



June 22, 2007

The Honorable John D. Dingell
Chairman
Committee on Energy and Commerce
House of Representatives
Washington, D.C. 20515

The Honorable Rick Boucher
Chairman
Subcommittee on Energy and Air Quality
Committee on Energy and Commerce
House of Representatives
Washington, D.C. 20515

Dear Chairman Dingell and Boucher:

The American Wind Energy Association (AWEA) would like to respond to the questions posed in a letter to various organizations on May 24, 2007 regarding national portfolio standards. AWEA is the national trade association of the U.S. wind energy industry. The association's membership of more than 1,100 organizations includes turbine and component manufacturers, wind project developers, electric utilities, energy suppliers, and consultants.

AWEA has been and continues to be a strong proponent of a National Renewable Portfolio Standard (RPS). An RPS is an essential component of a broader national energy strategy because it will help the nation take full advantage of the abundant domestic renewable resources available today for the generation of clean electricity. AWEA recently signed a broad letter of support, urging Congress to adopt a national RPS which included 186 signatories of international and domestic corporations, manufacturers, farm and rural groups, labor organizations, environmental advocates and wildlife organizations.

AWEA strongly believes that a national RPS is a key policy for national energy legislation that will deploy available technology for clean generation which will reduce greenhouse gas emissions, help achieve reduction of regulated pollutants, save water, lower natural gas demand, provide consumer savings, provide economic benefit to rural landowners and local tax districts, and bring hundreds of thousands of manufacturing, construction, and other jobs to the U.S.

We greatly appreciate the consideration of our views on a National Renewable Portfolio Standard and would be happy to discuss these in further detail.

Sincerely,

A handwritten signature in cursive script that reads "Jaime Steve".

Jaime Steve
Director of Legislative Affairs
American Wind Energy Association

1. Purpose of Portfolio Standards Proposals

- a. *Do you believe that adopting one or more Federal “portfolio-standard” requirements applied to sources of retail electricity, mandating that a given percentage of the power sold at retail come from particular sources, is an advisable Federal policy? Why or why not?*

RESPONSE: Yes. Not only is adopting Federal “renewable portfolio standard” advisable, it is a prudent, beneficial and necessary policy that the nation can pursue in order to address global warming, energy security, rural economic development and manufacturing jobs.

The U.S. electricity sector faces serious challenges in finding deployable carbon-free sources. Renewable energy, particularly wind energy, along with energy efficiency, are the only technologies that are currently available, vastly deployable, and cost-effective that can address these issues today, and can do so at a cost savings while bringing additional benefits to the American public.

The issues that we face today, making Portfolio Standards one of the most critical and advisable policies for Congress, include:

- **national security** stemming importing fossil fuels, which now includes coal and an increasing amount of natural gas, along with petroleum, from unstable nations,
- **fuel price volatility** faced by electric utilities and consumers due to demand and supply imbalances in the domestic and international fossil fuel and energy markets,
- decreased **electric reliability** from a constrained transmission system and lack of investment in generation build out to keep up with increasing electricity demand,
- impacts on **human and environmental health** from conventional pollutants and increasingly stringent regulations to address these impacts,
- threat of **greenhouse gas emission impacts** on global climate and ecosystems, potential for regulations, risk from regulatory uncertainty and,
- **impending cost** associated with addressing all of these issues.

The timeliness of pursuing a policy that creates a market for renewable energy to become a significant source of electric generation will not only address all of the issues above in a cost-effective manner, but will bring additional benefits of :

- **restoring U.S. leadership** in renewable energy production,
- creating **hundreds of thousands of jobs** in manufacturing and construction sectors,
- building **domestic manufacturing facilities** to keep pace with increasing production of renewable energy generating capacity
- providing **economic development growth for rural areas** and local districts through lease and property tax payments.

- b. *Is it appropriate for Government to impose generation-source conditions or energy savings requirements on load-serving utilities in order to serve public-policy purposes such as promotion of renewable energy production, energy efficiency, and reduction of carbon emissions? Why or why not?*

RESPONSE: Yes. A National RPS is the most direct policy option for Congress to carry out the stated purpose of national energy goals and fulfill their responsibility to ensure affordable, reliable, secure, and clean sources of energy for the American public.

The energy goals of the U.S. and the Administration have been set forth in the January 2007 State of the Union Address, broadly stated as ensuring “affordable, reliable, secure, and clean sources of energy” and more specifically, the stated the purpose of the Energy Policy Act of 2005 was to “help secure our energy future and reduce our dependence on foreign sources of energy by encouraging conservation and efficiency, diversifying our energy supply with alternative and renewable sources, expanding domestic energy production in an environmentally sensitive way, and modernizing our electricity infrastructure”.

With a National RPS, Congress can move toward achieving stated national energy goals, and do so while saving American consumers money and providing benefits to the manufacturing sector and rural economies.

c. If you favor such a policy, how would you define its specific purpose?

RESPONSE: The specific purpose of a National RPS is to encourage the widespread use of the nation’s abundant renewable resources and install readily available, vastly deployable and cost-effective renewable energy generating capacity to achieve variety of national energy goals.

The purpose of a national RPS is not specific to any one energy goal or issue facing the market, and the immense value of an RPS as national policy is it will holistically achieve many goals and address a variety of issues simultaneously and cost-effectively.

d. If Congress were to adopt an economy-wide policy mandating reductions in emissions of greenhouse gases, including the electricity industry, would such a portfolio standard remain necessary or advisable?

RESPONSE: Yes. Addressing global climate change will require broad and integrated energy and environmental policy and a full suite of policy tools. An National RPS is one of the many tools that will be needed. It will serve as a deployment-based policy to ensure that readily available technology is deployed to start immediately avoiding greenhouse gas emissions at a cost savings. Under an economy-wide climate change regulation, each sector will require a unique set of policies to ensure cost-effective greenhouse gas reductions. For the electric sector, an RPS is a necessary and unparalleled policy tool for achieving immediate and cost-effective emission reductions.

e. What analysis has been done of any portfolio standards requirement you endorse to demonstrate:

i. Its economic costs to consumers, nationally, and in various regions, in electricity rates?

RESPONSE: Wood Mackenzie, a consultant to the natural gas industry, recently released a report “The Impact of a Federal Renewable Portfolio Standard”. This report analyzed the impact of a 15% national RPS and concluded that the RPS would:

- Reduce variable electricity costs by \$240 billion, increase capital investment in electric generation by \$134 billion, leading to a net reduction in electricity costs of over \$100 million.
- Reduce gas prices at Henry Hub from \$1.00-1.50/MMBtu.
- Reduce wholesale electric power prices by 7 -11 percent across the country.

The Department of Energy's Energy Information Administration (EIA) recently released an analysis entitled "Impact of a 15-Percent Renewable Portfolio Standard." looking at the recent proposal from Senator Bingaman. EIA concluded that an RPS would:

- Increase retail electricity prices by a total of less than one percent between 2005 and 2030.
- Reduce natural gas and coal prices.
- Reduce retail natural gas costs by \$1 billion between 2005 and 2030. And

The Union of Concerned Scientists (UCS) in 2004 analyzed the impact of a 20 percent national RPS and concluded that it would:

- Reduce consumer energy (electricity and gas) costs by \$49 billion.

ii. Its benefits in greenhouse gas emission reductions?

RESPONSE: The WoodMackenzie report finds that a 15% RPS would avoid nearly 40 percent of CO₂ emission increases in the electric sector and reduce electric sector emissions by nearly 7 percent. EIA finds that a 15% RPS would reduce electric sector CO₂ emissions by 6.7 percent by 2030. The Union of Concerned Scientists finds that a 20% RPS would reduce CO₂ emissions by 15 percent in the electric sector, or avoid nearly 100 percent of the expected emissions increase by 2020.

iii. Its implications for electricity reliability, security, and grid management?

RESPONSE: A National RPS would reduce reliance on imported natural gas, maintain electricity reliability and grid management.

Wood Mackenzie, EIA and the Union of Concerned Scientists all found a reduced demand for natural gas from a national RPS. Foreign imports of natural gas are expected to increase by 25% by 2020, increasing our reliance on foreign fossil fuels. Reducing natural gas demand with renewable energy increases the ability for domestic natural gas resources to meet demand.

An RPS would fit very well with grid reliability goals and grid management. Wind technology in particular is very grid friendly now with power electronics and other new features. High wind penetration now exists in a number of states as well as parts of Europe, and reliability does not present a barrier to further wind development.

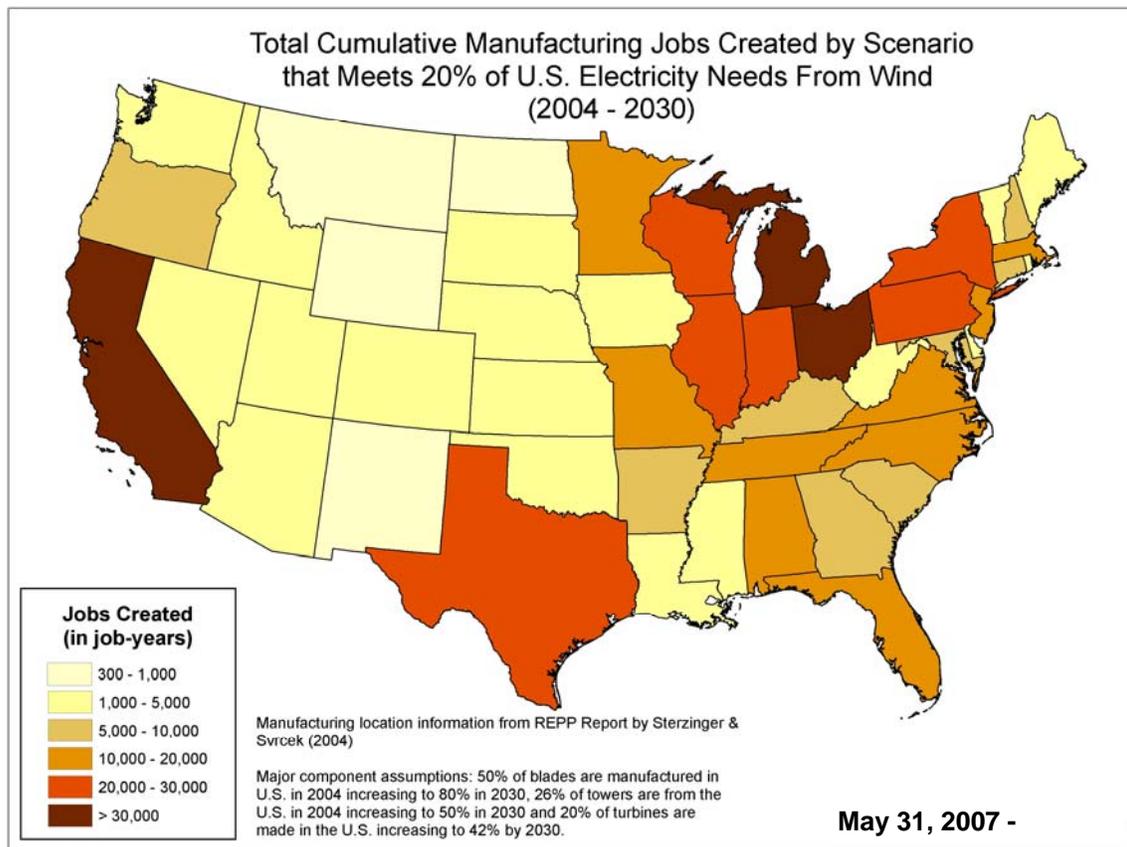
iv. Its implications for jobs and economic development?

RESPONSE: A National RPS would require hundreds of thousands of manufacturing and construction jobs, encourages development of new manufacturing facilities in the U.S, and generates million of dollars in revenue for rural land owners and taxes for local districts. The Union of Concerned Scientists finds that a 20% RPS would **generate over 300,000 jobs** in manufacturing and construction, and generation over \$20 billion in income to farmers, ranchers and rural landowners, as well as new local taxes.

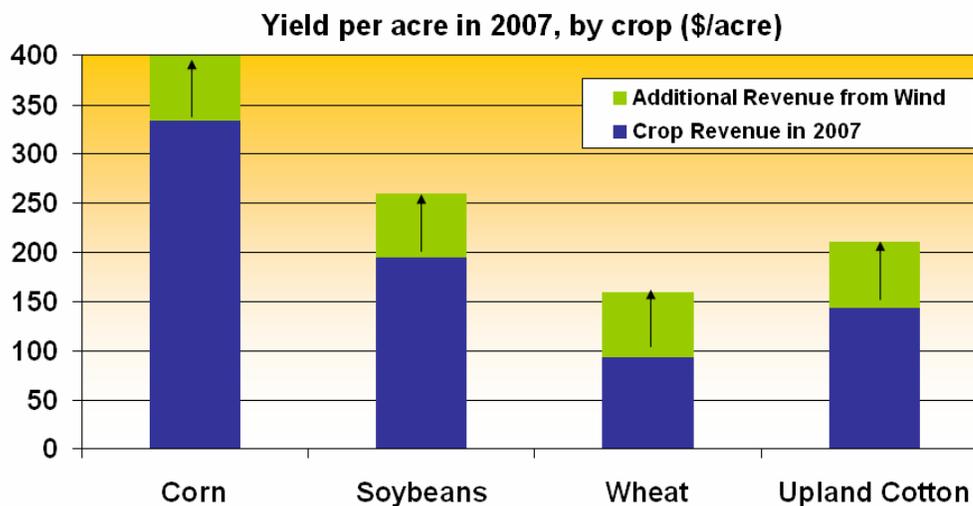
President of GE Energy, John Krenicki, stated in testimony to the Senate Finance Committee's Subcommittee on Energy, Natural Resources and Infrastructure that "*The wind industry contributes directly to the economies of 46 states, with power plants and manufacturing facilities that produce wind turbines, blades, electronic components, gearboxes, generators,*

and a wide range of other equipment... We believe wind and solar energy are likely to be among the largest sources of new manufacturing jobs worldwide during the 21st Century.”

The wind industry is building facilities across the U.S. to keep up with demand, and this trend is expected to continue, particularly in states with existing manufacturing infrastructure. Based on existing manufacturing infrastructure, the graph below shows the dispersion of manufacturing jobs across the U.S. under an aggressive expansion of wind energy by 2030. It is expected that the upper Midwest, Northeast, and Southeast will be the main beneficiaries of new manufacturing facilities and jobs.



Installing wind generation on private rural and farmland will generate millions of dollars in land lease payments, while allowing land owners to continue to use 95-98% of the land for other purposes such as raising livestock and harvesting crops. The chart below shows the potential for additional revenue of \$2,000-4,000 per megawatt of wind installed to landowners from lease payments.



Source: Crop data from USDA presentation by Keith Collins March 2007, Wind data from AWEA

v. *Its implications for utility capital investment?*

RESPONSE: UCS finds that a 20% RPS would generate over \$70 billion in new capital investment.

vi. *Other relevant factors?*

2. **Portfolio Inclusions and Exclusions**

a. *What is the principle that should determine inclusion or exclusion of any energy source from an adopted portfolio standard? (i.e. excludes all fossil-fired generation, includes all generation that emits no GHG, excludes all generation below given energy-conversion efficiency, etc.)*

RESPONSE: The portfolio should include clean, non-emitting, renewable energy resources and technologies that are readily available and vastly deployable today.

b. *What generation sources for retail electricity supplies (including efficiency offsets) should be included and should be excluded from any mandatory portfolio requirement that is adopted? Please provide your reasons for excluding any sources.*

RESPONSE: No Comment.

c. *To the extent that multiple renewable energy sources and efficiency or other sources are eligible for inclusion, should any tiers among them or separate sub-requirements be adopted?*

RESPONSE: Both a renewable portfolio and efficiency portfolio standard will provide a variety of benefits and are necessary tools toward addressing climate change. Both are needed, but they should be treated separately in order to maintain simplicity. Renewable energy and efficiency need legislative language that is tailored to each of these areas to ensure the standards are able to effectively and efficiently accomplish

their goals. Therefore, there should not be tiers, but rather separate legislative language to accomplished goals in both of these areas.

- d. *Should there be any distinction between existing and new sources of generation eligible for inclusion in the portfolio? If so, what would be the threshold date for eligibility?*

RESPONSE: Yes. The purpose of the RPS is to spur new renewable generation, so existing and new sources of renewable generation should be treated differently. However, entities that have already pursued clean generation should not be penalized. One method of different treatment is allowing existing renewable generation to be applied toward percentage requirements, but not allow existing generation credits to be traded.

- e. *Would the electricity equivalent of useful thermal energy from eligible sources be credited against the requirement? Why or why not?*

RESPONSE: No Comment

- f. *To the extent energy efficiency is included:*

i. *How would the required savings be measured and verified?*

ii. *Against what base consumption period (historic or projected)?*

RESPONSE: No Comment

3. **Percentage Requirement and Timing**

- a. *What target percentage of total retail power deliveries should be achieved by the required portfolio?*

RESPONSE: 20% renewable generation by 2020

- b. *What is the target year for reaching the ultimate mandated portfolio percentage?*

RESPONSE: 2020, with percentage requirements each year leading up to 2020

- c. *Should there be a straight-line, accelerating, or other form of “ramp-up” to the ultimate target percentage?*

RESPONSE: A consistent and clear increase over time to reach the end target of 20% by 2020

- d. *Should there be any “off-ramps” or other built-in automatic changes in requirements as a function of*

RESPONSE: In order to spur development, the portfolio requirement must be real and including off-ramps may dilute the market for actually developing new, clean

generation. However, including an alternative compliance payment provision could serve to provide some cost certainty to regulated entities.

4. **Relationship to State Portfolio Standards and Utility Regulation**

a. *Should an adopted Federal portfolio standard set:*

- i. *A minimum standard, allowing States to set or maintain higher targets?*
- ii. *A preemptive standard, prohibiting States to set higher or different targets?*
- iii. *Merely a mandate for a standard allowing States to set their own targets at any level?*
- iv. *Merely a given percentage target, allowing States to elect generation or efficiency sources eligible to meet it?*
- v. *A standard applying only to States without prior portfolio requirements, grandfathering all prior standard programs?*

RESPONSE: The Federal program should set a minimum standard, allowing states to set and maintain higher standards. The Federal program should not preempt state standards. This would undermine the progressive work of many states that are already pursuing aggressive renewable and efficiency standards, achieving their goals, and receiving significant benefits.

b. *Can and should State regulatory agencies be required to pass through the costs of complying with Federal portfolio standards requirements in retail rates?*

RESPONSE: No Comment.

5. **Utility Coverage**

a. *Should any retail sellers of electricity be exempt from the portfolio requirement? (e.g., municipal utilities, rural cooperatives, utilities selling less than a minimum volume of power, unregulated marketers in States with competitive retail markets, etc.)*

RESPONSE: No, retail sellers of electricity should not be exempted based on ownership structure.

b. *Should any standard apply to wholesale power markets or sales?*

RESPONSE: No, to maintain simplicity, the standard should apply to electric retail suppliers; it would be more difficult to apply the standard to wholesale markets or sales.

c. *Should there be any basis for discretionary exemptions of certain States or utilities?*

RESPONSE: No.

6. **Administration and Enforcement**

a. *Should a Federal Government entity enforce the requirement and decide on any exemptions?*

i. *If so, which one? (e.g., the Environmental Protection Agency? The Department of Energy? The Federal Energy Regulatory Commission? A newly created office or entity?)*

ii. *If not, should enforcement be delegated to the States or to regional transmission or electric-system operating entities?*

RESPONSE: There must be Federal enforcement for the policy to work effectively and to maintain the integrity of the program; it should be enforced by a Federal agency.

b. *How should Federal and State enforcement be coordinated in States with their own portfolio requirements?*

RESPONSE: The Federal program should recognize the compliance mechanisms of existing state programs.

c. *What penalties should apply for failure of utilities to meet the percentage mandate?*

RESPONSE: A non-compliance monetary penalty should be included in order to encourage development of new sources. An “alternative compliance payment” provision can also be included, and should reflect the non-compliance penalty. Both should be set at a level significant enough to strongly encourage development of new sources. In the state of Texas, which has one of the most effective Renewable Portfolio Standards and some of the lowest renewable energy credit prices in the nation, the non-compliance penalty has historically been 5 cents for every kilowatt-hour, leading the state to have full or nearly full compliance.

7. **Credits and Trading**

a. *Should tradable credits for qualifying generation be utilized as the mechanism for establishing compliance?*

RESPONSE: Yes.

b. *Should credit trading be permitted or required on a national basis in order to achieve least-cost compliance with the portfolio standards?*

RESPONSE: Yes. A national trading system will allow the lowest cost renewable generation to come to market, and allow states with more expensive or minimal renewable resource to comply with the regulation by purchasing the lower cost new renewable generation instead of developing higher cost sources.

c. *Should there be a cap on credit values to limit costs?*

RESPONSE: See response to 6c.

d. *As between a utility purchaser and a qualifying power generator, to whom should the portfolio standard credits be initially allocated?*

RESPONSE: The credit for renewable generation should go directly to the generator of the renewable energy which can choose to include in their contracts with utilities, or sell separately. If a utility owns the renewable generation, then the credits will automatically go to the utility. If a utility purchases renewable generation, it should be specified in the power purchase agreement who receives the credits.

e. *What relationship, if any, should portfolio standard credits have to other State and Federal credit trading programs for SO₂, greenhouse gases, or biofuels?*

RESPONSE: A renewable portfolio standard does provide emission benefits and renewable energy should be recognized for these benefits, but there is complexity of recognizing this benefit through a portfolio standard. Existing emission programs, such as SO₂ and NO_x, already have completed rules and most do not give credit to renewable energy or efficiency for their emission benefits. In order to recognize the emission benefits of renewable energy and efficiency under portfolio standards, Federal SO₂ and NO_x rules would have to be revisited. However, there is the opportunity to recognize the emission benefit of renewable energy and efficiency under greenhouse gas regulations. See comments submitted on March 19th on Climate Change Legislation and Issues for details of how to recognize renewable energy in climate change regulations.

f. *What requirements, if any, would there be concerning the length of contracts for qualifying generation and ownership of credit rights?*

RESPONSE: Renewable generators or utilities that hold credits should have some flexibility to “bank” credits and use them in subsequent years. It is common practice to allow credits to be used for 3 or 4 years after they are issued.