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AWEA believes that a national Clean Energy Standard (CES) should be designed with the ultimate goal of deploying a diverse set of clean generation technologies at least cost. In order to “do no harm,” it is critical that a national CES does not pre-empt states’ rights to design state standards that surpass federal requirements. To maximize the benefits of the policy, the policy should be applied as broadly as possible to utilities across the country. Clean energy resource qualification should be defined based on pollution emissions, energy diversification, and water consumption and contamination. While AWEA supports energy efficiency as a key part of the nation’s energy policy priorities, we do not believe the CES is a good way to promote it.

The crediting system and timetables should be designed to establish meaningful early targets and take into account existing clean technology generation. Meaningful early targets will immediately create jobs and increase investment by influencing short-term business decisions, while longer-term signals will attract and maintain high-quality clean energy manufacturing jobs. It is possible to design a CES that deploys a diverse set of clean generation technologies at least cost using a tiered approach and a system for banking, but the use of a borrowing system is poorly understood and untested.

An 80 percent CES by 2035, if complemented by meaningful near- and mid-term targets, would result in a robust, diverse electricity generation portfolio with strong incentives for cost reductions for all technologies. Allowing the market to determine and set clean energy credit prices will be sufficient to deploy technologies at least cost and there is no need for additional federal rules on dispatch. The CES proposal that is included in Senator Lindsay Graham’s Clean Energy Standard Act of 2010 (S. 20) could provide an alternative yet effective framework to deploy clean energy technologies.

The proper design of a national CES will ensure that consumers across the country benefit. It will help lower electricity rates by diversifying America’s energy portfolio, thereby protecting consumers from the volatility historically seen in the price of fossil fuels. Setting the Alternative Compliance Payment (ACP) at an appropriately high level will encourage the deployment of clean energy technologies without creating an incentive for non-compliance. With an ACP in place, additional cost containment measures will not be needed.

A national CES could be the centerpiece of a strategy to create jobs and expand the clean energy manufacturing sector while reducing the emissions footprint and improving the diversification of the U.S. electricity sector. A national CES would most effectively address the overarching uncertainty that affects all technologies. For the wind industry, predictable policy support could also be aided through a long term extension of the Production Tax Credit and Investment Tax Credit. Comprehensive legislation that addresses the siting, planning, and cost-allocation of the transmission system would also help, as would reasonable federal policies to address wind energy and wildlife interactions and federal lands access for wind energy developers.

Question 1. What should be the threshold for inclusion in the new program?

Submitter's Name/Affiliation: AWEA

- *Should there be a threshold for inclusion or should all electric utilities be subject to the standards set by a CES?*

The policy should apply as broadly as possible to ensure equal treatment of all electric utilities and maximize the deployment of clean energy technology. If a CES were to include a broader set of technologies, then there is less justification for exempting sectors or certain utilities. If there are exemptions, the percentage targets should be raised accordingly to preserve the benefits of the policy.

Question 1. What should be the threshold for inclusion in the new program?

Submitter's Name/Affiliation: AWEA

- *Should any states or portions of states be specifically excluded from the new program's requirements?*

The policy should apply as broadly as possible to ensure equal treatment of all electric utilities and maximize the deployment of clean energy technology. If a CES were to include a broader set of technologies, then there is less justification for exempting states or regions.

Question 1. What should be the threshold for inclusion in the new program?

Submitter's Name/Affiliation: AWEA

- *How should a federal mandate interact with the 30 existing state electricity standards?*

A federal policy should not pre-empt the states' rights to design state policy to go above the federal requirements. The federal policy should serve only as a floor for renewable energy, not a ceiling.

Question 2. What resources should qualify as “clean energy”?

Submitter’s Name/Affiliation: AWEA

- *On what basis should qualifying “clean energy” resources be defined? Should the definition of “clean energy” account only for the greenhouse gas emissions of electric generation, or should other environmental issues be accounted for (e.g. particulate matter from biomass combustion, spent fuel from nuclear power, or land use changes for solar panels or wind, etc.)?*

When determining the definition of “clean energy” to identify appropriate energy sources, lifecycle conventional pollutants and greenhouse gas emissions should be considered. It is also important to evaluate how a clean energy definition will affect the vital national security goal of energy diversification so our electricity generation mix is composed of a broad portfolio of energy technologies. In addition, water consumption and contamination associated with electricity generation and the production of fuels for electricity generation should be considered. Electric generation accounts for nearly 50% of all water withdrawals in the nation, even more than irrigation withdrawals. Many public utility commissions in the western United States now consider water use when evaluating electric utilities’ generation resources. Water resources must be saved for other purposes including supporting population growth and agriculture.

Question 2. What resources should qualify as “clean energy”?

Submitter’s Name/Affiliation: AWEA

- Should qualifying clean energy resources be expressly listed or based on a general emissions threshold? If it is determined that a list of clean energy resources is preferable, what is the optimal definition for “clean energy” that will deploy a diverse set of clean generation technologies at least cost? Should there be an avenue to qualify additional clean energy resources in the future, based on technological advancements?

We support the stated goal to “deploy a diverse set of clean generation technologies at least cost.” To determine which energy sources qualify, now and in the future, we support performance metrics based on lifecycle greenhouse gas emissions, energy diversity, and water consumption.

Question 2. What resources should qualify as “clean energy”?

Submitter’s Name/Affiliation: AWEA

- *What is the role for energy efficiency in the standard? If energy efficiency qualifies, should it be limited to the supply side, the demand side, or both? How should measurement and verification issues be handled?*

We support deploying clean energy through the specific policies that are best suited and most effective for those technologies. No single policy is designed to solve or even address all of the nation’s energy problems. A CES is not the most appropriate policy for energy efficiency deployment. We are concerned that including energy efficiency as a qualifying technology in the CES could undermine the goal of deploying a diverse set of clean generation technologies by allowing utilities to meet CES targets through efficiency actions that could be poorly measured and easily manipulated. For example, a utility could invest in an energy efficiency program to reduce energy demand. At the same time, a large energy consumer, such as a manufacturing facility, could shut down for economic reasons within the utility’s service territory. In this example, energy demand would be reduced and the utility could take credit for reducing energy demand even though its actions had nothing to do with the actual reduction in energy demand.

Allowing energy efficiency improvements to qualify could also lead to a situation that enables double counting of such actions since the efficiency measures could simultaneously reduce a utility’s overall generation baseline used to calculate its compliance target and provide a credit for compliance.

Question 2. What resources should qualify as “clean energy”?

Submitter’s Name/Affiliation: AWEA

- *Should retrofits or retirements of traditional fossil-fuel plants be included in the standard?*

Awarding credits to retirements or retrofits could leave little available for new clean sources and may only lead to replacing dirty sources with more of the same. A CES should not financially reward actions that would be undertaken anyway for environmental compliance reasons. It is possible to design a policy that provides incentives for retirements without distorting the remaining clean energy market, but it would need to be designed very carefully.

Question 2. What resources should qualify as “clean energy”?

Submitter’s Name/Affiliation: AWEA

- *Should the standard be focused solely on electricity generation, or is there a role for other clean energy technologies that could displace electricity, such as biomass-to-thermal energy?*

Yes, the standard should be focused on electricity generation.

Question 3. How should the crediting system and timetables be designed?

Submitter's Name/Affiliation: AWEA

- *Should the standard's requirements be keyed to the year 2035 or some other timeframe?*

It is important to have long-term, mid-term, and near-term goals. Long-term goals attract clean energy manufacturing to the country. Energy decisions are made in the short-term and the national policy should explicitly include short-term goals to spur early action. Global competition for investment and jobs is occurring today, so there is a need for clear, short-term investment signals to drive investment in clean energy in the U.S. Wind is among the energy sources that are cost-effective and readily deployable today. There is no national policy in place to promote wind energy deployment after 2012, so a clean energy standard should include a requirement starting no later than 2013 and include requirements every few years. China already has multiple national policies in place today to drive renewable energy, including a hard target for wind energy of 100 GW by 2020.

Question 3. How should the crediting system and timetables be designed?

Submitter's Name/Affiliation: AWEA

- *What interim targets and timetables should be established to meet the standard's requirements?*

Interim targets and timetables should be set to immediately deploy new clean energy generation above a business-as-usual scenario. Meaningful early targets will most effectively send a signal to the business and investment community that the United States is serious about deploying clean energy technologies. This signal will generate jobs, promote economic growth, help the United States regain its lead as the largest clean energy market, immediately reduce pollution levels, and grow a critical manufacturing sector.

Question 3. How should the crediting system and timetables be designed?

Submitter's Name/Affiliation: AWEA

- *What are the tradeoffs between crediting all existing clean technologies versus only allowing new and incremental upgrades to qualify for credits? Is one methodology preferable to the other?*

The policy, timetable, and targets should ensure deployment of new, clean technologies. The target levels must take into account inclusion of existing clean technologies. The targets must also be adjusted upward as existing technologies are included to ensure deployment of new, renewable technologies.

Question 3. How should the crediting system and timetables be designed?

Submitter's Name/Affiliation: AWEA

- *Should partial credits be given for certain technologies, like efficient natural gas and clean coal, as the President has proposed? If partial credits are used, on what basis should the percentage of credit be awarded? Should this be made modifiable over the life of the program?*

We support the stated goal to “deploy a diverse set of clean generation technologies at least cost.” To determine which energy sources qualify, now and in the future, we support performance metrics based on lifecycle greenhouse gas emissions, energy diversity, and water consumption.

Question 3. How should the crediting system and timetables be designed?

Submitter's Name/Affiliation: AWEA

- *Is there a deployment path that will optimize the trade-off between the overall cost of the program and the overall amount of clean energy deployed?*

All analyses of renewable electricity standards commissioned by the Congress through the Energy Information Administration (EIA) find that a Renewable Electricity Standard has a minimal or even beneficial impact on electric rates. Studies conducted by EIA in 2004, 2007, and 2009 all find that there is a minimal or even beneficial impact on overall consumer energy expenditures under a Renewable Electricity Standard, while natural gas prices and carbon dioxide emissions are reduced. The low cost impact of policies like the Renewable Electricity Standard, which focus on deploying clean, renewable technologies at least cost, offer Congress the option to improve energy diversity and increase clean energy, while limiting cost impacts on consumers and the federal budget. We support “deploying a diverse set of clean generation technologies at least cost.”

Question 3. How should the crediting system and timetables be designed?

Submitter's Name/Affiliation: AWEA

- *What would be the effect of including tiers for particular classes of technology, or for technologies with different levels of economic risk, and what would be a viable way of including such tiers?*

We support deploying a diverse set of clean generation technologies at least cost. There is no public policy justification for requiring more generation from an already dominant technology. However, if that is done there may be a need to have a renewable energy-specific first tier and place other technologies in a second tier.

Question 3. How should the crediting system and timetables be designed?

Submitter's Name/Affiliation: AWEA

- *Should the same credit be available to meet both the federal mandate and an existing state standard or should a credit only be utilized once?*

The policy must be designed to allow states to go above the federal program and allow states to enforce compliance with stronger state requirements. This has been the approach taken with all previous federal Renewable Electricity Standard bills.

Question 3. How should the crediting system and timetables be designed?

Submitter's Name/Affiliation: AWEA

- *Should there be a banking and/or borrowing system available for credits and, if so, for how long?*

Banking has a proven track record of success and is a common policy design in state RES programs, offering entities flexibility. On the contrary, the use of a borrowing system is poorly understood and untested and would not be appropriate within a national Clean Energy Standard.

Question 4. How will a CES affect the deployment of specific technologies?

Submitter's Name/Affiliation: AWEA

- *How valuable would clean energy credits have to be in order to facilitate the deployment of individual qualified technologies?*

We support “deploying a diverse set of clean generation technologies at least cost.” Allowing the market to determine and set clean energy credit prices will be sufficient to deploy technologies at least cost. The Alternative Compliance Payment (ACP) serves as a natural cap on the price and rate impact of the policy.

Question 4. How will a CES affect the deployment of specific technologies?

Submitter's Name/Affiliation: AWEA

- *How might a CES alter the current dispatch order of existing generation (such as natural gas-fired power plants), which has been driven by minimization of consumer costs, historically?*

A market-based framework will lead to least-cost dispatch and electric generation diversity. Current markets are sufficient; there is no need for additional federal rules on dispatch.

Question 4. How will a CES affect the deployment of specific technologies?

Submitter's Name/Affiliation: AWEA

- *What is the expected electricity generation mix for a target of 80 percent clean energy by 2035, under the President's proposal or an alternative construct?*

We expect that target, if complemented by meaningful near- and mid-term targets, would result in a robust, diverse electricity generation portfolio with strong incentives for all technologies to reduce their costs over time. Which resources are deployed in the future will depend entirely on which ones innovate the most and the specific design metrics of the CES.

Question 4. How will a CES affect the deployment of specific technologies?

Submitter's Name/Affiliation: AWEA

- *Could different crediting and requirements than those proposed by the President be more effective in deploying clean technologies?*

The President's proposed CES is an ambitious but achievable policy goal that could diversify our nation's energy mix, create jobs, lower electricity costs, and reduce pollution. However, without more detailed legislative language it is difficult to model the precise impact on the deployment of clean energy technologies. An alternative CES proposal that is included in Senator Lindsay Graham's Clean Energy Standard Act of 2010 (S. 20) could provide an alternative yet effective framework to deploy clean energy technologies.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *What are the anticipated effects on state and regional electricity prices of a CES structured according to the President's proposal? What are the anticipated net economic effects by region?*

We expect lower electricity rates over time because the policy will create a competitive structure where many resources offer their services. The policy will help lower electricity rates by diversifying America's energy portfolio, protecting consumers from the volatility that we have historically seen in the price of fossil fuels.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *Would other CES formulations or alternative policy proposals to meet a comparable level of clean energy deployment have better regional or net economic outcomes?*

A predictable long-term policy is needed to drive clean energy. A Renewable Electricity Standard is a proven policy that would drive deployment and manufacturing. Allowing a limited set of other technologies into the standard could potentially work. A long-term tax credit for renewable energy is another option to provide predictable long-term policy and could complement a Renewable and/or Clean Electricity Standard.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *How might various price levels for the ACP affect the deployment of clean energy technologies?*

In order to ensure that CES clean energy targets are met according to the established timetable, inclusion of a meaningful Alternative Compliance Payment (ACP) is essential. The ACP should be set at a level that encourages deployment of clean energy technology. For example, the “Diverse Energy Standard” policy from Senator Richard Lugar’s Practical Energy and Climate Plan Act of 2010 (S. 3464) includes an ACP of five cents per kilowatt hour. Failure to set the ACP at a reasonably high level will allow utilities to simply pay to avoid complying with the program, which will prevent the goals of the CES from being achieved.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *What options are available to mitigate regional disparities and contain costs of the policy?*

Our nation's energy resources are distributed unevenly across the country and no single energy resource reaches all corners of the country. As a result, states are interdependent for their energy sources. For example, in a number of southeastern states the majority of coal consumed by the power plants in that state is imported from outside the region. Both conventional and renewable resources are available in all regions of the country, so the expansion of the RES to include additional sources under a CES will further mitigate real or perceived regional disparities. Also, the inclusion of a market for trading clean energy credits as part of a CES will ensure that clean energy resources are deployed at least cost to consumers in the most efficient manner.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *What are the possible uses for potential ACP revenues? Should such revenues be used to support compliance with the standard's requirements? Should all or a portion of the collected ACP revenues go back to the state from which they were collected? Should ACP revenues be used to mitigate any increased electricity costs to the consumer that may be associated with the CES?*

ACP revenue distribution should not create an incentive for non-compliance. For example, a utility or state may prefer to receive the money rather than deploy clean energy, which would prevent the program's goals from being achieved. Redistributing revenue to utilities that comply based on how much renewable energy they build or buy would help accomplish the program's goals.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *Should cost containment measures and other consumer price protections be included in a CES?*

The cap on the price of the Alternative Compliance Payment provides a sufficient consumer price protection. In addition, the inclusion of credit trading will ensure that clean energy resources are deployed at least cost to consumers and in the most efficient manner.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *How much new transmission will be needed to meet a CES along the lines of the President's proposal and how should those transmission costs be allocated?*

New transmission will be needed to upgrade the system regardless of which electricity generating technologies are built. Building transmission also increases grid reliability and reduces electricity prices by promoting competition on the electric grid, providing consumers with access to lower cost sources of power, and improving the efficiency of the grid. For these reasons investments in the transmission grid are needed anyway, and numerous studies have demonstrated that the cost of such an investment would be recovered several times over simply from the reduction in electricity prices paid by consumers, without even accounting for the reliability and other benefits of building transmission.

Estimates of the cost to upgrade the transmission system in the U.S. range from a small increase over current levels of investment up to 25% over current levels of investment. It should be emphasized that transmission costs make up only around 6% of the average electric bill, and that investments in transmission allow major savings on the generation component that makes up the majority of a typical consumer's electric bill. As a result, investments in transmission tend to reduce consumers' electric bills. Transmission costs should be allocated consistent with Federal Energy Regulatory Commission cost-causation and beneficiary pays principles, as the Commission has done or has proposed to do in several recent rulemakings. This would recognize that the benefits of high-voltage transmission accrue to consumers spread over a broad region, and accordingly would broadly allocate the costs of transmission to those consumers. Since the precise distribution of the benefits of transmission can change over the 50+ year lifetime of the investment, as fuel prices change and as power flows on the grid change within a region, broadly allocating the costs to consumers across a broad region is the most fair way to assign the cost of the investment to the beneficiaries. Such a policy would be consistent with how transmission costs are currently allocated in Texas, out of recognition of the fact that the benefits of transmission are broadly allocated and that transmission is essential for ensuring competition among generating resources on the electric grid.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *Are there any technological impediments to the addition of significantly increased renewable electricity generation into the electrical grid?*

No. Studies and grid operating experience at U.S. and European utilities show wind penetrations at least 10 to 20 times higher than the current level of wind utilization in the U.S. are achievable with current technology. Government and utility studies in the U.S. have found wind penetrations of at least 30-40% by energy are achievable. For example, the Nebraska Power Association's 2010 study found that Nebraska and the entire Southwest Power Pool region could reliably and cost-effectively obtain at least 40% their electricity from wind energy. Similarly, the 2008 U.S. Department of Energy report "20% Wind Energy by 2030," concluded that wind could reliably provide at least 20% of America's electricity. In Europe, countries like Spain, Ireland, and Denmark reliably and cost-effectively obtain more than 10% of their electricity from wind energy today. Studies in those countries have indicated that wind energy could reliably and cost effectively provide more than 40% of their electricity, despite the facts that European wind resources are less diverse than America's and that many of those countries' power systems are less well-suited for wind integration than ours.

Question 5. How should Alternative Compliance Payments, regional costs, and consumer protection be addressed?

Submitter's Name/Affiliation: AWEA

- *What are the costs associated with replacing or retrofitting certain assets within the existing generation fleet in order to meet a CES?*

A CES would not have a significant impact on the need to retrofit assets unless the targets are extremely high. Regardless of whether or not a CES is enacted into law, a lot of new investment in new generation sources will be needed as aging, less efficient power plants retire.

Question 6. Are there policies that should be considered to complement a CES?

Submitter's Name/Affiliation: AWEA

- *To what extent does a CES contribute to the overall climate change policy of the United States, and would enactment of a CES warrant changes to other, relevant statutes?*

A Clean and/or Renewable Electricity Standard could be the centerpiece of a strategy to grow jobs while reducing the emissions footprint of the U.S. electricity sector. In fact, the July 2008 DOE report, *20% Wind Energy by 2030*, found that carbon dioxide emissions would be reduced annually by 825 million metric tons by 2030 if wind energy supplied 20% of U.S. electricity generation.

Question 6. Are there policies that should be considered to complement a CES?

Submitter's Name/Affiliation: AWEA

- *What are the specific challenges facing individual technologies such as nuclear, natural gas, CCS, on- and offshore wind, solar, efficiency, biomass, and others?*

The lack of a long-term, predictable national energy policy hampers all utilities and generators. These businesses are forced to not only predict and adapt to global dynamics that affect the price and public acceptance of various technologies or fuels, but also to domestic U.S. policy that is not developed coherently. A national CES would most effectively address this most serious, overarching uncertainty that affects all technologies.

Transmission will be a barrier to new generation sources, including wind, because of the congested and aging state of the electricity grid.

Question 6. Are there policies that should be considered to complement a CES?

Submitter's Name/Affiliation: AWEA

- *Will the enactment of a CES be sufficient for each technology to overcome its individual challenges?*

A Renewable and/or Clean Energy Standard would be the most important policy for addressing wind energy's barriers. What is lacking is long-term predictability and utility demand. When the signal is put in place, utilities have ways to address transmission and other challenges. Predictable policy could also be aided through a long term extension of the Production Tax Credit and Investment Tax Credit. Comprehensive legislation that addresses the siting, planning, and cost-allocation of the transmission system would also help, as would reasonable federal policies to address wind energy and wildlife interactions and federal lands access for wind energy developers.

Question 6. Are there policies that should be considered to complement a CES?

Submitter's Name/Affiliation: AWEA

- *Should there be an examination of energy-connected permitting?*

No specific legislation is required at this time. The wind industry will require sound, science-based siting regulations.

Question 6. Are there policies that should be considered to complement a CES?

Submitter's Name/Affiliation: AWEA

- *Are there specific supporting policy options that should be considered for coal, nuclear, natural gas, renewable energy, and efficiency?*

Long-term predictable tax credits would be an alternative means of driving wind energy deployment and manufacturing. To date, the Production Tax Credit has only been extended for periods of one or two years at a time.

Transmission policies would help develop many new generation sources, including wind, while improving reliability and lowering electricity rates. Legislation to improve the planning, permitting, and cost allocation for transmission would improve grid investment. Otherwise, federal, state, and local authorities generally have ample authority to address barriers to wind energy development.

Question 6. Are there policies that should be considered to complement a CES?

Submitter's Name/Affiliation: AWEA

- *What is the current status of clean energy technology manufacturing, and is it reasonable to expect domestic economic growth in that sector as a result of a CES?*

Wind energy manufacturing in America continues to grow. At the end of 2010, there were more than 400 manufacturing facilities making components used in wind turbines across 42 states. The current status represents a significant increase in manufacturing capacity from only a few years ago, when domestic components made up only 25% of the value of turbines in a much smaller market. Today, not only has the market grown, but the domestic content value of wind turbines has grown to 50%. However, there is still room for growth in manufacturing of high-value components of wind turbines. In order to justify multi-million dollar investments in the U.S. in new capital-intensive facilities, state-of-the-art machinery, and trained workforce and expertise, companies require a clean, stable signal. Companies willing and ready to make such investment must have a clear ability to recover those costs before moving ahead with those investments.

Long-term, stable and proven policies like properly designed energy standards provide the necessary signal. A report co-authored by the Blue-Green Alliance, United Steelworkers, and AWEA identifies a Renewable Electricity Standard as the number one policy that can drive more American manufacturing. A CES that is focused on near-term deployment of renewable energy beyond the status quo can successfully drive more manufacturing in the U.S as well.