollars back into the pockets of New York's consumers. Even under a 10 percent national standard, both UCS and EIA analysis shows New York would see all of these important benefits, but at lower levels than what would occur under a 20 percent standard.⁷ 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 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 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 Electricity sales from small utilities and hydroelectric facilities are exempt from the national renewable electricity standard.

⁵ Results are presented in cumulative net present value (NPV) 2002 dollars, using a seven percent real discount rate. Job results are for the year 2020.

⁶ Sterzinger, G. and M. Svrcke. *Wind Turbine Development: Location of Manufacturing Activity*. Renewable Energy Policy Project, September 2004.

⁷ For more information, see *Renewing New York'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