

Testimony on the Maryland Renewables Portfolio Standard (SB 744)

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Mr. Chairman and members of the Committee,

Thank you for the opportunity to appear today on behalf of the Union of Concerned Scientists (UCS). Established in 1969, UCS is an independent nonprofit alliance of 70,000 committed citizens and leading scientists across the country. UCS is dedicated to advancing responsible public policies in areas where science and technology play a critical role. UCS works to ensure that all people have clean air and energy, as well as safe and sufficient food. The UCS Energy Program focuses on developing a sustainable energy system—one that is affordable and nondepletable, and that does not degrade natural systems or public health. The program analyzes, develops, and promotes innovative technology and market-based strategies to commercialize renewable energy technologies, and provides information to policymakers, the media and the public about energy's impact on public health, the environment, and the economy.

UCS has been a leading analyst of and advocate for minimum renewable energy requirements at the state and federal levels. Two of our most recent publications on the subject include the reports, *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity* and *A Powerful Opportunity: Making Renewable Electricity the Standard*.¹ *Powerful Solutions* describes the rationale for public policies to support renewable energy development, especially in the context of electric industry restructuring, discusses mechanisms for implementing the policies, and reviews how states were implementing the policies as of the end of 1998. *A Powerful Opportunity* analyzes the costs and benefits of various federal Renewables Portfolio Standard (RPS) proposals. UCS has played an active role in discussions of RPS adoption and implementation before legislatures and commissions in states where they have been enacted (including Connecticut, Maine, Massachusetts, Nevada, New Jersey, Texas and

¹ Alan Noguee, Steven Clemmer, Bentham Paulos, and Brent Haddad, *Powerful Solutions: Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists, Cambridge, Mass., January 1999. Steven Clemmer, Michael Brower, Alan Noguee, and Paul Jefferiss, *A Powerful Opportunity: Making Renewable Electricity the Standard*, Union of Concerned Scientists, Cambridge, Mass., January 1999. Both publications are available online at: <http://www.ucsusa.org/energy/>.

Wisconsin). I also analyzed the costs and benefits of implementing different RPS levels in Maryland for the Public Service Commission's Draft RPS report.

I would like to commend Senator Dorman and the 10 other cosponsors of this bill for their leadership in introducing this important legislation. The renewables portfolio standard (RPS) would create a fair and market-oriented mechanism to ensure that a growing percentage of Maryland's electricity is produced from renewable energy sources. It would ensure that electricity markets recognize that clean renewable electricity is worth more than polluting fossil fuel and nuclear electricity.

The RPS uses a market approach that provides the greatest amount of clean power for the lowest price and an ongoing incentive to drive down costs. By establishing tradable "renewable energy credits," the RPS would function much like the Clean Air Act sulfur dioxide allowance trading system. Electricity providers could generate the power themselves, purchase renewables directly from suppliers, or buy credits from other companies who have extras to sell, whichever is cheaper. This would give providers tremendous flexibility in complying with the requirement. By creating a market for renewable energy credits, the RPS will stimulate investment in renewables in an environment where energy producers must keep their energy products competitively priced in order to attract customers.

An RPS can also ensure steady, predictable growth of Maryland's renewable energy industry. That would enable the industry to obtain lower-cost financing and achieve economies of scale and production that would make the technologies more competitive. The RPS would ensure that the lowest cost renewables are developed by creating competition among renewable developers. The RPS would have low administrative costs, since the market would decide which renewable energy technologies would get built and where.

Maryland citizens already benefit from similar standards in other sectors of the economy, such as recycling standards and minimum energy-efficiency standards for buildings and appliances. From airlines to cars to drugs, standards ensure public safety, economic health, and environmental protection. Such standards help societies achieve goals or meet needs that markets do not fully recognize.

The RPS has emerged as the leading proposal for capturing the economic, environmental and public health benefits of renewable energy technologies in an increasingly competitive marketplace. By passing this bill, Maryland would join eight other states that have enacted RPS's as part of electricity restructuring (including Connecticut, Maine, Massachusetts, New Jersey, Nevada, Pennsylvania, Texas and Wisconsin).² The state renewables targets range from 1 percent of total electricity sales in Nevada (with half coming from solar) to 30 percent in Maine. Connecticut has the fastest growing state

² By 2010, UCS estimates that these state RPS laws will lead to the development of 3,800 megawatts of new renewables capacity and provide support for an additional 3,600 megawatts of existing renewable capacity. For more information, see Ryan Wiser, Kevin Porter, and Steve Clemmer, "Emerging Markets for Renewables: The Role of State Policies during Restructuring," *Electricity Journal* (forthcoming).

target, requiring that 6 percent of its electricity supply come from new renewables by 2009. The Texas RPS will create the largest market for new renewables, providing 2,000 megawatts by 2009. New Jersey also has an RPS, requiring that 4 percent of its electricity come from non-hydro renewables by 2012, as well as a public benefits fund that would provide approximately \$34 million per year between 2000 and 2007 to develop renewable energy technologies.

Using a model UCS developed to analyze federal and regional RPS proposals, I recently completed an analysis that shows that providing 6 percent of Maryland's electricity sales with renewable resources by 2012, as proposed in SB 744, is feasible and affordable.³ Assuming the RPS is implemented in a way that facilitates the development of new renewables over time, the typical (500 kilowatt-hour per month non-electric heat) residential customer would pay only 26 cents per month (0.6 percent) more on average between 2002 and 2030 than without an RPS. This is less than the cost of a phone call. According to national polls, most households would be willing to pay more than \$2 extra per month for renewables, and thus would appear willing to support a much higher target.⁴

Our analysis does not include a number of potential benefits that could help lower the cost of the RPS even further. For example:

- A number of studies have shown that by displacing some of the projected growth in natural gas use for electricity generation, an RPS can help restrain the growth in gas prices for all gas consumers and provide net savings on combined electric and gas bills.⁵
- By displacing fossil fuels, renewables can reduce the cost of complying with increasingly stringent environmental standards as well as lower health care costs.⁶
- Our analysis does not include the federal production tax credit (PTC) for wind and biomass, which is scheduled to expire December 31, 2001, or other federal funds that could be available for developing renewables in Maryland. If the PTC is extended or some equivalent mechanism is in place, such as giving renewables credits for

³ This is the same model I used to analyze the costs and benefits of different RPS targets for the Maryland PSC staff's draft RPS report. For a complete description of the model and assumptions, see the PSC's report or UCS' report *A Powerful Opportunity*.

⁴ Sustainable Energy Coalition, *America Speaks Out on Energy: A Survey of Public Attitudes on Sustainable Energy Issues*, prepared by Research/Strategy/Management Inc., January 1996.

⁵ For example, according to the Energy Information Administration, consumer gas savings more than offset the slightly higher electricity prices that resulted from implementing a national RPS of 7.5 percent by 2010. See the analyses of federal RPS proposals completed by the EIA for *Annual Energy Outlook—2000*; This effect was demonstrated in Steve Clemmer, Alan Noguee and Michael C. Brower, *A Powerful Opportunity: Making Renewable Electricity the Standard*, Union of Concerned Scientists, 1999.

⁶ For example, one study has estimated that each summer in Maryland, approximately 180,000 asthma attacks and 3,900 emergency room visits are attributable to acute ozone exposure. (see Clean Air Task Force, *Out of Breath*, available online at www.cleanair.net.) The Maryland Department of Environment estimates that power plants are responsible for 42 percent of the state's nitrogen oxide emissions, the limiting precursor in ozone formation.

reducing carbon or other emissions, the cost of the RPS would be considerably lower.⁷

- Our analysis does not include the potential income and rural economic development benefits that could occur from developing home-grown renewable resources instead of paying for imported fossil fuels.⁸

The proposed RPS would also help clean-up and diversify Maryland's electricity. By displacing some existing coal generation and new natural gas generation, the Maryland RPS would reduce global warming and other harmful emissions equivalent to removing over 150,000 cars from the road.

For these reasons, UCS strongly urges the Committee to support SB 744. We would like to offer our assistance in developing the strongest bill possible, as it moves through the legislative process.

Thank you for this opportunity to provide the views of the Union of Concerned Scientists and our members on this important legislation.

Respectfully submitted,

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⁷ For example, an analysis recently completed by the American Wind Energy Association found that if all the projects under an RPS of 10 percent by 2015 in Iowa were eligible to receive the PTC, the RPS would save Iowa over \$300 million over a 25-year period or 28 cents per month on a typical household's electric bill. See Thomas A. Wind, PE, *Projected Impact of a Renewable Portfolio Standard on Iowa's Electricity Prices*, Wind Energy Consulting, Jefferson, Iowa, January 31, 2000.

⁸ For example, the California Energy Commission estimates that developing 600 megawatts of new renewables using a total of \$162 million from its public benefits fund will induce \$700 million in private capital investment; create 10,000 jobs, \$400 million in wages and \$1.5 billion in gross state product from building the facilities; and result in 900 full-time jobs, \$30 million in wages, and \$130 million in gross state product each year from operating the facilities.