



March 19, 2007

To: The Honorable John D. Dingell,  
Chairman, House Committee on Energy and Commerce

The Honorable Rick Boucher,  
Chairman, Subcommittee on Energy and Air Quality

From: American Wind Energy Association

Regarding: Response to Letter on Climate Change Issues and Legislation

Submitted via email: [chris.treanor@mail.house.gov](mailto:chris.treanor@mail.house.gov).

The American Wind Energy Association (AWEA) is grateful for the opportunity to provide the following comments on and recommendations for climate change legislation to the House Committee on Energy and Commerce. *AWEA believes the widespread use of clean, available, domestic and deployable wind and other renewable energy technology is a strategic and necessary element of achieving climate change goals cost-effectively.* AWEA is the national trade association of the U.S. wind energy industry. The association's membership of more than 850 organizations includes turbine and component manufacturers, wind project developers, electric utilities, energy suppliers, and consultants.

The clean generation provided by wind power prevented the emissions of approximately 23 million tons of CO<sub>2</sub> in 2006. According to a recent report "Tackling Climate Change in the U.S.", *wind power alone could lower emissions by approximately 150 million tons of CO<sub>2</sub> in the year 2020, avoiding nearly 33 percent of expected emission increases in the electric sector.*<sup>1</sup> However, the vitally important potential benefits of clean wind and other renewable energy sources cannot be fully realized without Congressional action to eliminate existing barriers to the deployment of renewable energy technologies. AWEA supports national climate change legislation that addresses these issues by:

- **Recognizing and Promoting Renewable Energy in Climate Change Policy:** Renewable energy should be explicitly recognized for its zero-emissions electric generation and the cost it avoids in climate change regulation. In a greenhouse gas cap and trade program, emission allowance value should be directly allocated to clean renewable generating units, just as it is to emitting sources.

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<sup>1</sup> *Tackling Climate Change in the U.S., Potential Carbon Emissions Reductions from Energy Efficiency and Renewable Energy by 2030.* American Solar Energy Society. January 2007.  
[http://www.ases.org/climatechange/climate\\_change.pdf](http://www.ases.org/climatechange/climate_change.pdf)

- **Mitigating Economic Impact of Climate Change Policy by Encouraging Deployment of Renewable Energy:** The deployment of clean renewable technology can alleviate the economic impacts associated with action to reduce greenhouse gas emissions. Climate change policy should promote the wider application of renewable energy as a way to limit the cost of the program rather than set arbitrary limits on emission allowance prices. A separate but complementary deployment-based policy, such as a national Renewable Portfolio Standard, can be used to assure that renewable energy technologies are deployed and significant emission reductions are achieved at a cost savings. Congress can also help by expanding electric transmission infrastructure that can support wide deployment of clean renewable energy.
- **Integrating Energy and Environmental Policy:** The benefits of wind energy should be evaluated holistically, recognizing 1) the security benefits of reduced demand for natural gas in light of expected significant increases in imports, 2) the value of payments to rural and farm landowners for hosting for wind turbines, and 3) the expected surge in jobs and related economic benefits associated with construction, manufacturing, materials and services for the wind industry.<sup>2</sup>

There is no silver bullet to combating climate change. However, the United States is blessed with one of the strongest wind energy resources in the world offering a readily available, cost-effective solution that can provide a significant contribution. It is critical to highlight that any type of artificial limit on carbon price in climate change legislation will limit the incentive for clean renewable technology. *In this scenario, complementary policies, such as a national RPS, will ensure that available clean technology for electricity generation gets deployed, providing emission reductions cost effectively while new advanced technologies are still being developed and commercialized.*

Wind energy and other existing clean renewable energy sources can provide a significant contribution to combating global climate change starting today. However, this contribution can only be realized if climate change legislation is designed to facilitate and recognize the role of renewable energy. AWEA believes this can be accomplished through approaches suggested in the attached responses to the helpful questions posed by the Committee on Energy and Commerce. We thank you for your interest in this important issue. Please feel free to contact me or my staff 202-383-2500 if we can provide any additional information.

Sincerely,



Gregory S. Wetstone  
 Director of Governmental and Public Affairs  
 American Wind Energy Association

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<sup>2</sup> More information on additional benefits of wind can be found here, [http://www.awea.org/legislative/pdf/Federal\\_RPS\\_Factsheet.pdf](http://www.awea.org/legislative/pdf/Federal_RPS_Factsheet.pdf)

## QUESTION 1.

Please outline which issues should be addressed in the Committee's legislation?

1. **Recognize and Promote Renewable Energy in Climate Change Policy:** When emissions are avoided with renewable energy, the *total cost of achieving any climate change goal is reduced*. Renewable energy should therefore be promoted and explicitly recognized for its zero-emissions electric generation, and for the cost it avoids in any climate change legislation.
2. **Encourage Deployment of Renewable Energy Technology to Reduce Economic Impact:** The economic impact of climate legislation should be minimized by *taking immediate advantage of early deployment of available clean renewable technology, as well as by encouraging future technology development*. Legislation that artificially limits the market price of carbon may have the effect of preventing or delaying the use of available cost-effective technologies that reduce emissions.

How should these be resolved?

1. **Recognize and Promote Renewable Energy in Climate Change Policy:** Renewable energy can be recognized explicitly in a climate change legislation. In a greenhouse gas cap and trade program, emission allowance value should be directly allocated to clean renewable generating units, just it is to emitting sources. Approaches for such allocation are described below in response to question 2d.
2. **Encourage Deployment of Renewable Energy Technology to Reduce Economic Impact:** The economic impact can be mitigated by making sure there are *strong market signals* and complementary energy policies to accelerate the deployment of available renewable energy technology and the development of advanced technologies.
  - *One approach for minimizing the economic impact of a cap and trade program without diluting the incentive for clean technology is to complement carbon regulation with separate deployment-based policies, such as a national Renewable Portfolio Standard (RPS).* A national RPS will ensure that existing and available clean technology gets deployed even if the carbon market signal is insufficient, thus providing immediate emission reductions even as new advanced technologies are still being developed and commercialized.
  - A national RPS would serve as *one piece* of the solution to climate change. A national RPS should not replace other climate change policies, but should be used early to complement comprehensive climate change policy, achieving emission reductions with available clean technology at a cost savings.
  - The approach of using separate incentives is supported by the U.S. Climate Action Partnership (USCAP) as one of their necessary principles for U.S. climate change legislation, noting that “When near-term price signals are insufficient to deploy cleaner existing technologies, additional incentives or other measures must be

considered, especially where carbon emissions could be significantly reduced and the “lock-in” of future carbon emissions avoided.”<sup>3</sup>

**Address the impacts the relevant policy would have on:**

**a) emissions of greenhouse gases and the rate and consequences of climate change.**

**Although benefits would be proportionate with the renewable energy generation required, a 15% - 20% National RPS by 2020 could:**

- Avoid over 200 million tons of CO<sub>2</sub> that would otherwise be emitted in 2020.
- Avoid over 40 percent of the additional CO<sub>2</sub> emissions *in the electric sector* expected between today and 2020.

**b) the effects on the U.S. economy, consumer prices and jobs**

**Although benefits would be proportionate with the renewable energy generation required, a 15% - 20% National RPS by 2020 could:**

- Save up to \$50 billion on wholesale power and natural gas costs through 2020.
- Avoid over 10% of expected natural gas consumption in the electric sector in 2026, which is more than 50% of the estimated foreign imports of pipeline and liquefied natural gas.
- Create approximately American 300,000 jobs.<sup>4</sup>

## **QUESTION 2**

### **Cap and Trade Policy**

**2a) Which sectors should it cover?**

A cap and trade program should be designed to achieve significant reductions in the most cost-effective manner. The electric sector must play a crucial role in achieving climate change goals, accounting for almost 40 percent of total energy-related CO<sub>2</sub> emissions. *Between 2004 and 2005, the electric sector accounted for approximately 85 percent of the increase in CO<sub>2</sub> emissions.* While total energy-related CO<sub>2</sub> emissions rose by 1 percent between 2004 and 2005, total emissions from the electric sector rose by 3.2 percent. Given the significant opportunity to reduce emissions in the electric sector, policies complementary to a climate change program and directed at the electric sector to achieve immediate reductions, such as a national RPS, would achieve immediate reductions and contribute to climate protection goals cost effectively.

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<sup>3</sup> U.S. Climate Action Partnership. *A Call for Action*. <http://www.us-cap.org/ClimateReport.pdf>.

<sup>4</sup> More information available from: Union of Concern Scientists, *Renewing America's Economy*, <http://www.us-cap.org/ClimateReport.pdf>, [http://www.ucsusa.org/clean\\_energy/renewable\\_energy\\_basics/renewing-americas-economy.html](http://www.ucsusa.org/clean_energy/renewable_energy_basics/renewing-americas-economy.html). Wood Mackenzie, *The Impact of a Federal Renewable Portfolio Standard*. <http://www.woodmacresearch.com/cgi-bin/corp/portal/corp/corpPressDetail.jsp?oid=826210>

**2b) To what degree should details be set in statute by Congress or delegated to another entity?**

- *Efforts to implement and enforce climate change legislation are crucial to its effectiveness.* The legislation must include sufficient direction and specificity to assure that uncertainty and delays in implementation do not hinder investment and planning.
- Congress should outline in the legislation:
  - a long-term reduction timeline,
  - which entities are regulated,
  - the distribution of emission allowances among sectors and the specific allocation of allowances within each sectors,
  - economic relief conditions or restrictions surrounding carbon price and its link to the emission reduction level,
  - contingency provisions for the cap level and reduction timeline,
  - enforcement and penalty provisions.

**2c) Upstream vs. Downstream**

- The point of regulation could differ for each regulated sector and should provide a balance of the tradeoffs among broader sector coverage, the number of regulated units, and expected sensitivity to price changes. *The appropriate point of regulation for the electric sector is at the electric generating units.*

**2d) How should allowances be allocated?**

- Climate change legislation should avoid the specific allowance allocation approach embodied in Title IV of the Clean Air Act, which allocates all allowances to historic emitters based on heat-input. This approach fails to recognize the important role of renewable energy in displacing emissions from fossil-fuel fired electric generation.
- Renewable energy should be explicitly recognized in climate change legislation for its zero-emissions electric generation and the cost it avoids. Allowance value should be distributed across all electric generating units, which includes a *direct recognition of renewable energy in the legislation, specifically:*
- If some or all emission allowances are allocated FREELY:
  - They should be distributed to all electric generating units based on a neutral measure. *Specifically, allocation should be based on the unit's percentage of total electric generation in Megawatt-hours (so-called output-based allocation),*
  - While an output-based allocation approach is most effective, other options include:
    - Reserving a portion of allowances to recognize the reductions created by renewable energy in an allowance “set-aside” approach.

- Creating a dual approach in which new units receive allowances based on generation output, and the allowances for older units are allocated in another fashion
- Creating a hybrid approach in which a portion of allowances are allocated based on generation output, and a portion of allowances are auctioned.
- The recommended approaches encourage efficient and clean generation. Allocating allowances based on any measure related to emissions or fuel consumption distorts behaviors and indirectly favors emitting generation, limiting the incentive to change behavior.
- If some or all emission allowances are AUCTIONED:
  - The auction market will determine who receives the allowances, but the auction revenue should be used to further encourage a change in electric sector composition toward deploying and developing clean emitting generation, such as renewable energy. Distribution of auction revenue is discussed below.

**2e) How should the cap level be set?**

- The cap level must be a hard cap, with defined reductions in total tons of emissions through a percentage or real decline, and reduction levels should be set over a specified timeframe. Addressing the potential impact on the economy can be done through economic relief measures separate from the cap level.
- A firm, well-defined cap structure is necessary to provide certainty for investment in and deployment of low-carbon infrastructure and new technology research and development. Any lack of clarity will increase the cost of compliance with the program.

**2i) Should the Program employ a safety valve?**

- If Congress determines that a mechanism is necessary to limit the economic impact of climate change legislation, the specific use of a safety valve mechanism is not the optimal approach.
- The purpose of a climate change cap and trade program is for the market to set a price signal for carbon emissions so the market can choose the most cost effective reduction options. Artificially limiting the price of carbon will severely dilute any market price signal or incentive to change behavior.
- Artificially limiting the price of carbon will:
  - Limit the incentive to adopt cleaner technology,
  - Delay emission reductions to the future,
  - Increase the cost of those reductions when they occur,
  - Cause further damage to the environment,
  - Make it harder to avoid the effects of climate change, and
  - Limit the effectiveness of the legislation.

## Alternatives to the safety valve

- There are alternative approaches for addressing economic impact in climate change legislation, particularly through encouraging the vast deployment of available wind and other clean renewable energy technology.
- There are also other economic relief mechanisms such as a “circuit-breaker” which is triggered at a certain carbon price and *only slows the required emission reduction rate* until the price of carbon falls. However, in this approach, the price of carbon is not limited to the trigger price and the current cap level is not broken. This approach maintains the environmental integrity of the cap level and allows the market price signal to remain undistorted.
- *If any* type of limit on carbon price is included in the legislation, there must be separate complementary policies, such as a national RPS, that encourage clean technology because the carbon price signal will likely be insufficient due to its artificial price cap.

### 2j) **Should Offsets be allowed?**

- In an economy-wide program, the use of offsets should be limited to reductions of emissions that are not recognized in the regulated sectors.

### 2k) **How should revenue from an auction be used?**

- Revenue should be used to deploy and develop the technology needed to achieve reduction goals. Revenue can be used to address the barriers to deploying available clean renewable technology, including R&D or tax and production incentives.

### 2l) **Should there be special features to encourage technological development?**

- There should be features that encourage technological deployment, as well as development. A cap and trade program can use its existing features, particularly the allocation of allowances, to produce a signal to deploy and develop clean energy technologies.
- Congress can also help by expanding electric transmission infrastructure that can support wide deployment of clean renewable energy. Currently, transmission infrastructure and market rules limit deployment of clean energy sources. The transmission system is an interstate network with national interest and public benefit that requires Federal leadership to finance new transmission and promote fair access for renewable energy sources.
- Any program features using allowance value to fund research and development (R&D) should include be broad-based and cover a variety of advanced clean technologies, including renewable energy technology R&D.

### QUESTION 3

**How well do you believe the existing authorities permitting or compelling voluntary and mandatory action are functioning?**

**What lessons do you think can be learned from existing voluntary and mandatory programs?**

1. **Integrating energy and environmental policy:** The two types of policies are complementary and help achieve the others' goals. As learned from the development of existing climate change programs, the need for comprehensive integration of energy and environmental policies applies both looking ahead at new policies and looking at existing energy policies, particularly for renewable energy.
  - Existing compliance and voluntary renewable energy policies, such as state Renewable Portfolio Standards and voluntary green power programs, exist to encourage the development of renewable energy for the variety of economic, security, and environmental benefits it provides, often including reduced greenhouse gas emissions. In order to allow these renewable energy markets to continue to deliver greenhouse gas emission benefits, climate change legislation should recognize these markets, particularly those that employ renewable energy certificates (RECs).

### QUESTION 5

**What steps have your organization's members or its individual members taken to reduce their greenhouse gas emission? Which of these have been voluntary in nature? If any actions have been taken in response to mandatory requirements, please explain which authority compelled them?**

The American Wind Energy Association (AWEA) is the national trade association of the U.S. wind energy industry. While AWEA members may have taken steps to reduce their overall emissions from various sources, these companies' wind energy activities have helped *avoid* emissions in the electric sector as a whole or achieve emissions reduction goals at a lower overall cost. The U.S. wind energy industry has installed over 11,600 megawatts (MW) of wind in the U.S. In 2006 alone, clean wind energy avoided approximately 23 million tons of CO<sub>2</sub>.

Wind is a reliable, efficient source of energy that possesses significant economic and environmental advantages. Further increasing the percentage of electricity wind produces in America will provide much needed price stability, generate tens of millions of dollars in revenue for farmers and rural communities, and create tens of thousands of jobs. It will also enhance the nation's energy security. As the effects of climate change become increasingly evident, wind is an ideal source of energy: it is safe, 100 percent clean, free and inexhaustible. With direction and leadership from Congress, wind energy can provide a large, vital contribution to combating climate change.