



**2nd Annual Ports-to-Plains Energy Summit  
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# Energy Issues in the New Congress

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## Energy Policy: Issues in the New Congress

- Obama's Energy Plan
  - 80% "Clean Energy" by 2035
  - Picken's Natural Gas Transportation Plan
- EPA Regulations – Massachusetts v. EPA (2007)
  - Utility & Refinery Regulations
  - Budget Funding
- Clean Renewable Energy Standard (Never Passed)
- Expanding U.S. Domestic Oil Production
- 1603 Grant Program Extension and Modification (Expires December 31, 2011)
- Production Tax Credit Extension (Expires December 31, 2012)

# Energy Policy: Why Are Incentives So Important?

## White Housing Briefing Memo

**Appendix Table 1: Cost of Generating Power from New Capacity Investment by Technology Type, ¢/kWh**

	Natural Gas	Wind	Solar Thermal
No Subsidy Cost	7.3	8.8	23.2
Cost with 1603	7.3	6.7	16.0
Cost with 1603 and 1705	7.3	4.0	12.6

Source: DOE Energy Information Administration 2010.

Source: WHITE HOUSE BRIEFING MEMO, OCTOBER 25, 2010, PREPARED BY LARRY SUMMERS, CAROL BROWNER AND RON KALIN

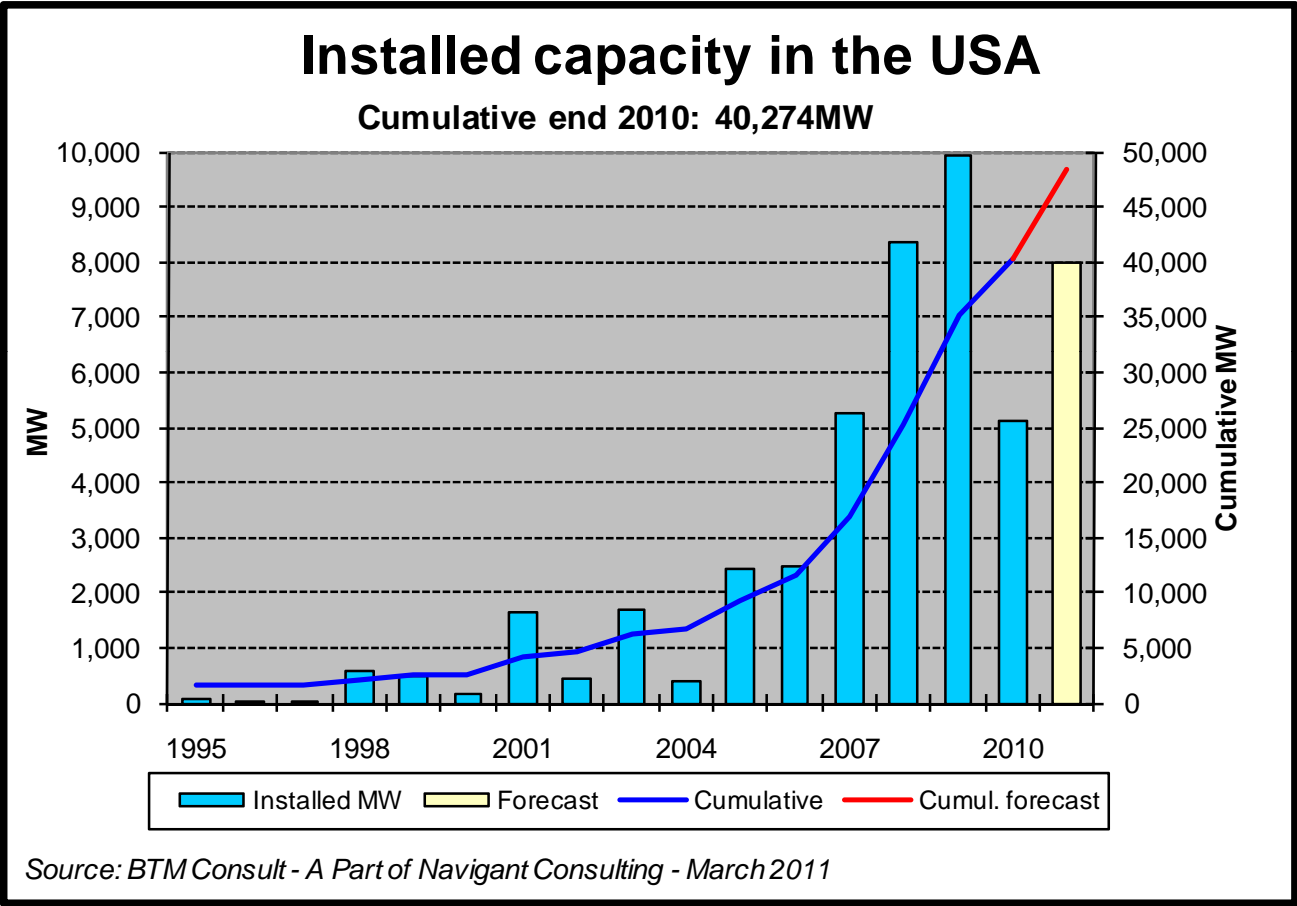
## Energy Policy: 2007-2010 Annual Accumulated Installations & Growth Rates

### Growth Rates In the Top 10 Markets

	Accu. end 2007	Accu. end 2008	Accu. end 2009	Accu. end 2010	Growth rate 2009-2010 %	3 years average %
<b>Country</b>						
P.R. China	5,875	12,121	25,853	44,781	73.2%	96.8%
USA	16,879	25,237	35,159	40,274	14.5%	33.6%
Germany	22,277	23,933	25,813	27,364	6.0%	7.1%
Spain	14,714	16,453	18,784	20,300	8.1%	11.3%
India	7,845	9,655	10,827	12,966	19.8%	18.2%
France	2,471	3,671	4,775	5,961	24.8%	34.1%
UK	2,394	3,263	4,340	5,862	35.1%	34.8%
Italy	2,721	3,731	4,845	5,793	19.6%	28.6%
Canada	1,845	2,371	3,321	4,011	20.8%	29.5%
Portugal	2,150	2,829	3,474	3,837	10.4%	21.3%
<b>Total "Ten"</b>	<b>79,171</b>	<b>103,263</b>	<b>137,191</b>	<b>171,149</b>	<b>24.8%</b>	<b>29.3%</b>

Source: BTM Consult - A Part of Navigant Consulting - March 2011

# Energy Policy: Annual Installed Capacity 1995-2010

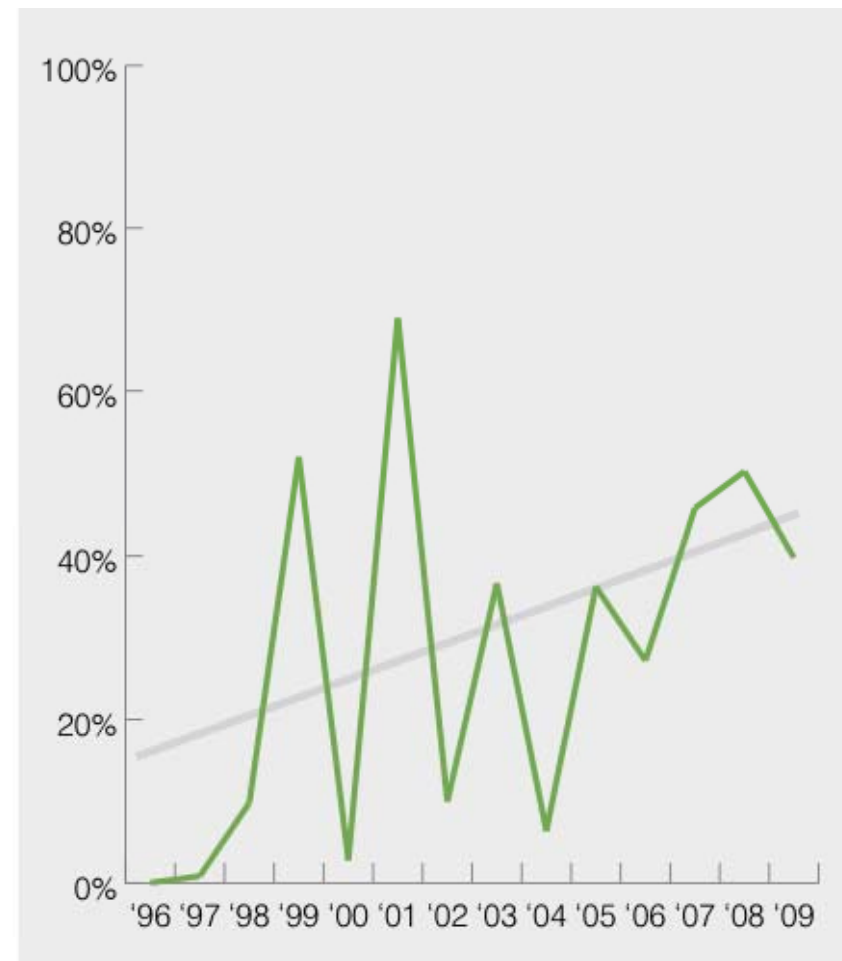


## Energy Policy: 1996-2009 Quarterly Installations Reflect Market Volatility

The five-year average annual growth rate for the industry (2005-2009) was 39%, up from 32% between 2004 and 2008.

As annual installations have doubled twice during a 3 year period (2007-2009) in the last three years.

The volatility in this quarterly chart in the early 2000s reflects the strong effect that on-again, off-again tax policy had on the market.



Source: American Wind Energy Association U.S. Wind Industry Annual Market Report – Year Ending 2009

# Energy Policy: 2007-2010 Quarterly Installations Reflect Market Volatility

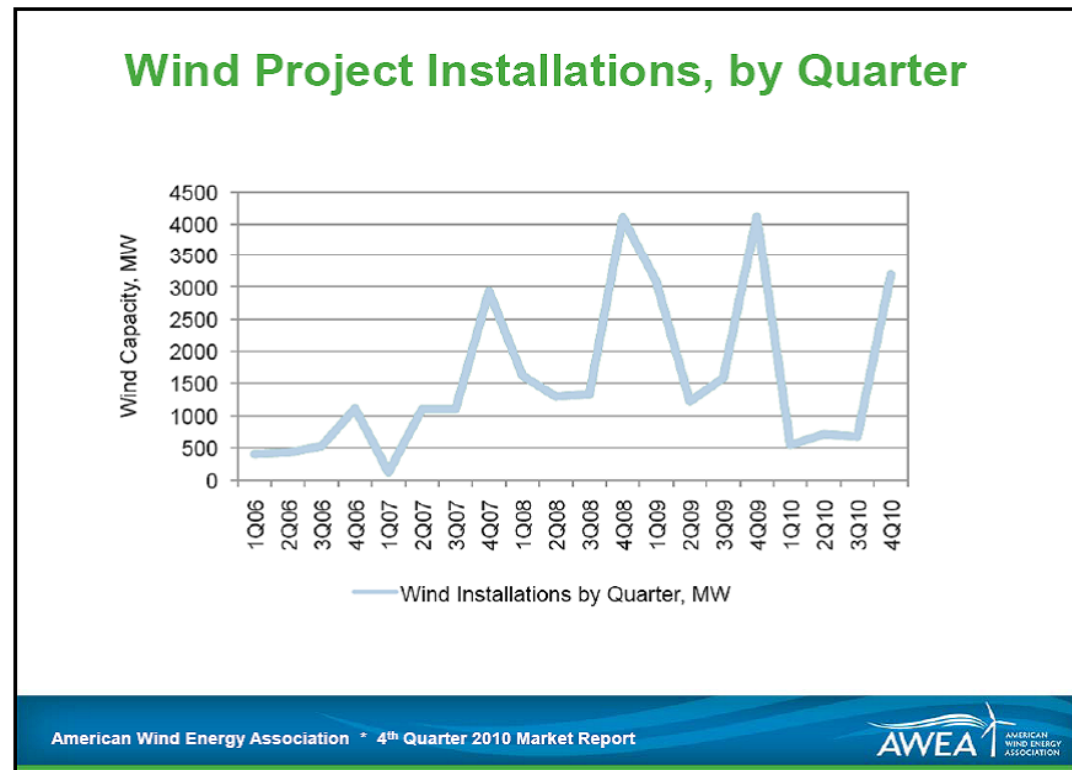
The boom-and-bust cycle that has developed due to short-term incentives is not conducive to business investment and increased employment.

This chart of new installations of wind generating capacity by quarter clearly illustrates the consequences of on-again off-again short-term federal incentives for wind as a market signal.

Its important to understand that wind projects can be built so quickly (in six months to a year) that the entire pace of activity in the wind industry can be driven by the month-to-month prospects of, say, a tax incentive extension pending before Congress.

The level of completed installs in 2009 and the spike up back in 2010 is directly related to the passage of the 1603 Grant Program in February, 2009.

Source: AWEA Fourth Quarter 2010 Market Report



## Energy Policy: Production Tax Credit – “Start, Almost Stop, Stop” Policy

The PTC was initially enacted by Congress in the Energy Policy Act of 1992. **However, after the initial 1992-2001 period the PTC has incurred the following “star, almost stop and stop” congressional support:**

- **December, 2001 PTC expired.**
- March, 2002 PTC extended through December 31, 2002.
- **December, 2003 PTC expired.**
- October, 2004 PTC extended through December, 2005.
- July, 2005 PTC extended through December, 2007.
- December, 2006 PTC extended through December, 2008.
- **October, 2008 PTC extended through December, 2009.** (TARP Bill)
- February, 2009 PTC extended through December, 2012. (Stimulus Bill)



# Energy Policy: Financial Crisis – Stimulus Bill 1603 Grant Program

- 30% of Eligible Basis Grant-In-Lieu of Tax Credit Program (February, 2009).
- Response to the collapse of the Tax Credit Equity Market.
- **Was set to expire on December 31, 2010.**
- **Only Stimulus Renewable Energy program extended in Lame Duck Session**
- **Expires December 31, 2011**
- Grants Made Through March 26, 2011:

<u>Source</u>	<u>Number</u>	<u>Amount</u>	<u>%</u>
Wind	263	\$5,246,270,724	81.08
Solar	1,828	\$788,961,593	12.19
Geothermal	32	\$267,536,360	4.13
Biomass	29	\$115,871,615	1.79
Other	<u>41</u>	<u>\$52,191,637</u>	<u>0.81</u>
Total	2,193	\$6,470,831,929	100.00
Average Project:		\$2,950,676	
Median Project:		\$57,405	
Projects < \$20m	2,122		
Projects $\geq$ \$20m	71		

## Energy Policy: 1603 Grant Program – Significant Funding Source for Wind

As of March 26, 2011, twenty-six (26) wind energy developers of the top sixty-five (65) 1603 Grant Program wind developments received 78.16% (\$5,057,857,761) of the 1603 Grants made. Just thirteen (13) wind energy developers received over 68.20% (\$4,412,834,065) of the total 1603 Grants made through March 26, 2011.

<u>Rank</u>	<u>Wind Energy Develop (Headquarters)</u>	<u>Number of Developments</u>	<u>Total 1603 Grants as of 3/26/11</u>
1	Iberdola Renewables (Spain)	14	\$1,091,967,077
2	Horizon Wind Energy (Portugal)	6	\$665,067,807
3	Next Era (United States)	8	\$555,175,380
4	E.On (Germany)	5	\$474,406,227
5	Pattern Energy (U.S.)	2	\$258,315,240
6	First Wind (Unite States)	4	\$254,566,974
7	Noble Environmental (U.S.)	3	\$221,422,053
8	Cannon Power Group (U.S.)	1	\$218,482,326
9	Invenergy (United States)	3	\$199,393,379
10	NRG Energy (U.S.)	2	\$143,696,058
11	Eurus Energy (Japan)	2	\$130,524,470
12	Wind Capital (U.S.)	1	\$107,685,043
13	Edison International (U.S.)	2	<u>\$92,132,031</u>
<b>Total</b>			<b>\$4,412,834,065</b>
% of Total 1603:			68.20%

# Energy Policy: US Solar Energy Industry Experiences Record-Breaking Growth in 2010

SOLAR ENERGY INDUSTRY ASSOCIATION reported on March 10, 2010:

**The U.S. solar energy industry had a banner year in 2010 with the industry's total market value growing 67 percent from \$3.6 billion in 2009 to \$6.0 billion in 2010, according to the U.S. Solar Market Insight: Year-in-Review 2010 released today by the Solar Energy Industries Association (SEIA) and GTM Research. Solar was a bright spot in the U.S. economy last year as the fastest growing energy sector, contrasting overall U.S. GDP growth of less than 3 percent.**

In total, 878 megawatts (MW) of photovoltaic (PV) capacity and 78 MW of concentrating solar power (CSP) were installed in the U.S. in 2010, enough to power roughly 200,000 homes. In addition, more than 65,000 homes and businesses added solar water heating (SWH) or solar pool heating (SPH) systems.

The U.S. PV market made the most significant strides in 2010, more than doubling installation totals from 2009 according to the latest U.S. Solar Market Insight™ report. **This expansion was driven by the Federal section 1603 Treasury program**, completion of significant utility-scale projects, expansion of new state markets and declining technology costs.

The section 1603 Treasury program helped fourth-quarter installations surge to a record 359 MW and was critical in allowing the solar industry to employ more than 93,000 Americans in 2010. Originally set to expire at the end of 2010, the 1603 Treasury program was ultimately extended through 2011.

**This report shows that solar energy is now one of the fastest growing industries in the United States, creating new opportunities for both large and small businesses. Every day, Americans across the country are going to work at well-paying, stable jobs at solar companies, from small installers all the way up to Fortune 500 companies,"** said Rhone Resch, SEIA president and CEO. **"This remarkable growth puts the solar industry's goal of powering 2 million homes annually by 2015 within reach. Achieving such amazing growth during the economic downturn shows that smart policies combined with American ingenuity adds up to a great return on investment for the public. The bottom line is that the solar energy industry is creating tens of thousands of new American jobs each year."**



# Energy Policy: The 1603 Grant Program Pumps Up Geothermal

RenewableEnergyWorld.com By Robert Crowe, March 31, 2011

**Geothermal energy production could triple over the next few years, expanding its reach from nine to 15 states, according to a report released this week by the Geothermal Energy Association (GEA).**

Renewed capital investment, U.S. Department of Energy support and rapid technological advancements are driving a “second wave” of geothermal expansion, said GEA Executive Director Karl Gawell in a conference call about the new report.

The United States ranks No. 1 in geothermal energy production with approximately 3,102 MW of installed capacity, according to GEA. Geothermal companies are currently developing 146 projects in 15 states. The GEA and a handful of geothermal companies discussed [the report](#) and industry developments during a conference call on Tuesday, March 29, 2011.

**“We’re very excited to see the growth in the geothermal industry,” said Halley K. Dickey, director of geothermal business development for Turbine Air Systems (TAS Energy). “We believe the geothermal industry is poised for a significant set of gains in production capacity for utility scale power production in the U.S.”**

Gawell estimates the geothermal industry is developing 146 projects in 15 states, but there could be many more (particularly involving oil and gas) that remain under the radar. Drilling and exploration are expected to pick up soon after winter storm season ends. **Gawell said the federal government’s continuation of a loan guarantee program, investment tax credits, and cash grants will be crucial to the continued success of the industry. “The extension of the tax grant program through projects under construction this year has helped,” he said.**

In spite of the positive news, Gawell said, development is still somewhat stalled due to risk-averse investors.

“(Investors) want to make sure projects have no risk and can pretty much guarantee returns,” Gawell said. “We’re not out of the woods in terms of the economy, that’s for sure.”

# Energy Policy: The 1603 Grant Program - The Most Obvious Reason For Growth

NOVOGRADAC JOURNAL OF TAX CREDIT by Jennifer Dockery on April 1, 2011:

The extension of the Section 1603 cash grant in lieu of renewable energy tax credits has bolstered the renewable energy industry and has investors interested in new projects, according to industry insiders. First-time investors are entering the renewable energy tax credit (RETC) market and experienced investors have returned. The majority of investors are opting for the grant, but a few production tax credit (PTC) and investment tax credit (ITC) deals are feeding the lessened but enduring appetite for tax credits. Attorneys, investors, developers and others predict increased interest from investors in the short term, but are uncertain about the future of the renewable energy market after the Section 1603 grant program expires.

Nixon Peabody's Michael Goldman agreed. "The availability of the 1603 payments in lieu of ITCs is the most obvious reason for the growth in renewable energy projects over the past couple of years .... **Without the 1603 program, the investor pool would have been close to extinct, as there has been a much diminished need for tax credits and a much increased desire to have cash in hand,"** he said. At press time, he had not seen any ITC or PTC investments in 2011 and he described the tax credit market as "quite thin."

For projects that expect completion after 2012 or beyond, **"the only offers are going to be from folks who can take the ITCs,"** Kunhardt said. He estimated that this might be about half of the active investors.

**From the investor side, Van't Hof said that U.S. Bank would continue investing without the grant, but the market will suffer if it has to rely on tax credit equity. "If the grant expires there will be ... a huge decrease in the number of transactions that get done."**

## Energy Policy: 1603 Grant Program Doubles Solar's 2011 Installation Rate

BARRON'S by [TIERNAN RAY](#) on March 31, 2011

Jefferies & Co. solar analyst Jesse Pichel this morning picks through some of the data from the Solar Energy Industries Association (SEIA) [report from earlier this month](#) on U.S. demand for solar.

**Pichel notes that photovoltaic installations in the U.S. last year doubled from 2009, to 878 megawatts, with installations in the States set to rise double the market rate of 16% to 24% this year, according to SEIA.**

Out of a total expected 18 gigawatt market, by Pichel's estimate, that would give the U.S. 10% of global demand, up from about 5% in 2010.

More important, Pichel sees “**steady demand**” in the U.S. thanks to a broadening of the market to include not just **utilities** but also **residential** and **commercial**. Residential and utility should be “strong” this year, with “some weakness” in commercial installations, he writes.

**Pichel notes that such growth depends on the U.S. Department of Energy's “Loan Guarantee program” getting financed. He adds, “The Treasury Cash Grant program is also expiring at the end of 2011, furthering concerns that 2012 may be weak,” though his belief is, “efforts are underway to extend the Cash Grant program, or to even make it permanent as a cash refund.”**

Pichel notes **President Obama's** prominent support for solar and renewables in [a talk just yesterday](#) at Georgetown University

# Energy Policy: The 1603 Grant Program More Effective vs. PTC

**GREENWIRE by Katie Howell on March 25, 2011:**

Federal cash grants for wind and solar energy development are cheaper and more effective than tax incentives, according to a new study out today.

**The paper from the Bipartisan Policy Center says the 1603 Cash Grant Program, initially funded under the 2009 stimulus law, cost taxpayers roughly half as much as traditional tax credits.**

**"This study shows that solar and wind subsidies distributed through cash grants are approximately twice as effective as tax incentives," said Bipartisan Policy Center energy research director Sasha Mackler in a statement. "In other words, one dollar in cash has nearly double the value of a dollar in tax credits to a project developer."**

**The study says the grants are more effective than credits because they simplify project financing and lower the cost of capital.**

But the future of the cash grant program remains uncertain. Congress late last year temporarily extended funding -- which was set to expire -- through the end of this year. And as lawmakers are looking to trim federal spending, another extension is not likely.

**"To provide long-term predictability and certainty, Congress will need to take the difficult step of establishing a stable funding source," the report says. "Because government funding will likely be scarce going forward, any renewable support program must create incentives for continued cost reductions and technology improvements, while also promoting public accountability."**

The paper discusses potential policy options that could be used to make the cash grant program more efficient, such as reverse auctions or refundable tax credits.

"Going forward, in a new era of fiscal austerity, it is paramount that we reassess our federal renewable energy program to ensure that federal resources are being leveraged as effectively as possible," Mackler said.



# Energy Policy: Why Extend The 1603 Grant Program? Jobs! Jobs! Jobs!

## *BlueGreen Alliance, American Wind Energy Association, and USW Provide "Manufacturing Blueprint" to Build Out Domestic Wind Energy Supply Chain and Create U.S. Manufacturing Jobs*

According to a report released in June 2010 by the American Wind Energy Association (AWEA), BlueGreen Alliance and the United Steelworkers, the U.S. wind industry **can create tens of thousands of additional jobs manufacturing wind turbines and components if the U.S. passes long-term policies that create a stable market for the domestic wind energy supply chain.**

To read the report go to: [http://www.bluegreenalliance.org/press\\_room/publications?id=0048](http://www.bluegreenalliance.org/press_room/publications?id=0048)

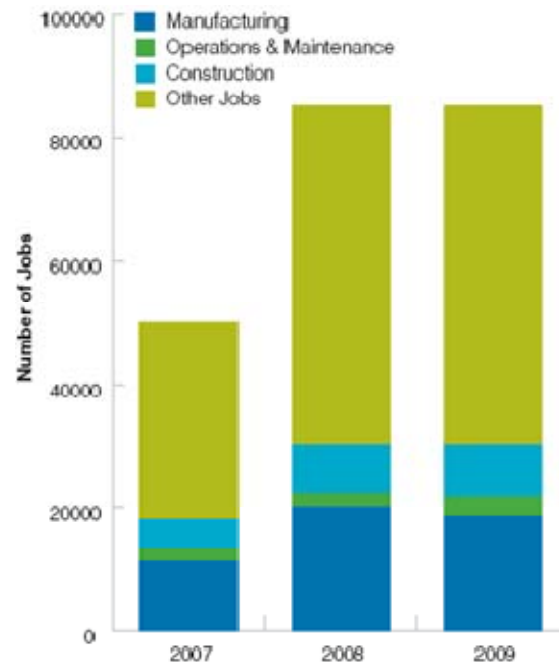


Figure 11. Total Wind Industry Employment\*

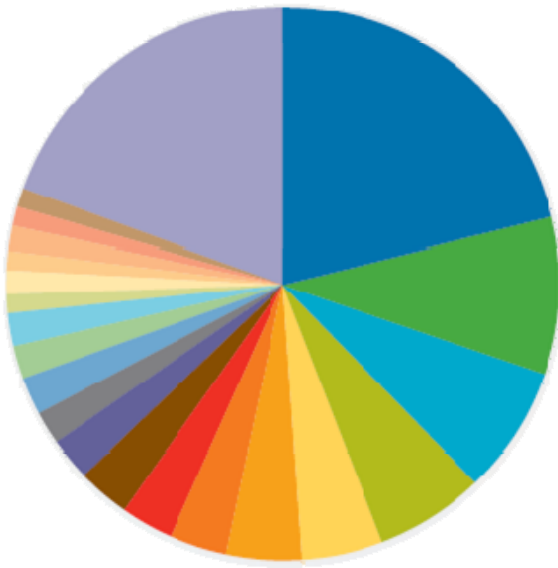




# Energy Policy: Jobs! Jobs! Jobs! Production vs. Manufacturing Jobs

<u>Indiana Examples</u>	<u>Capital Invested</u>	<u>Permanent Jobs</u>	<u>Capitalization Per Job</u>
Benton County Wind Farms	>\$1 billion	<300	>\$3,333,333
Brevini Wind Gear Manufacturer Delaware County	<\$60 million	>400	<\$150,000

# Energy Policy: 2009 Wind Energy Developers



Ownership is on a net basis, so if two owners have a half share of a 100-MW wind farm, each company is credited with 50 MW. Ownership does not include structural investors, which may have a share of equity.

Company	MW under "managing ownership"
NextEra Energy Resources	7458
Iberdrola Renewables	3225
Horizon-EDPR	2642
MidAmerican Energy	2205
E.On Climate & Renewables	1720
Invenergy	1500
Edison Mission Group	1210
Infigen Energy (previously BBW)	1090
AES	1057
enXco	882
Duke Energy	735
Noble Environmental Power	726
John Deere Renewables	705
BP Wind Energy	679
First Wind	478
Shell	449
Puget Sound Energy	429
Eurus Energy	417
Acciona Energy	415
Babcock & Brown Ltd	413
Others	6630

NextEra Energy Resources continues to lead ownership of wind assets in the U.S., with over 7,400 of the over 35,000 MW installed.

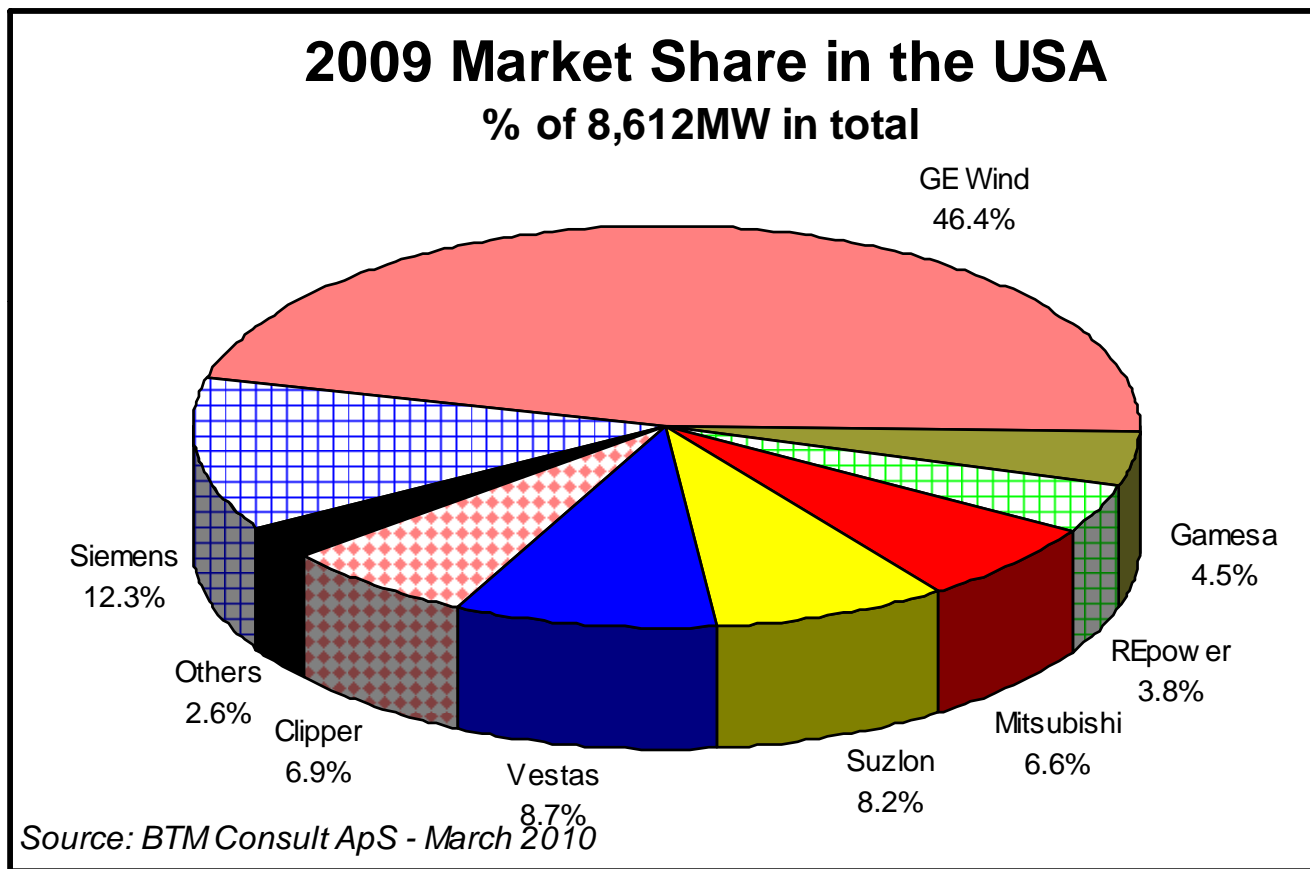
Eight other companies now own over 1,000 MW of wind power assets, up from five last year. The top five companies own about 49% of the total U.S. fleet, down from 53% last year.

AWEA Supply Chain March, 2011

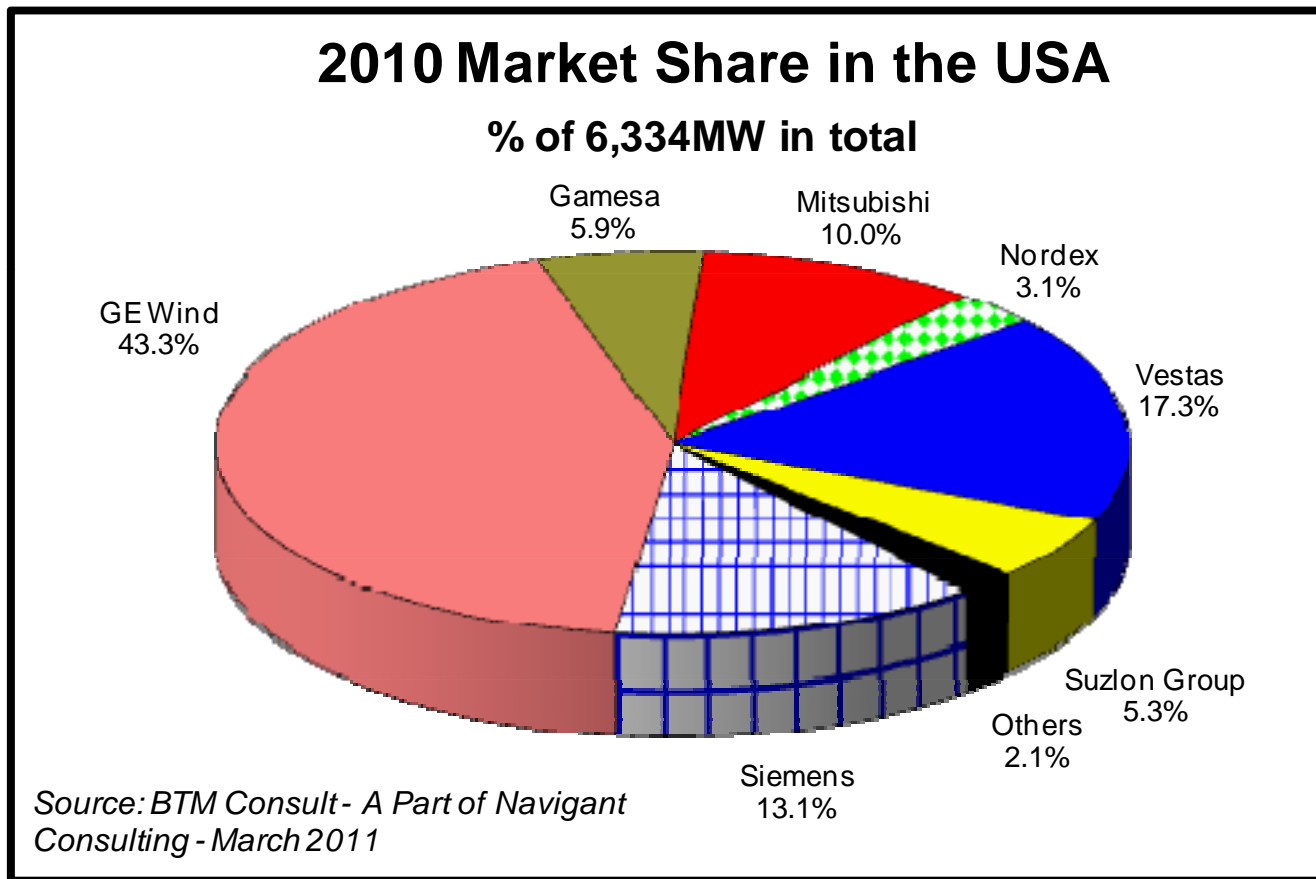




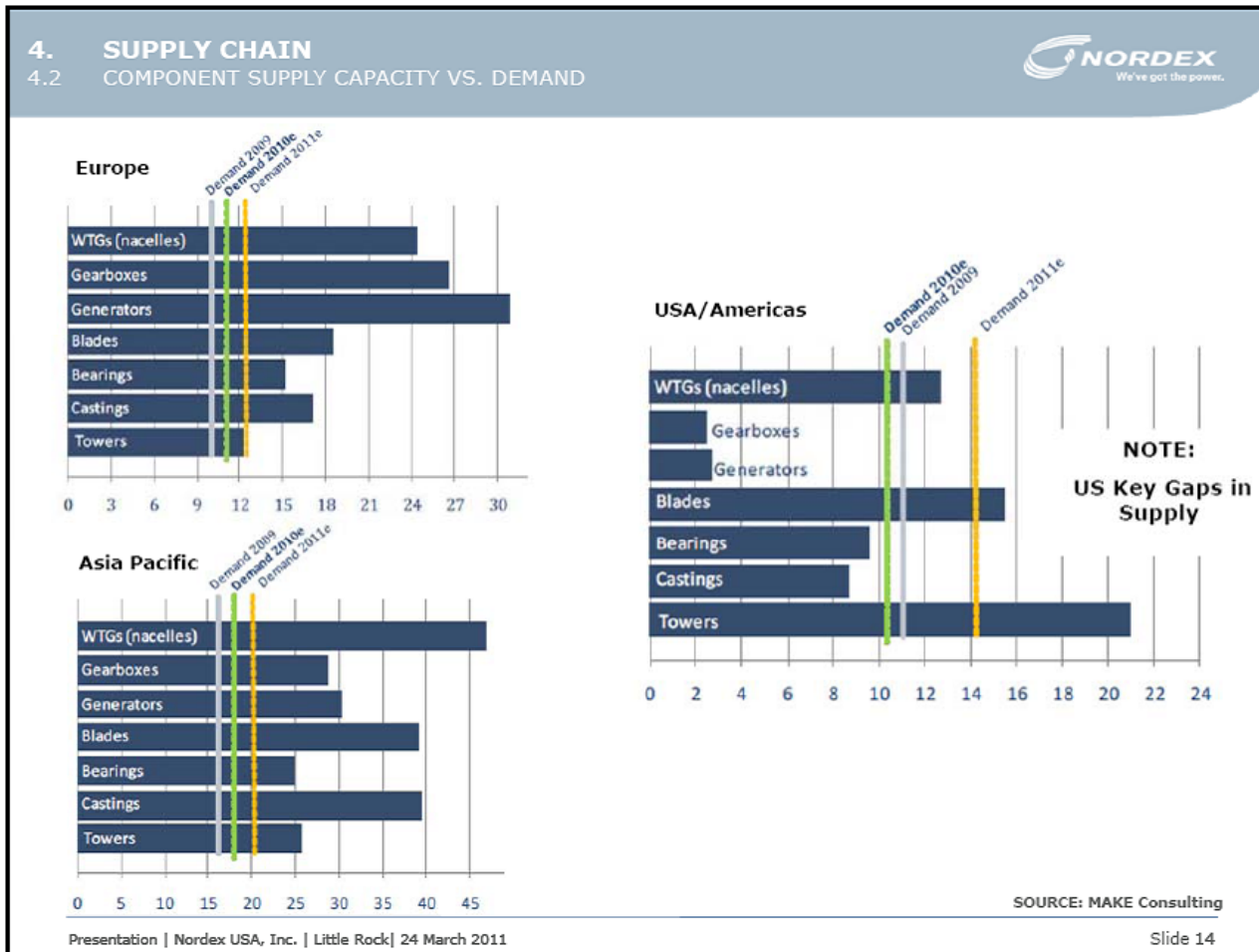
# Energy Policy: 2009 U.S. Manufacturers (G.E. & Clipper) – 53.3% U.S. Market Share



# Energy Policy: 2010 U.S. Manufacturers (G.E. only) – 43.3% U.S. Market Share



# Energy Policy: Supply Chain Capacity vs. Demand



## The Complete Picture – Global Manufacturing Capability Comparison Percentages

<u>2009 Actual</u>	<u>Installed MW</u>	<u>Announced Turbine O.E.M. Manufacturing Capability</u>	<u>Manufacturing Capability As a Percentage of <u>Installed MW</u></u>
Europe	10,738	21,228	197.69%
Americas (U.S.: 87.73%)	11,433	7,729	67.76%
China	13,750	13,660	99.35%
India	1,172	4,750	405.29%

<u>2012 Forecast</u>	<u>Installed MW</u>	<u>Announced Turbine O.E.M. Manufacturing Capability</u>	<u>Manufacturing Capability As a Percentage of <u>Installed MW</u></u>
Europe	18,025	38,825	215.40%
Americas	18,400	10,329	56.14%
China	15,400	34,980	227.71%
India	3,500	8,790	251.14%

WEMA December 2010 Study based on data from BTM-C internal file September 2009.

## Energy Policy: Potential jobs – Nonmanufacturing vs. Manufacturing

<u>Type of Jobs</u>	2010 AWEA USW Report for U.S.	%	2008 EWEA Report for Europe	%
Construction, Operations, Maintenance & Other Non-Manufacturing Jobs	66,500	78.25%	44,280	41.0%
Manufacturing Jobs	18,500	21.75%	63,720	59.0%
Total Wind Related Jobs	85,000	100.00%	108,000	100.00%
Annual Installed MW; Year Prior to Study	9,922 MW		8,681 MW	
<b>2011 Environmental Law &amp; Policy Center Supply Chain Studies for IL, MI &amp; OH (based on 9,992 MW)</b>				
Constructional, Operations, Maintenance & Other Non-Manufacturing Jobs	44,529	20.88%		
Manufacturing Jobs	168,674	79.12%		
Total	213,203	100.00%		



# 1603 Grant Program Modification – Tie Incentives To Supply Chain Job Creation Policy! Policy! Policy!

We need to consider implementing a Five Year \$5 billion per year:

- Competitive Capped Allocation Application Process For Individual Allocations Over \$20 million Per Year.
- Performance Based Selection Process Awarding those \$20 million + Developers who commit to Cause Their Supply Chain to Create the Greatest Number of Jobs and Make the Largest Capital Investment in the United States.
- Accountability with Annual Reporting Confirming Job Creation and Capital Investment Commitment Performance over the next 5 years.
- Transparency With All Reports and Related Data Readily Available on the Internet.

## Energy Policy: WEMA 1603 LED Program

To learn more about the WEMA 1603 Large Energy Developer (LED) Program go to: [www.wemawind.org](http://www.wemawind.org)

For a copy of this presentation go to:

[http://www.kriegdevault.com/our\\_professionals/frank-hoffman](http://www.kriegdevault.com/our_professionals/frank-hoffman)

# Energy Policy: Issues in the New Congress

Frank A. Hoffman is president of the newly formed Wind Energy Manufacturers Association ([www.wemawind.org](http://www.wemawind.org)) and a partner in the law firm of Krieg DeVault LLP with offices in Chicago, Atlanta and Indianapolis ([www.kriegdevault.com](http://www.kriegdevault.com)). The Wind Energy Manufacturers Association (WEMA) has been created to promote the manufacturing supply chain for the Wind Energy Industry in the United States. Frank Hoffman concentrates his practice in creative and complex federal, state, and local incentive-based financing transactions. Most recently Mr. Hoffman has assisted his clients and WEMA members in obtaining over \$40 million in Recovery Act, state and local economic development incentives and over \$50 million in permanent financing for wind energy component part manufacturing in the United States. ([http://www.kriegdevault.com/our\\_professionals/frank-hoffman](http://www.kriegdevault.com/our_professionals/frank-hoffman)).

## Tax Incentive Financing Experience

- Created the New Markets Tax Credit Program for the Indiana Bankers Association and its 180 member banks - 2004 \$50 million Allocation
- Assisted in the creation of the New Markets Tax Credit Program for the city of Fort Wayne – 2008 \$15 million Allocation
- Assisted in the creation of the New Markets Tax Credit Program for the town of French Lick and seventeen (17) participating southern Indiana counties – 2009 \$50 million Allocation
- Assisting in the creation of the New Markets Tax Credit Program for the City of Indianapolis – 2010 - \$32 million Allocation
- Combined Indiana CRED Credit, Local TIF Bond and NMTC to fund \$5.5 million start-up manufacturing plant (Marion, Indiana)
- Combined local TIF Bond and NMTC to fund \$20 million hotel/indoor waterpark facility (French Lick, Indiana)
- Closed over \$150 million in NMTC financing (2004 to present)
- Created the Wind Energy Manufacturers Associations, Inc. to attract capital investment under ARRA to Indiana in 2009
- Obtained over \$28 million in ARRA economic development incentives and \$53 million in permanent financing for Indiana start-up wind turbine component part manufactures since February 2009

## **Education**

DePauw University  
Indiana University School of Law  
Admitted to Indiana Bar

B.A., (Economics), June, 1979  
J.D., (Taxation); January, 1982  
1983, Indiana

**Birth Place:** Evansville, Indiana, September 1, 1957

**High School:** Andrian Catholic High School, Merrillville, Indiana; 1975

