

WIND ENERGY FOR A NEW ERA



AN AGENDA
FOR THE NEW PRESIDENT
AND CONGRESS



AMERICAN WIND ENERGY ASSOCIATION

Barack Obama:

“A green, renewable energy economy isn't some pie-in-the-sky, far-off future – it is now. It is creating jobs – now. It is providing cheap alternatives to \$140-per-barrel oil – now. And it can create millions of additional jobs, an entire new industry, **if we act – now.**”

20% Wind Energy By 2030

20% Wind Energy By 2030, a report released in May 2008 by the U.S. Department of Energy, concludes that the U.S. possesses sufficient and affordable wind resources to obtain at least 20% of its electricity from wind. No technological breakthroughs are required and the costs would be modest. But the benefits are substantial. Achieving the 20% wind vision will dramatically cut greenhouse gas emissions, reduce electricity costs and create long-term price stability, promote our energy security and support hundreds of thousands of new American jobs.

The 20% report is the driver of the wind industry's proposed agenda for the new President and Congress. Here we present an overview of the key national policies needed to support the growth of wind power consistent with the 20% vision.

A new approach to energy offers a clear path to a more secure and prosperous future and a more livable world. Increased use of wind, solar and other renewable energy sources will spur economic growth, create high-quality American jobs, enhance our national security, protect consumers from price spikes or supply shortages associated with global fuel markets, and dramatically reduce the pollution that is warming the planet.

Wind energy is already a clean, mainstream source of electric power and a major force for economic growth. In 2008, the United States became the largest generator of wind power in the world, producing enough electricity to power more than 5 million homes. In 2007, wind power provided 35% of the nation's new electric generating capacity and contributed critical growth to the hard-pressed U.S. manufacturing sector. Since the beginning of 2007, more than 50 wind industry manufacturing plants have been opened, expanded or announced, creating many thousands of permanent, high-paying American jobs in a difficult economic climate.

And that is just the start. In May 2008, the U.S. Department of Energy released a major report documenting the potential for wind energy to provide at least 20% of the nation's electricity by the year 2030. Wind power at this level would support 500,000 jobs¹, save consumers \$128 billion through lower natural gas prices², and cut greenhouse gas emissions as much as taking 140 million automobiles off the road. No technological breakthroughs are required for wind power to reach this level. All that is needed are supportive government policies that reflect a long-term national commitment to clean, home-grown renewable energy.



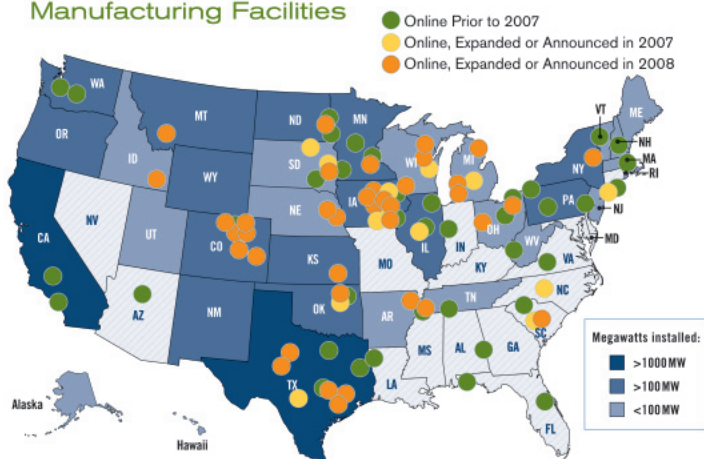
A National Renewable Electricity Standard

A national renewable electricity standard (RES) – also known as a renewable portfolio standard – would, for the first time, signal a long-term, national commitment to expand the use of renewable energy in the U.S. Utilities in every state would obtain a minimum percentage of their electricity from renewable sources by a certain date or purchase tradable credits for renewable electricity produced elsewhere. This vital incentive would drive new and greater investment in domestic wind industry manufacturing. Twenty-eight states already have RES policies, which have been effective and economical incentives for the development of wind and other renewable energy sources. A national policy would streamline this uneven patchwork and bring renewable energy benefits to all parts of the country. A national RES should call for 25% of the nation's electricity to come from renewable energy by 2025. An aggressive near-term target, such as the 10% by 2012 objective called for in the Obama-Biden *New Energy for America* plan, is essential to ensure rapid deployment of renewables. The target levels should increase incrementally in the years that follow.

“Barack Obama and Joe Biden will ensure that 10% of our electricity comes from renewable sources by 2012, and 25% by 2025. This national requirement will spur significant private sector investment in renewable sources of energy and create thousands of new American jobs, especially in rural areas.”

Obama-Biden New Energy For America Plan

Creating Jobs With Wind Industry Manufacturing Facilities



A national RES would foster significant growth in manufacturing investment across the U.S. Since 2007, over 50 wind industry manufacturing facilities have been opened, expanded or announced in the U.S., creating many thousands of American jobs once complete. Sample of Manufacturing Facilities, November 2008

A Minimum Five-Year Production Tax Credit Extension

“I will also extend the Production Tax Credit for five years to encourage the production of renewable energy like wind power... It was because of this credit that wind power grew 45% last year, the largest growth in history.”

Barack Obama, August 4, 2008, Lansing, Michigan

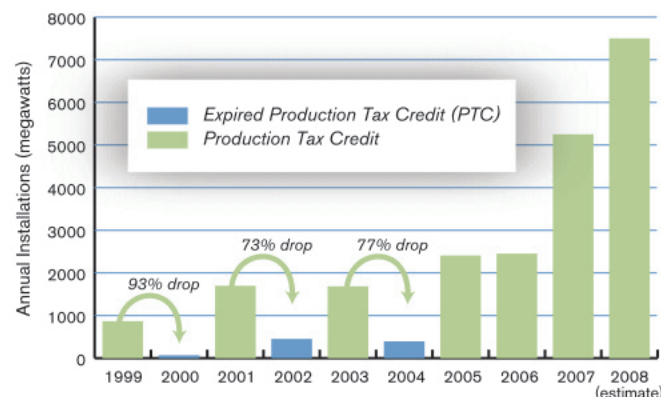
The renewable energy production tax credit (PTC), a credit of 2.1 cents per kilowatt-hour, is the primary federal incentive for wind energy and has been essential to the industry's growth. Other electricity generation technologies have their own forms of federal support, often permanent in tax law, so wind power would be disadvantaged in the absence of a PTC or other comparable incentive.

Still, there are two significant problems with the PTC. First, it offers little benefit in an adverse financial climate, where demand for a tax credit is limited. The renewable energy sector is seeking changes to the structure of the credit that make it possible to realize its value in a down market and allow participation by a broader pool of investors.

Second, the credit has routinely been extended for only one-year or two-year terms, and has been allowed to expire on three separate occasions – in 1999, 2001, and 2003. The uncertainty of this on-again, off-again pattern has discouraged companies from making long-term, sizeable investments in wind power manufacturing and development. An extension of at least five years would, for the first time, provide the wind energy industry with the policy stability that other energy industries have long enjoyed.

Lastly, small wind systems, used to power homes, farms and small businesses, are ineligible for the PTC and instead rely on a federal investment tax credit. This credit needs to be adjusted to remove the cost caps, which greatly reduce its effectiveness.

Historic Impact of PTC Expiration on Annual Installation of Wind Capacity



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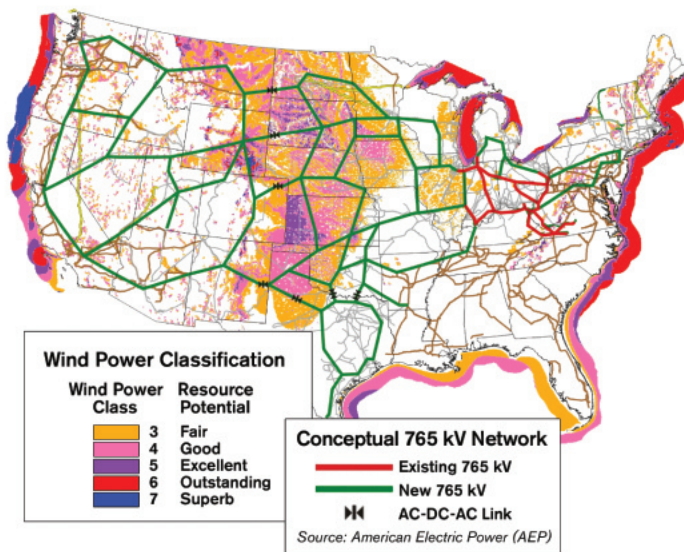
New Interstate Transmission Highways for Renewable Energy

"I also think that we're going to have to rebuild our infrastructure, which is falling behind... making sure that we have a new electricity grid to get the alternative energy to population centers."

Barack Obama, September 26, 2008, Presidential Debate at the University of Mississippi

Perhaps the biggest obstacle to the long-term growth of wind power and other renewables in the U.S. is the lack of available transmission. Simply put, we don't have enough transmission capacity to deliver electricity from the rural, windy areas where it is generated most abundantly and cost-effectively to the populated areas where most electricity is consumed. The wind industry supports federal policies that would bring about the construction of a high-voltage interstate transmission highway system for renewable energy, as envisioned in DOE's 20% wind report. Our agenda includes federal legislation, regulatory initiatives by the Federal Energy Regulatory Commission and the Department of Energy, and federal financial support. The cost would be an increase in annual transmission investment from approximately \$8 billion today to \$11 billion, but this investment would quickly be offset by lower electricity costs and reduced fuel costs, and would lead to greater energy independence.

Conceptual Transmission Expansion Plan



American Electric Power designed this transmission expansion plan, a conceptual design to accommodate 400 gigawatts of wind power.

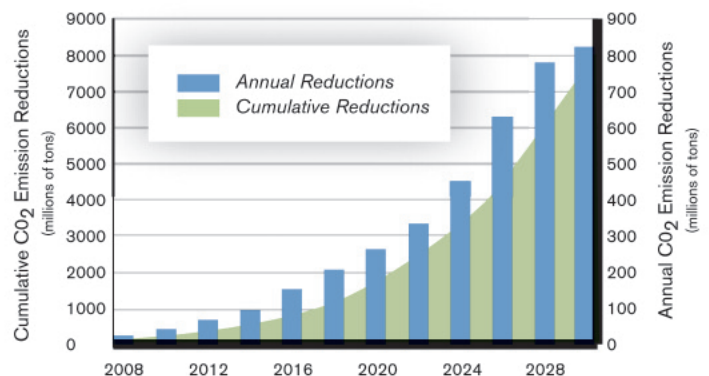
Climate Change Legislation

As the most readily deployable source of carbon-free electricity generation, wind power is uniquely positioned to contribute to the global warming solution, especially in the early years of the climate protection effort when few other options are available. Generating 20% of U.S. electricity from wind would be the climate equivalent of removing 140 million vehicles from the roadways. But that potential will not be realized unless climate legislation provides an economic incentive to switch to clean energy sources. Under a cap-and-trade system, any method of distributing emission allowances must include a fair allocation to renewable energy. In addition, climate legislation must include an aggressive near-term goal, such as a 15% to 20% carbon dioxide emissions reduction by 2020, in order to promote a near-term shift to renewable energy and get the quick start on greenhouse gas emissions reductions scientists tell us is needed. Finally, a portion of the revenues generated by auctioning allowances should be used to finance key renewable energy priorities, including a renewable energy production incentive, a new interstate transmission highway system, training for the growing renewable industry workforce, incentives for manufacturers, and research and development. For small wind systems, climate legislation should also include consumer rebates and incentives for states, utilities and manufacturers.

"Barack Obama and Joe Biden support implementation of an economy-wide cap-and-trade system to reduce carbon emissions by the amount scientists say is necessary: 80 percent by 2050. A small portion of the receipts generated by auctioning allowances (\$15 billion per year) will be used to support the development of clean energy."

Obama-Biden New Energy For America Plan

CO₂ Emissions Reductions from 20% Wind Energy by 2030



Achieving the 20% wind vision would avoid the emissions of 7,600 million metric tons of carbon dioxide by 2030, equivalent to removing 140 million vehicles from the roads. Source: U.S. DOE, 20% Wind Energy by 2030 Report

Federal Research & Development and Program Funding

Federal funding for wind energy research and development (R&D) and other programs is inadequate, especially when compared with funding levels for other fuels and energy sources. The DOE wind program currently receives about \$50 million annually, which is well below its all-time high of \$63 million appropriated in Fiscal Year (FY) 1980. In comparison, the annual R&D budget for nuclear power is over \$960 million, while coal receives nearly \$500 million, solar receives over \$160 million, and biomass receives roughly \$200 million. The overall program budget for the DOE's Office of Energy Efficiency and Renewable Energy for FY 2008 was over \$1.7 billion. The wind industry recommends increasing the annual funding level for wind R&D and other programs to \$217 million over the course of the next three to five years. Most of this funding should be directed to the DOE's Office of Energy Efficiency and Renewable Energy's wind program.

Federal Agency Support for Siting Wind Projects and New Transmission Lines

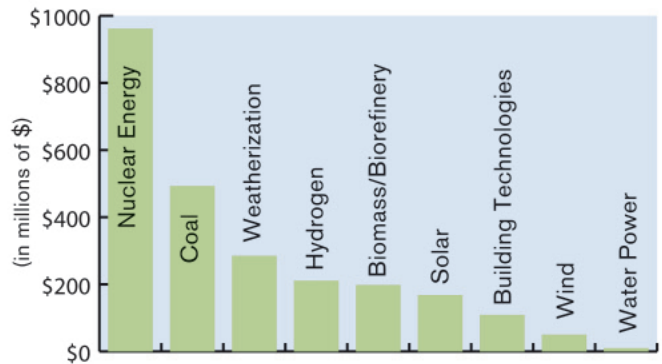
Federal agencies have a key part to play in developing our renewable energy potential because of their role in siting wind projects and transmission lines, especially on federal lands. Proposals for responsibly-sited renewable energy projects on federal lands (including offshore waters) should be prioritized and federal agencies should create review processes that are streamlined, transparent and timely, with permitting and review capabilities that are scaled up as needed to meet demand. In addition, the President should direct the Department of Defense, the Federal Aviation Administration, and the Department of Homeland Security to adopt a cooperative approach to resolving possible conflicts between wind projects and radar operations. Each federal agency should be asked to plan how it will use its authority to facilitate the growth of wind power and other renewable energy sources.

Conclusion: A Rare Opportunity

With the right policies in place, wind power can make a major contribution to the effort to protect the planet's climate, while spurring tens of billions of dollars in economic investment, supporting hundreds of thousands of new American jobs, making America more independent and secure, and saving consumers more than \$100 billion.

Let's act – now –
to put the right policies in place.

U.S. Department of Energy
R&D Funding for Energy Programs, FY 2008



The DOE wind program currently receives about \$50 million annually, a level that is inadequate compared with funding levels for other fuels and energy sources. Source: DOE Congressional Budget Request for 2009





WIND ENERGY FOR A NEW ERA



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AWEA is the national trade association of America's wind energy industry, with more than 1,600 member companies, including global leaders in wind power and energy development, wind turbine manufacturing, component and service suppliers, and the world's largest wind power trade show. AWEA is the voice of wind energy in the U.S., promoting renewable energy to power a cleaner, stronger America.

More information on wind energy is available at the AWEA Web site:

www.awea.org

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Cover Photo: New Mexico Wind Energy Center/FPL Energy/GE Wind Energy

Inside Photo: Twin Buttes Wind Farm (Colorado)/Iberdrola Renewables/GE Wind Energy

Back Cover Photo: Steelwinds Wind Farm (New York)/Clipper Windpower

¹ U.S. Department of Energy. 20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply. May 2008.

² National Renewable Energy Laboratory. Power System Modeling of 20% Wind-Generated Electricity by 2030. June 2008;
Number reflects mid-case secondary natural gas savings from 20% Wind (2006 dollars).