



state standards will reduce total annual CO<sub>2</sub> emissions by more than 183 million metric tons (MMT)—the equivalent of taking 30 million cars off the road or planting a forest large enough to cover the entire state of Washington.

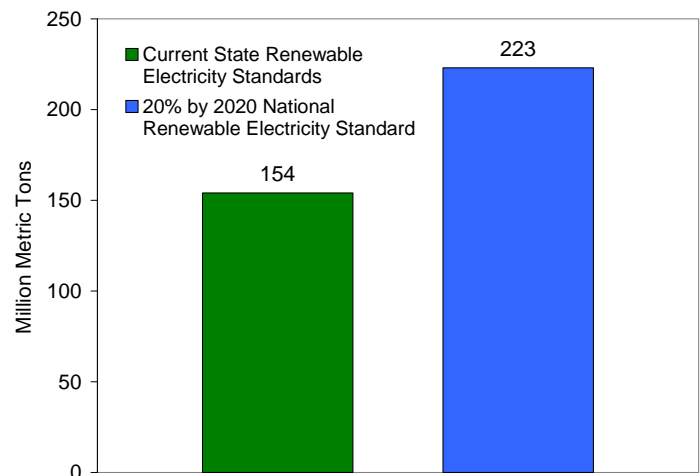
In addition to realizing significant reduction of harmful emissions, the states have also found that renewable standards are an effective means to help meet critical fuel diversity, energy security, and economic goals. In fact, this approach has been so successful that 18 states—including Minnesota, Wisconsin, Pennsylvania, and most recently Illinois—have revisited and significantly increased or accelerated their annual requirements.

## A National Standard Significantly Increases Climate Benefits

While many states are making important strides in reducing CO<sub>2</sub> emissions with renewable electricity standards, greater benefits could be achieved if Congress adopted a national standard. A 2007 UCS analysis examined the costs and benefits of a 20 percent by 2020 renewable standard, and found that America would increase its total renewable power to 117,000 MW in 2020—nearly 6 times the capacity levels in 2005 (about 20,000 MW).<sup>iii</sup>

The 20 percent national standard would reduce the projected growth in power plant CO<sub>2</sub> emissions under a business-as-usual scenario by 63 percent, or 223 MMT per year by 2020. This level of reductions is equivalent to taking 36.4 million cars off the road. Studies by the U.S. Department of Energy's Energy Information Administration have shown similar even greater annual CO<sub>2</sub> emission reductions.

Comparison of Annual Power Plant CO<sub>2</sub> Reduction from State and National Renewable Electricity Standards, 2020



Source: UCS

## Renewable Electricity Standards are a Smart Climate Solution

With only five percent of the world population, the United States produces nearly 25 percent of annual global heat-trapping emissions.<sup>iv</sup> Electricity generation accounts for fully one-third of these emissions.<sup>v</sup> We have a responsibility and a compelling interest to significantly reduce these harmful emissions. Renewable electricity standards offer a smart, affordable climate solution with a proven track record.

<sup>i</sup> Epstein, Paul R and Christine Rodgers. *Inside the Greenhouse: The Impacts of CO<sub>2</sub> and Climate Change on Public Health in the Inner City*. Report from the Center for Health and the Global Environment Harvard Medical School. April 2004.

<sup>ii</sup> Intergovernmental Panel on Climate Change. *Third Assessment Report. Climate Change 2001: Impacts, Adaptation, and Vulnerability*. 2001.

<sup>iii</sup> Union of Concerned Scientists. *Cashing In on Clean Energy*. July 2007. Available online at

[http://www.ucsusa.org/clean\\_energy/solutions/renewable\\_energy\\_solutions/cashing-in-on-clean-energy-a.html](http://www.ucsusa.org/clean_energy/solutions/renewable_energy_solutions/cashing-in-on-clean-energy-a.html)

<sup>iv</sup> United Nations Framework Convention on Climate Change. Annex 1: Greenhouse Gas Inventory Database.

<sup>v</sup> U.S. Environmental Protection Agency. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2002*. April, 2004.

For additional information, visit the UCS Clean Energy web site at [www.ucsusa.org/clean\\_energy](http://www.ucsusa.org/clean_energy).

The Union of Concerned Scientists is the leading science-based nonprofit working for a healthy environment and a safer world.



**National Headquarters**  
Two Brattle Square  
Cambridge, MA 02238-9105  
Phone: (617) 547-5552  
Fax: (617) 864-9405

**Washington, DC, Office**  
1825 K St. NW, Suite 800  
Washington, DC 20006-1232  
Phone: (202) 223-6133  
Fax: (202) 223-6162



Printed on recycled paper using vegetable based inks  
© UCS February 2009