

# Indiana Solar Energy Working Group (ISEWG) Policy! Policy! Policy!



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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: 2010 US Solar Energy Industry Experiences Record-Breaking Growth

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.

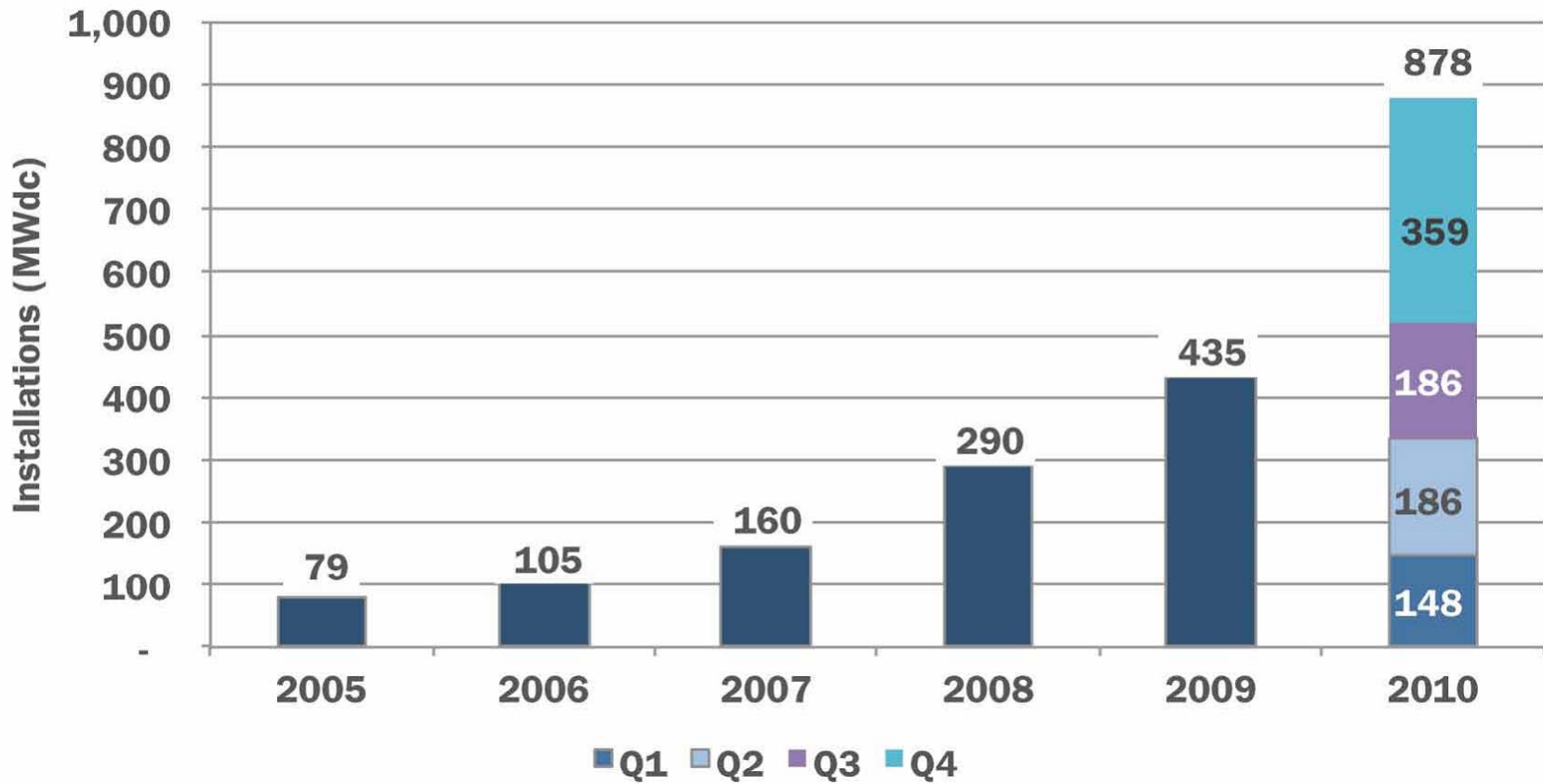
The U.S. PV market made the most significant strides in 2010, more than doubling installation totals from 2009 according to the latest U.S. Solar Market Insight™ report. **This expansion was driven by the Federal section 1603 Treasury program**, completion of significant utility-scale projects, expansion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



## U.S. PV Installations, 2005-2010



## Why Focus on 1603 Extension Policy Now? New Republican House



# 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%



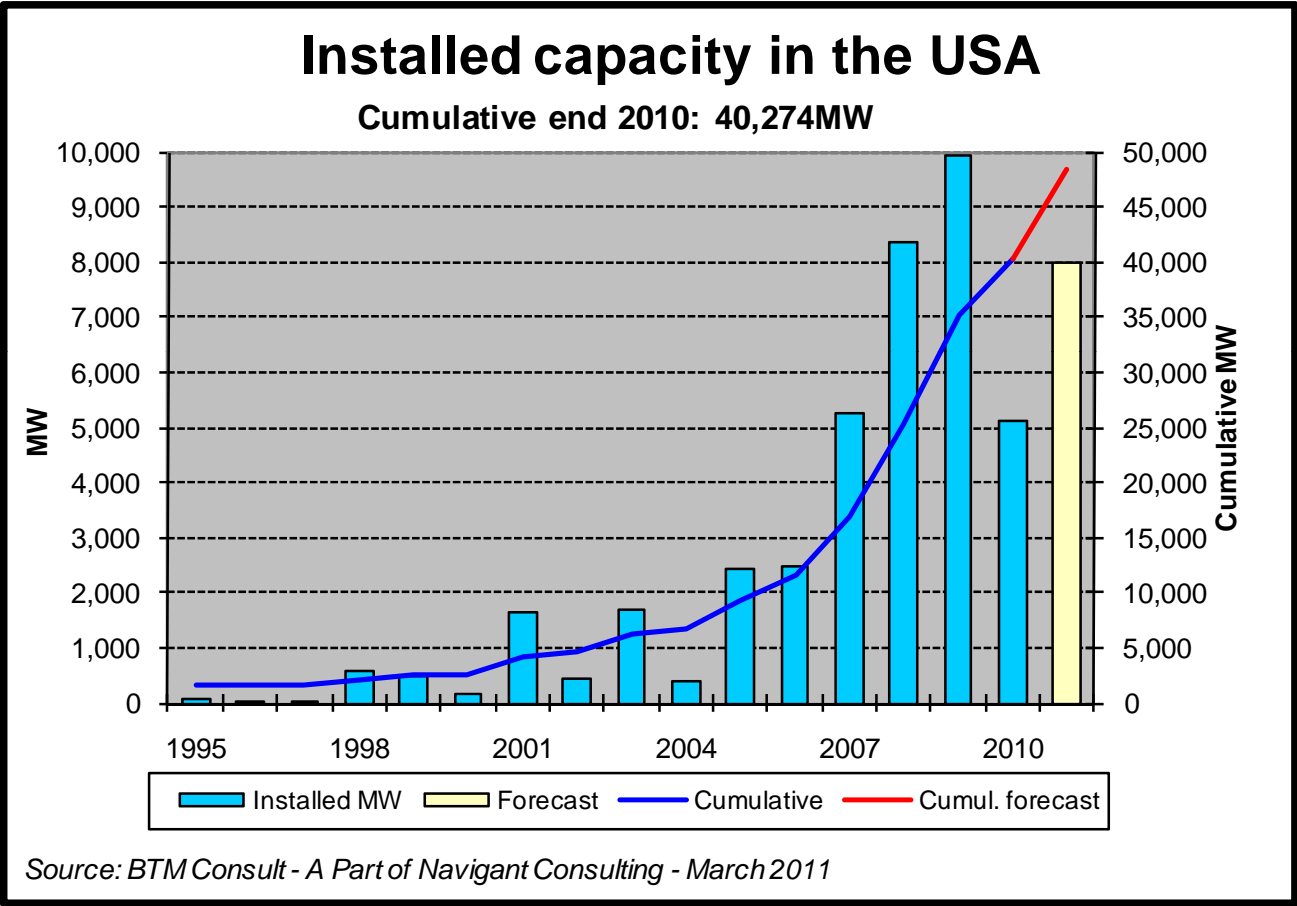
## Energy Policy: 2007-2010 Annual Accumulated Installations & Growth Rates

### 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

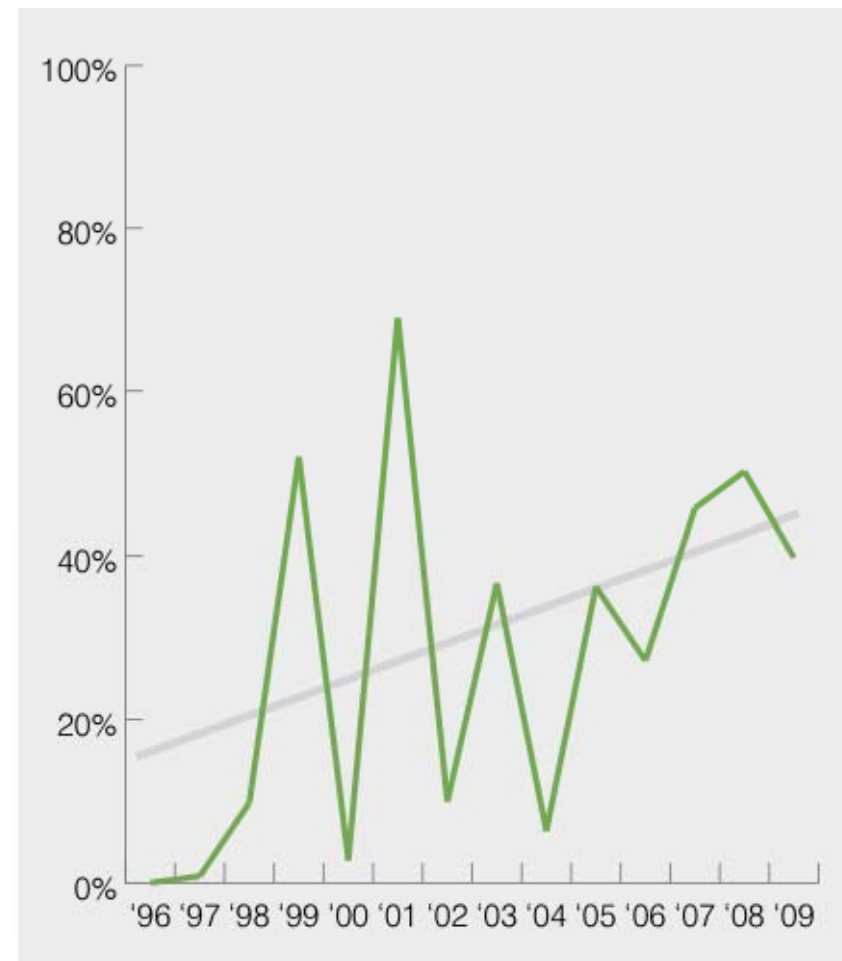


## Energy Policy: 1996-2009 Quarterly Installations Reflect Market Volatility

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: 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: 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: 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)

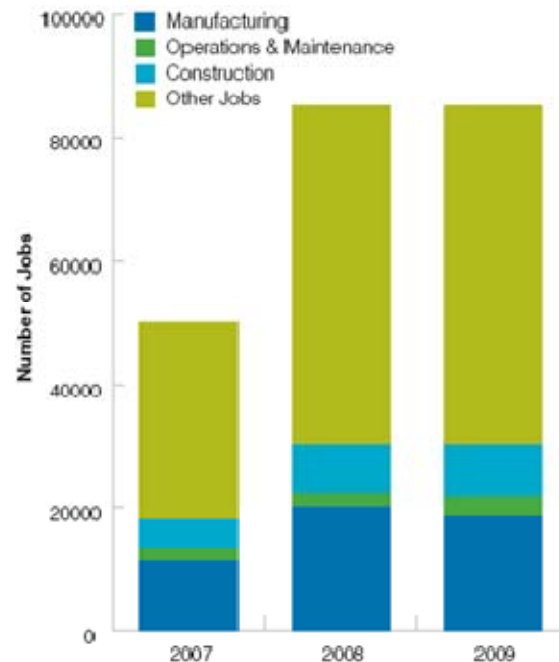
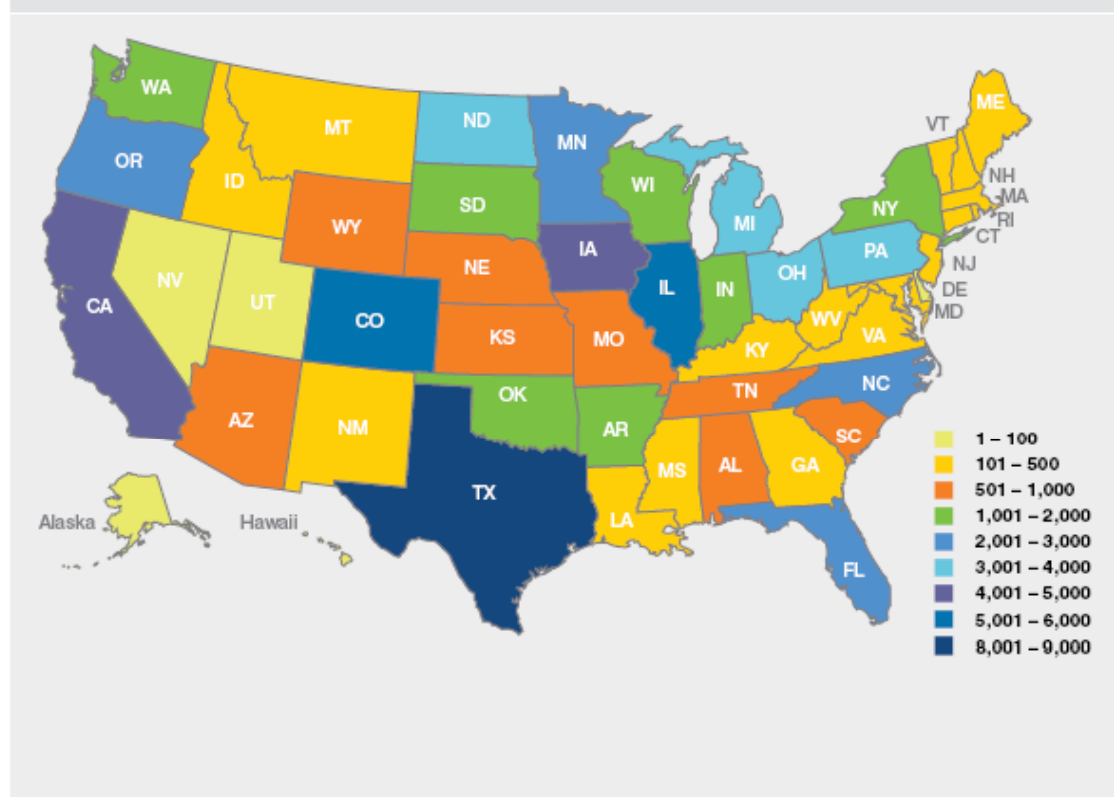


Figure 11. Total Wind Industry Employment\*



# Benefits of Wind Energy

Figure 49 U.S. Wind Industry Jobs by State



The wind industry supported jobs in every state in the U.S. in 2010. While the industry supported construction and operations-and-maintenance jobs in some states as new wind projects came online, it supported manufacturing jobs in others. Still, the global leaders for wind industry jobs typically have both strong capacity installations and strong manufacturing sectors, and 2010 confirmed that these two ingredients spell success for wind jobs.

Texas, the No. 1 state in wind installations, also maintained its lead for wind industry jobs in 2010, though job intensity was reduced due to the state installing 1,600 fewer megawatts of new capacity in 2010 than in 2009. Illinois, driven by a higher level of new installations compared to its 2009 total as well as a strong manufacturing sector, took the No. 2 spot for wind industry employment in 2010. Colorado ranked third in 2010 for total employment, as manufacturing in the state for the wind industry took off and new facilities brought many new jobs to the state. Iowa dropped from second to fourth in 2010 due to a smaller market for new installations, and California joined the top five with strong 2010 wind capacity installations. Rounding out the top 10 were Ohio, Michigan, Pennsylvania, North Dakota and North Carolina.



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

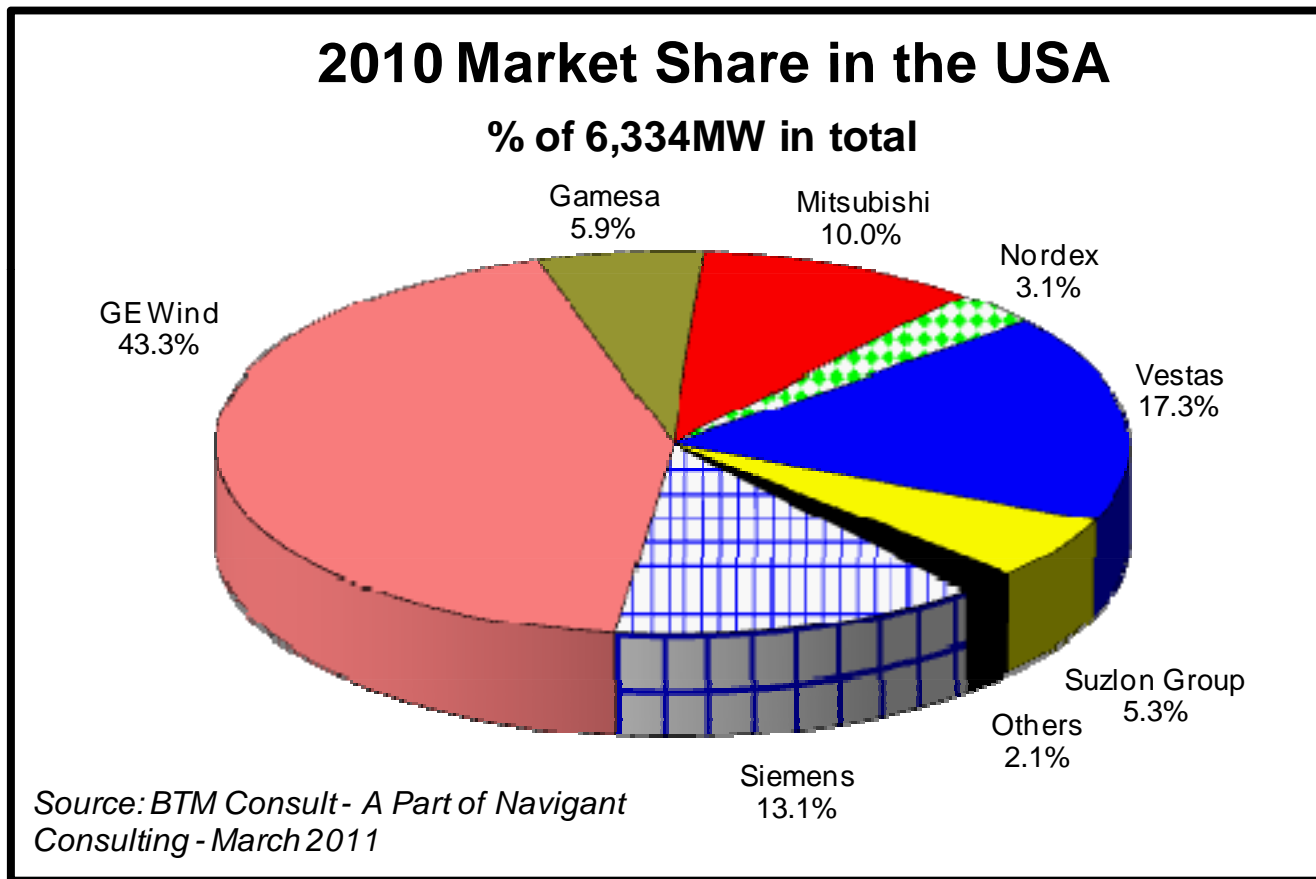
<u>Type of Jobs</u>	2010 AWEA USW Report for U.S.	%	2008 EWEA Report for Europe	%
Construction, Operations, Maintenance & Other Non-Manufacturing Jobs	66,500	78.25%	44,280	41.0%
Manufacturing Jobs	18,500	21.75%	63,720	59.0%
Total Wind Related Jobs	85,000	100.00%	108,000	100.00%
Annual Installed MW; Year 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%		

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

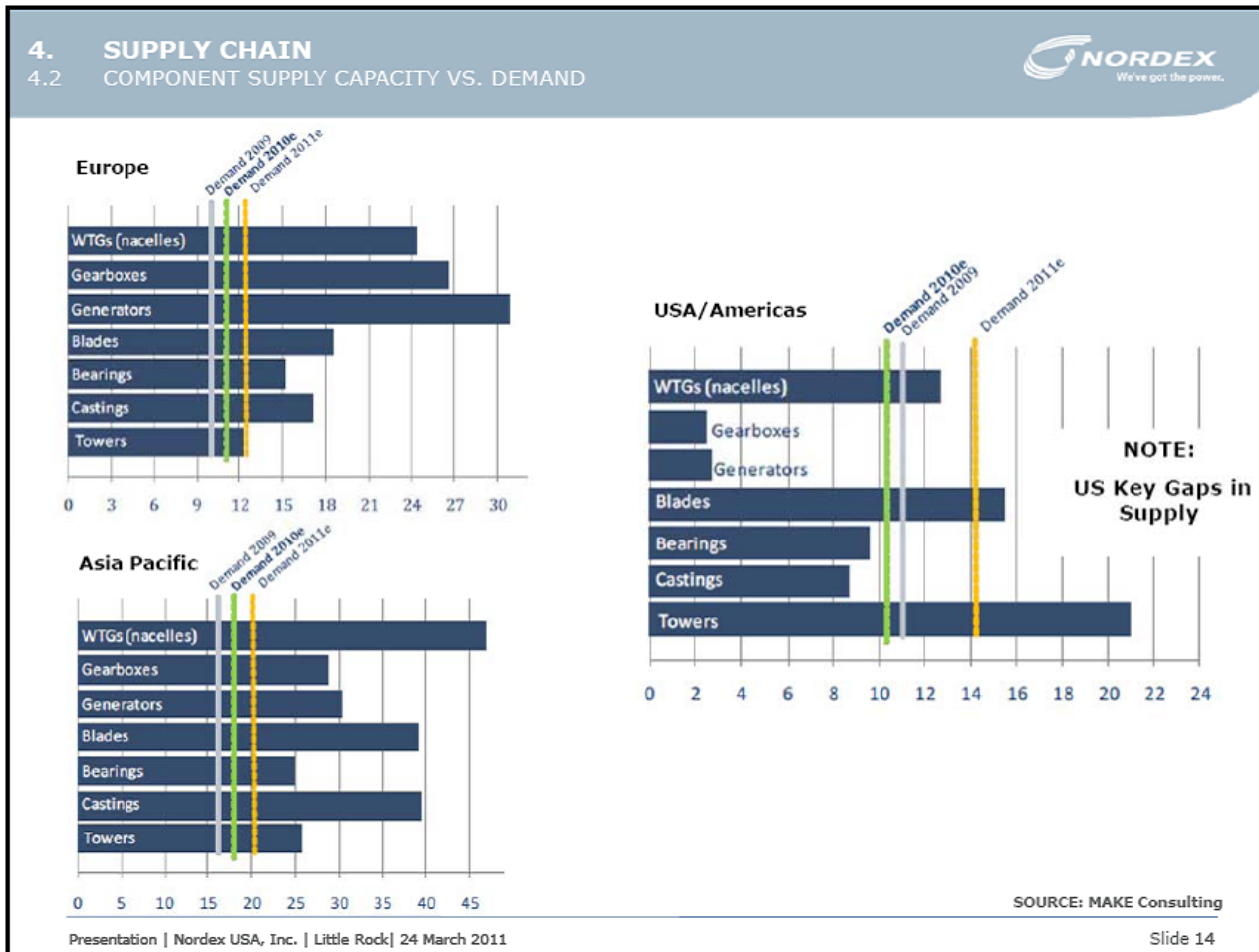
<u>Indiana Examples</u>	<u>Capital Invested</u>	<u>Permanent Jobs</u>	<u>Capitalization Per Job</u>
Benton County Wind Farms	>\$1 billion	<300	>\$3,333,333
Brevini Wind Gear Manufacturer Delaware County	<\$60 million	>400	<\$150,000



# Energy Policy: 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.

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

We need to consider implementing a Five Year \$3 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  
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**Birth Place:** Evansville, Indiana, September 1, 1957

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