



Renewing Florida

What A National Renewable Electricity Standard Means for Florida

America's energy choices affect our national security, our economy, our family budgets, and our environment. Last year, the U.S. Senate passed an energy bill (HR 4) that contained the first-ever national renewable electricity standard, which requires major electric companies¹ to gradually increase sales of electricity from renewable energy sources (wind, solar, bioenergy, and geothermal) to 10 percent by 2020. However, the standard did not become law as a committee of House and Senate members failed to agree on a final bill before the 107th Congress adjourned. The newly elected 108th Congress should revisit the renewable electricity standard during the current national energy debate in order to move our nation away from polluting fossil fuels and toward a safer, cleaner, and more sustainable energy future.

UCS used a modified version of the U.S. Energy Information Administration's National Energy Modeling System computer model to examine the costs and benefits of last year's Senate renewable electricity standard (RES) proposal – often called a renewable portfolio standard.² We found that this policy – along with Senate-passed tax credits for renewable energy – slightly *reduces* consumer energy bills in Florida. In addition, this important national policy will benefit Florida residents by addressing one of the biggest threats to the state's economy and ecological heritage: the burning of fossil fuels.

Current Electricity Mix and Its Impact. Like the rest of the United States, Florida relies heavily on fossil fuels and nuclear power to generate its electricity. All of the coal and nuclear fuel, and most of the gas and oil are imported into the state, exporting jobs and millions of dollars in the process. Homegrown renewable energy sources (not including hydro) such as landfill gas and bioenergy (plants/energy crops and clean plant wastes such as sugar cane or urban wastes) currently provide less than 2 percent of the electricity generated in Florida.

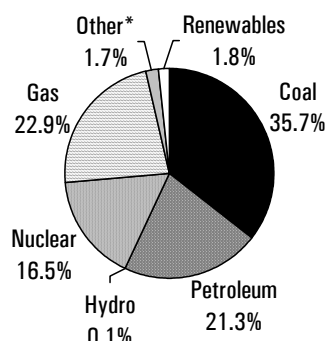
Florida's heavy reliance on fossil fuels for electricity contributes significantly to public health and environmental problems in local communities throughout the state. For example, air pollution from oil and coal-fired power plants aggravates asthma, and causes chronic bronchitis and other respiratory problems, including premature death. Wastes, such as arsenic and mercury, can contaminate local drinking water supplies and severely disrupt valuable aquatic ecosystems. Demand for cooling water from power plants can create unwelcome competition for scarce water supplies in drought-stricken areas.

The burning of fossil fuels to generate electricity is also the leading source of U.S. carbon dioxide emissions, which trap heat in the atmosphere and are the primary cause of global warming. Florida's residents, economy and rich ecological heritage are at significant risk from the potential impacts.³

Renewable Energy Potential and Development. Florida has the technical potential to generate nearly one-third of its current electricity needs from renewable energy. The resources with the greatest potential in Florida are solar and bioenergy. While not all of the state's renewable potential will be developed due to economic, physical and other limitations, the national standard will spur renewable energy development in Florida.

UCS analysis found that under a 10 percent renewable electricity standard, Florida would increase its total renewable power to 680 megawatts (MW) by 2020 – enough electricity to meet the needs of nearly 1 million

Florida's Electricity Mix, 2001

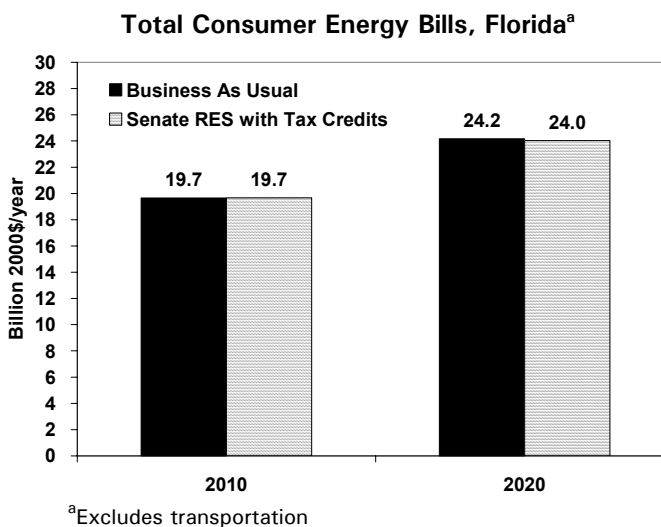


*Includes municipal solid waste and other fuels.
Source: EIA, 2003

typical homes and reduce the use of imported coal and oil. Florida's bioenergy resources would power the majority of this development with the rest from landfill gas and solar.

Renewable Energy Standard Benefits. The national standard and renewable energy tax credits passed by the Senate would result in slight savings to Florida consumers on long run energy costs. Increased competition from renewable energy leads to lower natural gas prices, offsetting the incremental costs of meeting the renewable energy standard in the state. Total annual consumer energy bills (not including transportation) would be essentially the same as under business as usual through 2010, and \$130 million or 0.5 percent *lower* in 2020.⁴ The cumulative consumer savings through 2020 would be over \$90 million.⁵

The renewable electricity standard will provide important health, environmental and economic benefits to Florida residents. Nationally, the renewable electricity standard will reduce about 27 million metric tons (MMT) of carbon emissions a year by 2020. This reduction, in concert with other efforts to curtail greenhouse gas emissions, will help to slow the impacts of global warming in Florida. By reducing fossil fuel use throughout the region, the renewable standard will also reduce harmful air pollution and the water and land impacts from extracting and transporting these resources.



The renewable standard increases benefits if natural gas prices increase

In the future, natural gas is projected to fuel much of the new electricity generation built in the United States without additional policies for renewable energy. This increase in demand for natural gas may lead to natural gas prices that are higher and more volatile than those used in our base case analysis. The more expensive natural gas is, the greater the savings will be from reducing natural gas use through a renewable energy standard.

Specifically, UCS examined the effects of a renewable standard on an alternative scenario where wholesale natural gas prices are 35 percent higher by 2020. In this case, cumulative energy bill savings for Florida's consumers would be nearly 4 times greater and U.S. power plant carbon emissions would be reduced by an additional 11 MMT.

Providing a clean, safe energy future

A national renewable electricity standard would make Florida's energy supply more reliable and secure, and help to address the main cause of global warming. It would diversify the fuel mix using energy produced within the state. The renewable electricity standard is a sensible step toward a balanced approach to meeting energy demands with renewable technologies, and is far more responsible than continuing to rely on polluting or dangerous power sources. Renewable energy is ready to provide Florida with a clean, safe energy future.

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 Small utilities and publicly-owned utilities are exempted.

² More information about UCS' modeling approach can be found in the October 2001 report *Clean Energy Blueprint: A Smarter National Energy Policy for Today and the Future*, which is available at www.ucsusa.org/energy/blueprint.html.

³ More information about climate change impacts in Florida can be found in the October 2001 UCS report *Confronting Climate Change in the Gulf Coast Region*, which is available at www.ucsusa.org/gulf/index.html.

⁴ Results presented are in 2000\$. Cumulative results are in net present value using an 8 percent real discount rate.

⁵ The House and Senate energy bills include renewable energy tax credits worth between \$2.6 billion (Congress' estimate) and \$5.2 billion (UCS' estimate) over the next 10 years. The bills also include 10 years' worth of subsidies for fossil fuel and nuclear power totaling about \$9.1 billion in the Senate bill and \$28 billion in the House bill. The taxpayer costs of the additional subsidies for renewable energy and conventional fuels were not included in the analysis. (Note: these dollar figures are *not* discounted.)