



## Real Energy Solutions: The Renewable Electricity Standard

Renewable energy can help solve multiple problems: increasing and volatile fossil fuel prices, energy supply shortages and disruptions, a growing dependence on natural gas, a need for more domestic energy supplies, and harmful air pollution. A national Renewable Electricity Standard can diversify our energy supply with clean, domestic resources. It will help stabilize electricity prices, reduce natural gas prices, reduce emissions of carbon dioxide and other harmful air pollutants, and create jobs—especially in rural areas—and new income for farmers and ranchers.

### What is a Renewable Electricity Standard?

The Renewable Electricity Standard (RES), also called a Renewable Portfolio Standard, is a market-based mechanism that requires utilities to gradually increase the portion of electricity produced from renewable resources such as wind, biomass, geothermal, and solar energy. Thirteen states—including Texas—have enacted minimum renewable energy requirements. But energy production creates national economic and environmental problems that need national solutions.

### The RES Relies on Market Forces

By using tradable "renewable energy credits" to achieve compliance at the lowest cost, the RES would function much like the Clean Air Act credit-trading system, which permits lower-cost, market-based compliance with air pollution regulations. This market-based approach creates competition among renewable generators, providing the greatest amount of clean power for the lowest price, and creates an ongoing incentive to drive down costs.

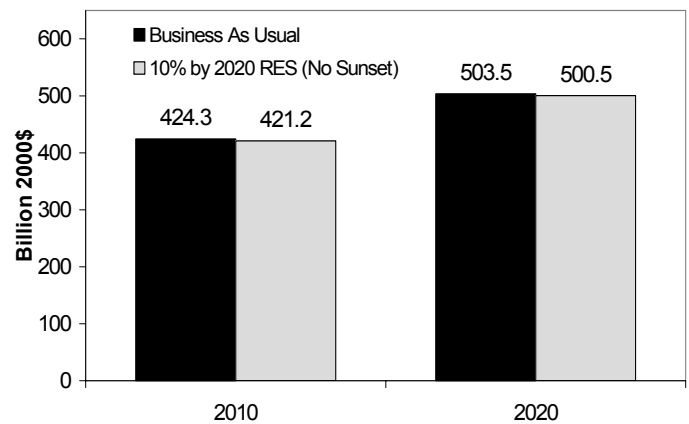
### Benefits of the Renewable Electricity Standard

#### *Saves Consumers and Businesses Money*

Diversifying the power supply by developing America's homegrown renewable energy resources creates a more competitive market, which can reduce natural gas prices and save consumers money on their energy bills. Renewable energy is not subject to the price volatility that plagues natural gas power plants.

Two recent studies by the U.S. Energy Information Administration (EIA)<sup>1</sup>, using high renewable energy cost estimates, found that a national RES to provide 10 percent of U.S. electricity from renewables by 2020 would lower natural gas prices, have virtually no impact on electricity prices, and could save energy consumers as much as \$13.2 billion.<sup>2</sup>

EIA: Total Consumer Energy Bills, United States\*



\*Not Including Transportation.  
Source: EIA, 2002.

A recent UCS report, *Renewing Where We Live*, also found that a 10 percent by 2020 national RES could significantly reduce consumer energy bills. In addition, the UCS report looked at what would happen if the national RES was doubled to 20 percent by 2020. In this case, the RES would achieve greater diversity, economic development, and environmental benefits, while still saving consumers \$4.5 billion on their energy bills between 2002 and 2020.<sup>3,4</sup>

### ***Reduce dependence on fossil fuels and lower fossil fuel prices***

Studies by UCS, the Department of Energy, and others show that the RES can create healthy competition for fossil fuel power plants, which are increasingly fueled by natural gas. By reducing the heavy demand for natural gas, the RES will reduce natural gas prices to homes and businesses.

**“The benefit of wind and solar energy is a predictable price path...your variable costs will be zero.”**

**Pat Wood**

former Chair of the Texas Public Utilities Commission, which implemented the nation's most successful RPS to date, and current Chair of the Federal Energy Regulatory Commission

### ***Foster economic development***

This RES will stimulate domestic investment in new renewable energy throughout the nation, creating jobs and income in rural areas as well as in the high tech and manufacturing sectors. Wind energy could provide \$1.2 billion in new income for farmers and rural landowners by 2020 and 80,000 new jobs, according to the U.S. Department of Energy. Tripling US use of biomass energy could provide as much as \$20 billion in new income for farmers and rural communities. With a strong domestic renewable energy industry, the U.S. economy would benefit from the large export potential of this industry.

### ***Reduce emissions and environmental impacts***

Adopting a strong national renewable energy standard can reduce U.S. carbon dioxide emissions—the primary greenhouse gas—from electricity generation. Combined with energy efficiency improvements, power plant carbon emissions can be significantly reduced. Electricity generation is the leading source of U.S. carbon emissions, accounting for over 40 percent of the total. An RES will also significantly reduce emissions of nitrogen oxides, sulfur dioxide, and mercury, which are linked to acid rain, smog, respiratory illness, and water contamination. A recent study by EIA shows that the RES can reduce the cost of controlling power plant emissions by reducing pressure on natural gas prices.<sup>5</sup>

An RES would reduce the need to drill for natural gas, build new pipelines and power lines, and reduce the need to mine, transport and burn coal. Energy efficiency and renewable energy can be increased faster than developing new fossil and nuclear energy supplies.

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*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.*

<sup>1</sup> Energy Information Administration, *Impacts of a 10-Percent Renewable Portfolio Standard*, SR/OIAF/2002-03, February 2002. [http://www.eia.doe.gov/oiaf/servicerpt/rps/pdf/sroiaf\(2002\)03.pdf](http://www.eia.doe.gov/oiaf/servicerpt/rps/pdf/sroiaf(2002)03.pdf). Energy Information Administration, *Analysis of a 10-Percent Renewable Portfolio Standard*, SR/OIAF/2003-01, May 2003. [http://www.eia.doe.gov/oiaf/servicerpt/rps2/pdf/sroiaf\(2003\)01.pdf](http://www.eia.doe.gov/oiaf/servicerpt/rps2/pdf/sroiaf(2003)01.pdf).

<sup>2</sup> 2000 dollars using a 8 percent real discount rate.

<sup>3</sup> 1999 dollars using a 5 percent real discount rate.

<sup>4</sup> UCS, *Renewing Where We Live*, February 2002. [http://www.ucsusa.org/clean\\_energy/renewable\\_energy/page.cfm?pageID=784](http://www.ucsusa.org/clean_energy/renewable_energy/page.cfm?pageID=784)

<sup>5</sup> Energy Information Administration, *Analysis of Strategies for Reducing Multiple Emissions from Electric Power Plants: Sulfur Dioxide, Nitrogen Oxides, Carbon Dioxide, and Mercury and a Renewable Portfolio Standard*, SR/OIAF/2001-03, June 2001. [http://www.eia.doe.gov/oiaf/servicerpt/epp/pdf/sroiaf\(2001\)03.pdf](http://www.eia.doe.gov/oiaf/servicerpt/epp/pdf/sroiaf(2001)03.pdf)