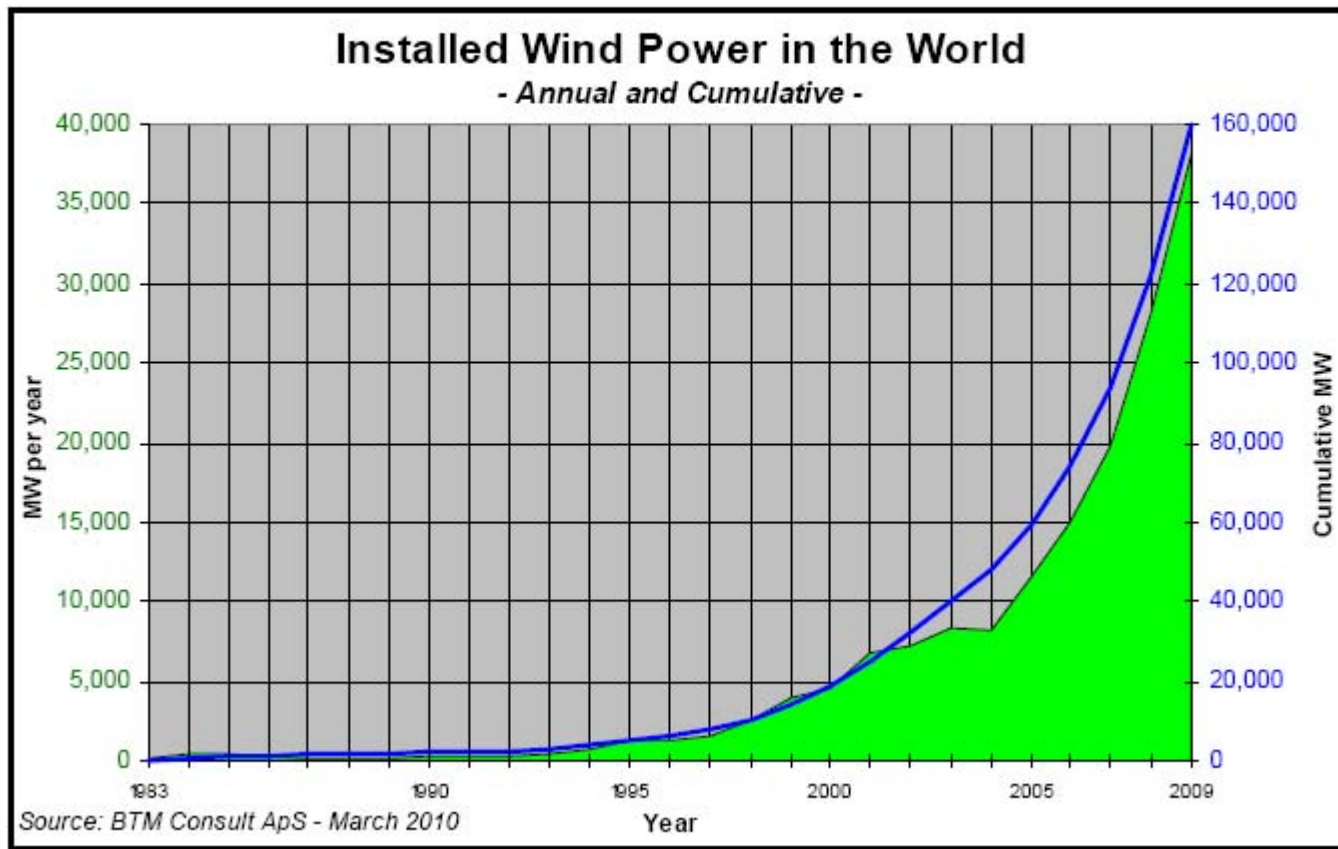


# Challenges and Opportunities in Wind Power in Indiana

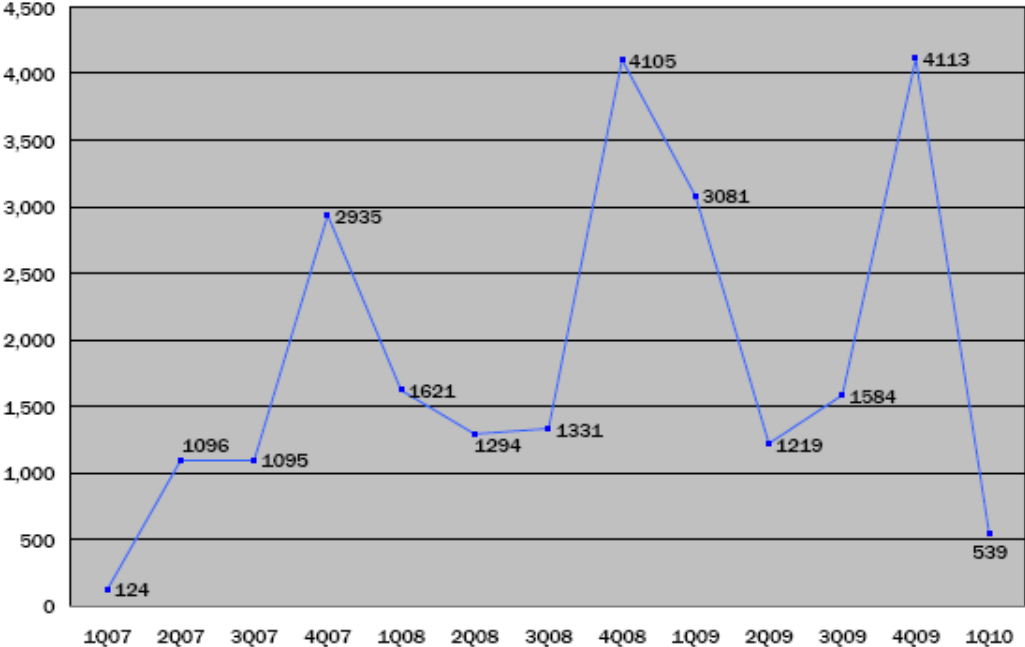
By: Frank A. Hoffman, Esq.  
Krieg DeVault LLP  
12800 N. Meridian Street, Suite 300  
Carmel, Indiana 46032 USA  
(317) 238-6240 (Direct)  
(317) 636-1507 (Fax)  
(317) 750-6625 (Mobile)  
[fhoffman@kdlegal.com](mailto:fhoffman@kdlegal.com)






# Quarterly Installations Reflect Market Volatility

The cycle of wind capacity installations over the past few years, illustrated by the figure below, has created a poor environment for long-term investment decisions, particularly in wind manufacturing. Dozens of manufacturing companies have already made commitments to build and upgrade U.S. facilities, despite the market's booms and busts. These companies have created the foundation for renewing the American manufacturing sector and the U.S. could see explosive growth the instant there is a sign of market stability and U.S. commitment to long term policy.





## Global Distribution of Wind Turbine Manufacturing


 Region/country	Supply capacity in 2008	Share of global market in 2008	Number of wind turbine OEMs by Oct 2009
Europe	17,574	56.1%	28
Americas	5,479	17.5%	7
South & East Asia	7,458	23.8%	80
of which China	4,707	15.0%	(70)
India	2,752	8.8%	(10)
OECD-Pacific	815	2.6%	7
Total	31,326	100%	122

Sources: BTM Consult ApS internal files – Nov 2009

*Comment : It shall be noticed that the Top-10 suppliers counted for 84 % of the total supply in 2008*



## Installed capacity in 2008 and 2009 (Global)

	Installed MW 2008	Accu. MW 2008	Installed MW 2009	Accu. MW 2009	% of installed MW 2009
Total Americas	9,527	28,918	11,433	40,351	30.0%
Total Europe	9,179	65,971	10,738	76,553	28.2%
Total South & East Asia	8,201	22,174	14,991	37,147	39.3%
Total OECD-Pacific	1,056	4,272	622	4,890	1.6%
Total Africa	228	696	318	1,014	0.8%
Total other continents and areas:	0	127	1.7	129	0.0%
Annual MW installed capacity	28,190		38,103		
Cumulative MW installed in the world		122,158		160,084	

Source: BTM Consult ApS - March 2010

## Wind Energy Policy

	<u>Status</u>
• National Renewable Energy Standard	Never Passed
• Production Tax Credit	Expires 2012
• Investment Tax Credit	Expires 2016
• 1603 Grant in Lieu of Tax Credit	Expires 2010
• Advanced Manufacturing Tax Credit	Capped at \$2.3 billion; 100% Allocated
• Residential Tax Credit	Expires 2016

1. Climate Change => “Climategate”
2. Reduce Dependence on Foreign Oil => \$150 p.b. vs. \$75 p.b.
3. Clean Jobs => 9.5 + Unemployment

## U.S. Unemployment Report, March 2010

	<u>Rate</u>	<u>Over the Year Loss</u>
United States	9.7%	
Indiana	9.9%	38,700
Michigan	14.1%	96,500
Ohio	11.4%	147,000
Illinois	11.5%	148,500
Wisconsin	8.8%	74,800



Great Recession  
Total U.S. Jobs Deficit  
As of February, 2010

Total Jobs Lost:	8.4 million
Total New Job Demand:	<u>2.7 million</u>
Total U.S. Jobs Deficit:	11.1 million

# Jobs! Jobs! Jobs!

## Production vs. Manufacturing Jobs

	Capital Invested	Jobs
Benton County Wind Farms	>\$1 billion	<300
Brevini Wind Delaware County	<\$100 million	>400

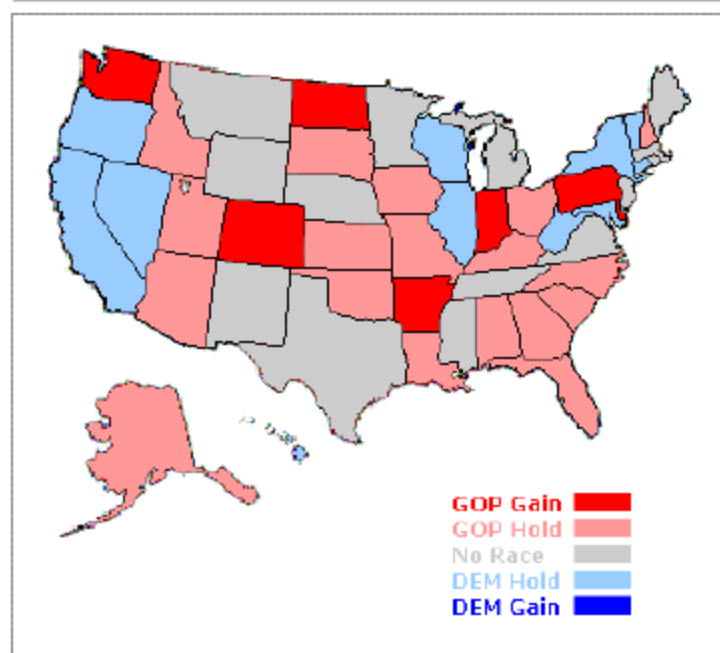
# Potential Wind Manufacturing Jobs at 10% RES

Type of Analysis	Assumes a <u>10% Renewable Generation Requirement</u> and the Development of 50,000 MW of Wind Power in the United States to determine impact of Wind Turbine Component part and assembly manufacturing jobs.
Total Investment in Wind Turbine Component Parts and Assembly (based on \$1 billion per 1000 MW)	\$50,000,000,000 (AWEA)
<u>Wind Manufacturing Jobs</u>	
Rotor (28%)	42,000
Nacelle and Controls (21.7%)	32,550
Gearbox and Drive Train (17.3%)	25,950
Generator and Power Electronics (7.0%)	10,500
Tower (26%)	39,900
Total (100%)	150,000 (AWEA)
Number of Wind Manufacturing Jobs to be located in the Midwest (ND, SD, NE, KS, MN, IA, MO, WI, IL, IN, MI and OH)	30,639 (AWEA)
Percentage of Wind Manufacturing Jobs to be located in the Midwest:	20.43%
Number of Wind Manufacturing Jobs to be located in Indiana	8,317 (AWEA)
Percentage of National Wind Manufacturing Jobs to be located in Indiana:	5.0545%
Percentage of Midwest Wind Manufacturing Jobs to be located in Indiana	27.145%
Percentage of National Population located in Indiana	2.098%

# The Battle For Capitol Hill – 2010 Senate

Projections for Thursday, July 22, 2010

Projected Seats:	<b>Democrats 50</b>	<b>Republicans 48</b>	<b>Independents 2</b>
Current Seats:	Democrats 57	Republicans 41	Independents 2
Projected Change:	-7	+7	no change



Ratings Changes for Thu,  
July 22, 2010

In Democrats' Favor

- None

In Republicans' Favor

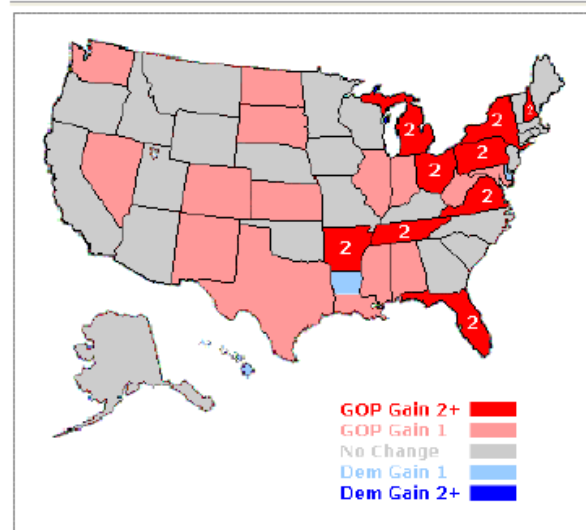
- None

[<< Previous update](#)

# The Battle For Capitol Hill – 2010 House

Projections for Thursday, July 22, 2010

Projected Seats:	Democrats 226	Republicans 209
Current Seats:	Democrats 256	Republicans 179
Projected Change:	-30	+30



Ratings Changes for Thu, July 22, 2010

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In Democrats' Favor

- Virginia CD-9: Weak DEM -> Mod DEM

---

In Republicans' Favor

- Virginia CD-5: Weak GOP -> Mod GOP
-

# U.S. Tea Party Movement – Cut Government Spending



**THURSDAY, APRIL 15<sup>TH</sup>, 2010**  
**11:30 AM TO 1:00 PM**  
 GENESEE CROSSROADS PARK (SAME AS LAST YEAR)  
 ANDREWS & FRONT ST., ROCHESTER, NY 14614



**Join us in Saying:**

- STOP THE SPENDING
- WE'RE BEING TAXED ENOUGH ALREADY
- LESS GOVERNMENT= MORE FREEDOM!
- AND EDUCATE YOURSELF AT OUR INFO TABLES

A FUN **FREE** FAMILY-FRIENDLY, EVENT.

More Info: [WeSurroundRochester.com](http://WeSurroundRochester.com)

New York Times/CBS News Poll (April 15, 2010):

- “Tea Party supporters are wealthier and more well-educated than the general public, and are no more or less afraid of falling into a lower socioeconomic class”
- 18% of Americans identified themselves as supporters of the Tea party movement.
- When asked “What should be the goal of the Tea Party Movement?:

<u>% Selected</u>	<u>Answer</u>
45%	Reduce Federal Government
6%	Cutting Budget
6%	Lowering Taxes
7%	Electing their own candidates
9%	Creating jobs
7%	Something else
18%	All of them
3%	No answer

## Post Election “Lame Duck Session”?

- 2010 Congressional Election: November 2, 2010
- 2010 Congressional Session Ends: January 3, 2011
- 61 Days Post Election
- December 24, 2009 Christmas Eve U.S. House and Senate passed Health Care Legislation
- Spending Cuts and Tax Legislation requires “50 + 1” votes in the Senate and 216 votes in the House
- Policy Legislation (e.g. Comprehensive Energy & Climate Bill) requires 59 + 1 votes in the Senate and 216 votes in the House

## 2010 Wind Energy Policy Objectives

National Renewable Electricity Standard (RES). At least twenty-five percent (25%) of the nation's electricity to come from clean energy by 2025.

Performance Based Section 1603 Production Grant Program. A five (5) year \$25 billion Section 1603 Production Grant In Lieu of Tax Credits Program competitively allocated and awarded to those energy production developers that commit to achieve the greatest amount of capital investment and the highest number of retained and new jobs in the U.S.

Performance Based Section 48C Manufacturing Grant Program. A five (5) year \$25 billion Section 48C Grant In Lieu of Tax Credits Program competitively allocated and awarded to those clean energy products manufacturers that commit to make the greatest amount of capital investment and the highest number of retained and new jobs in the U.S.

Clean Energy Manufacturing Revolving Loan Fund. A \$30 billion revolving loan program to help small and med-sized manufacturers in the clean energy industry.

Residential Renewable Energy Tax Credit. A five (5) year thirty percent (30%) individual income tax credit (with no cap) for clean energy systems installation (new construction or replacement).













Jobs! Jobs! Jobs!

“Clean Energy Standard” = U.S. Manufacturing Jobs

# Why & How Can U.S. Include Clean Coal in a “Clean Energy Standard”?

## List of Global Coal Reserves

### Proved recoverable coal reserves at end-2006 (million tonnes (teragrams))

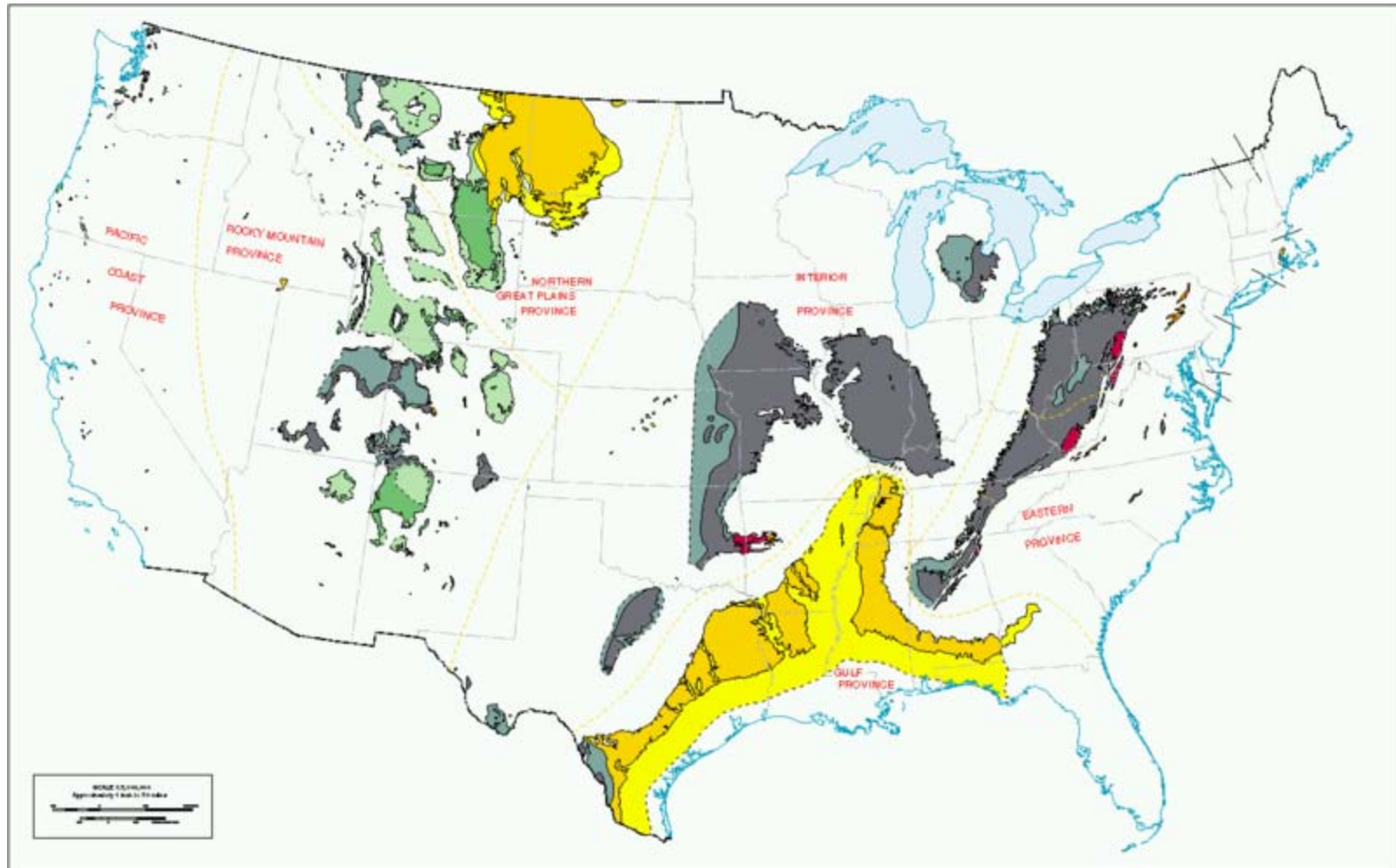
Country	Bituminous & anthracite	SubBituminous & lignite	TOTAL	Share
 <a href="#">United States</a>	111,338	135,305	246,643	27.1
 <a href="#">Russia</a>	49,088	107,922	157,010	17.3
 <a href="#">China</a>	62,200	52,300	114,500	12.6
 <a href="#">India</a>	90,085	2,360	92,445	10.2
 <a href="#">Australia</a>	38,600	39,900	78,500	8.6
 <a href="#">South Africa</a>	48,750	0	48,750	5.4
 <a href="#">Ukraine</a>	16,274	17,879	34,153	3.8
 <a href="#">Kazakhstan</a>	28,151	3,128	31,279	3.4
 <a href="#">Poland</a>	14,000	0	14,000	1.5
 <a href="#">Brazil</a>	0	10,113	10,113	1.1

source: <sup>9</sup> "BP Statistical review of world energy June 2007" (XLS). British Petroleum. June 2007.

[http://www.bp.com/liveassets/bp\\_internet/globalbp/globalbp\\_uk\\_english/reports\\_and\\_publications/statistical\\_energy\\_review\\_2007/STAGING/local\\_assets/downloads/spreadsheets/statistical\\_review\\_full\\_report\\_workbook\\_2007.xls](http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2007/STAGING/local_assets/downloads/spreadsheets/statistical_review_full_report_workbook_2007.xls). Retrieved 2007-10-22.

# Why Clean Coal?

## Location of United States Coal Reserves



## Why Clean Coal? Coal Dependant States

<b>States <u>highly</u> dependent on coal for electric power produced &amp; consumed in 2005</b>	<b>Percent dependency</b>	<b>National rank of state for <u>total</u> coal consumption in 2007</b>
West Virginia	98%	7
Wyoming	97%	15
Indiana	96%	2
North Dakota	95%	21
Utah	93%	23
Kentucky	87%	6
Ohio	86%	4
Missouri	86%	11
Kansas	74%	22
North Carolina	60%	10
Tennessee	60%	14
Alabama	59%	9
Pennsylvania	54%	3

## Why Clean Coal? U.S. Coal Jobs

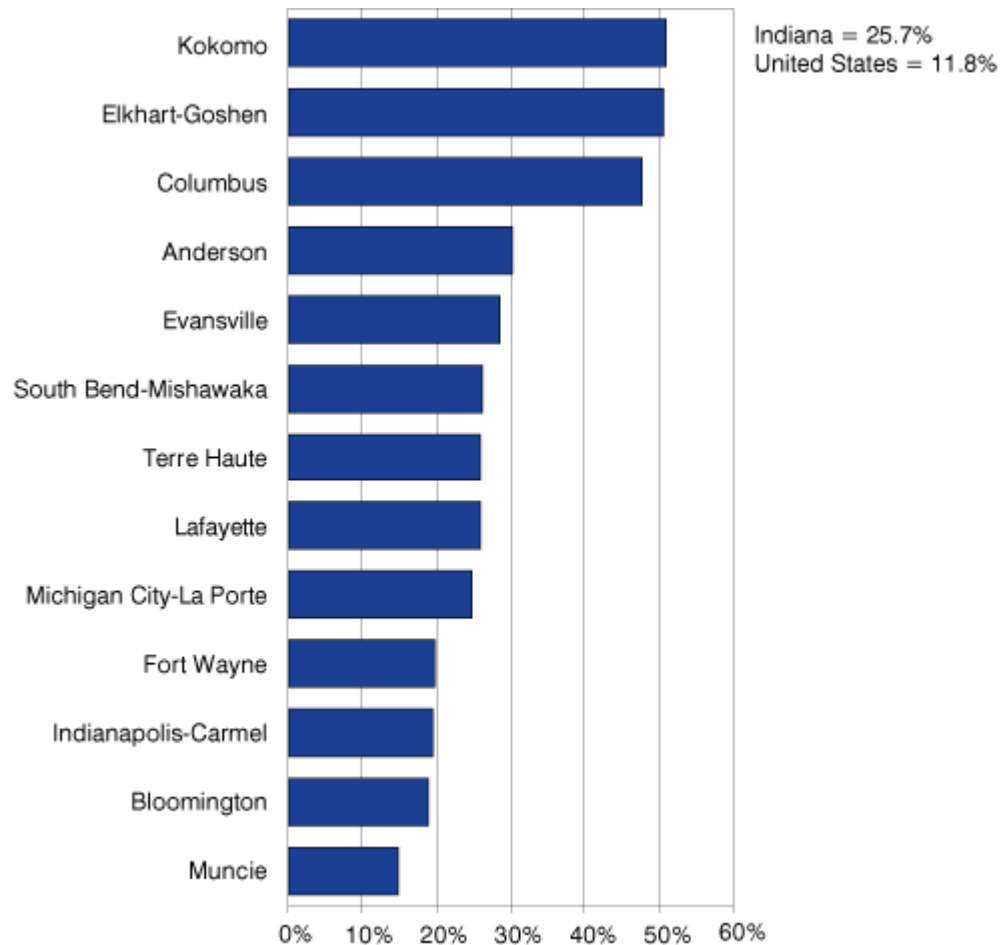
**IN 2006, THERE WERE 82,595 PEOPLE EMPLOYED IN COAL MINING IN THE U.S. OF THOSE, 47,475 WORKED IN UNDERGROUND MINING, AND 35,398 WORKED IN SURFACE MINING.**

**HERE IS A BREAKDOWN OF THE GEOGRAPHICAL DISTRIBUTION OF UNDERGROUND COAL MINING JOBS IN 2006 (WITH COAL PRODUCTION IN THOUSANDS OF SHORT TONS):<sup>[3][4]</sup>**

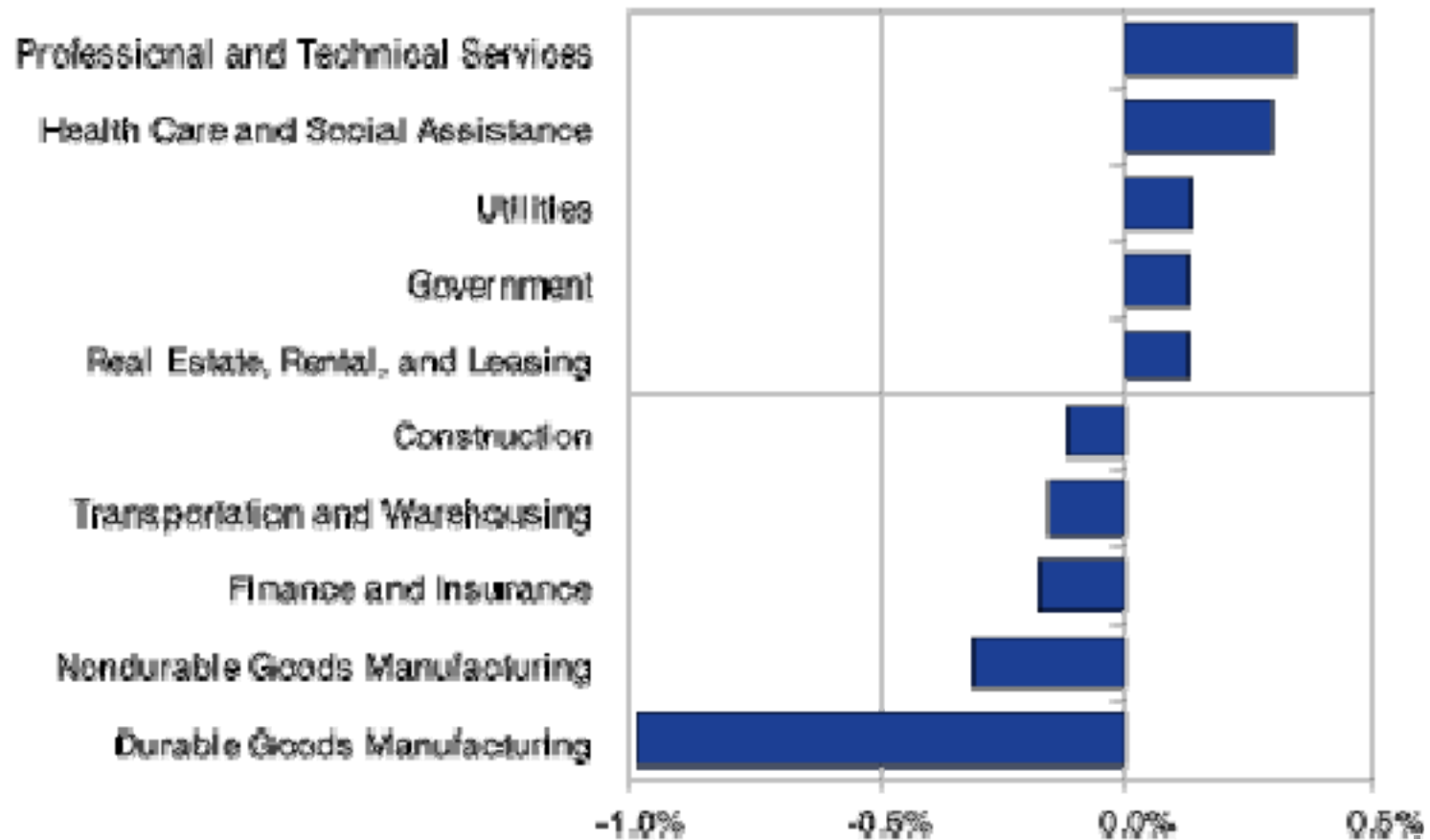
<b>State</b>	<b>Total Coal Production</b>	<b>Underground Mining Jobs</b>	<b>Surface Mining Jobs</b>	<b>Total Jobs</b>	<b>Annual Production Per Miner</b>
<b>West Virginia</b>	152,374	13,190	6,886	<b>20,076</b>	7.59
<b>Kentucky</b>	120,848	11,902	6,057	<b>17,959</b>	6.73
<b>Pennsylvania</b>	66,029	5,099	2,427	<b>7,526</b>	8.77
<b>Wyoming</b>	446,742	128	5,709	<b>5,837</b>	76.54
<b>Virginia</b>	29,740	3,623	1,639	<b>5,262</b>	5.65
<b>Alabama</b>	18,830	2,621	1,574	<b>4,195</b>	4.49
<b>Illinois</b>	32,729	3,507	470	<b>3,977</b>	8.23
<b>Indiana</b>	35,119	1,231	1,627	<b>2,858</b>	12.29
<b>Ohio</b>	22,722	1,384	1,029	<b>2,413</b>	9.42
<b>Colorado</b>	36,322	1,682	547	<b>2,229</b>	16.30
<b>Texas</b>	45,548	0	2,138	<b>2,138</b>	21.30

# Indiana The Most Manufacturing Intensive State in the U.S

## Manufacturing's Share of Total GDP in Indiana MSAs



## Industries with the Largest Positive and Negative Contributions to Indiana's Real GDP Change, 2008



Source: IBRC, using data from the Bureau of Economic Analysis, 2008

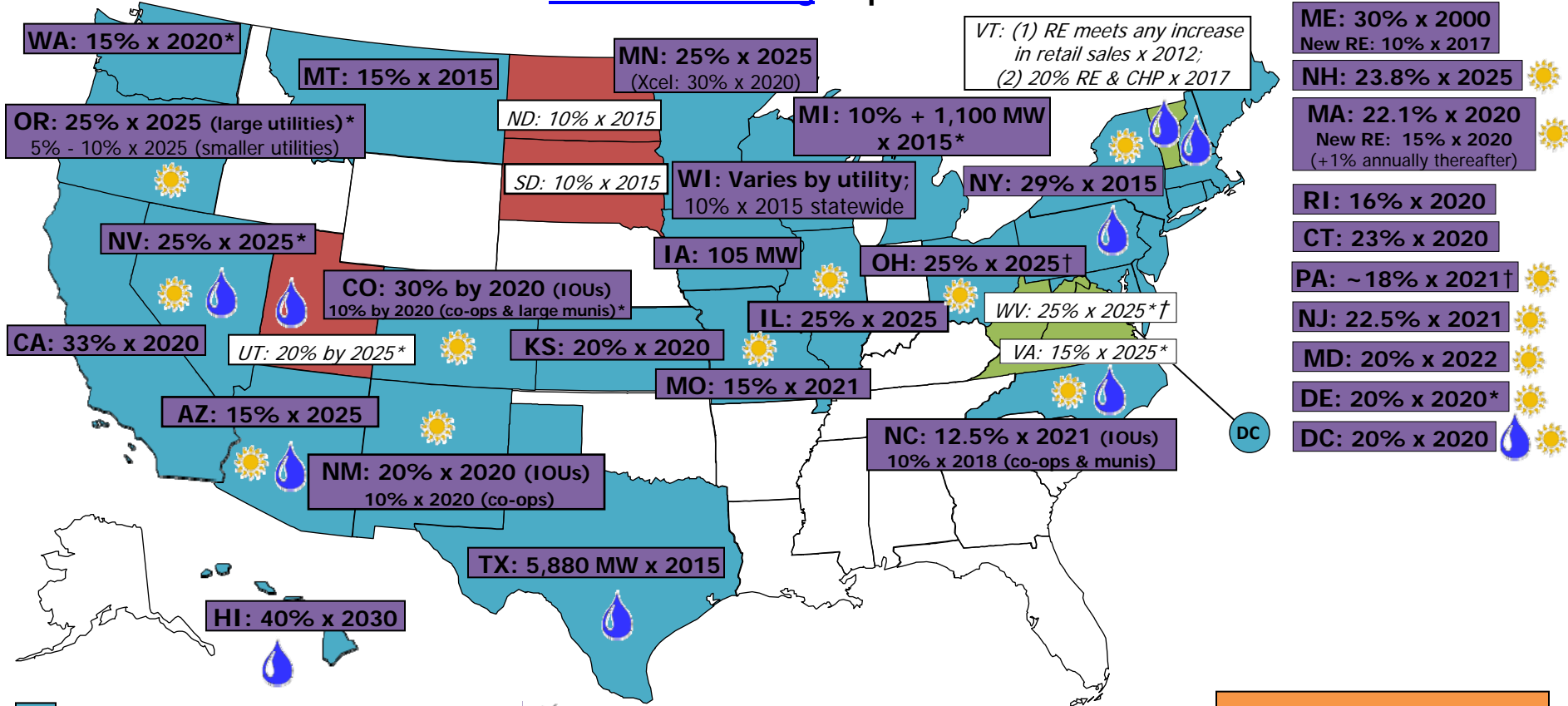
## Indiana's Compensation by Industry, 2007 – Manufacturing #1

Rank	Industry	Compensation (in Thousands)	Share of Total Nonfarm Compensation	Percent Change, 2006-2007
1	Manufacturing	36,962,044	26.1%	0.1%
2	Government and Government Enterprises	21,780,476	15.4%	3.8%
3	Health Care and Social Assistance	14,909,046	10.5%	5.1%
4	Retail Trade	8,962,439	6.3%	1.2%
5	Construction	8,348,004	5.9%	6.6%
6	Wholesale Trade	7,778,635	5.5%	5.0%
7	Finance and Insurance	6,557,105	4.6%	0.9%
8	Professional and Technical Services	6,156,494	4.4%	8.2%
9	Transportation and Warehousing	5,701,462	4.0%	3.0%
10	Administrative and Waste Services	4,757,514	3.4%	5.5%



# Current Renewable Portfolio Standards State by State

[www.dsireusa.org](http://www.dsireusa.org) / April 2010

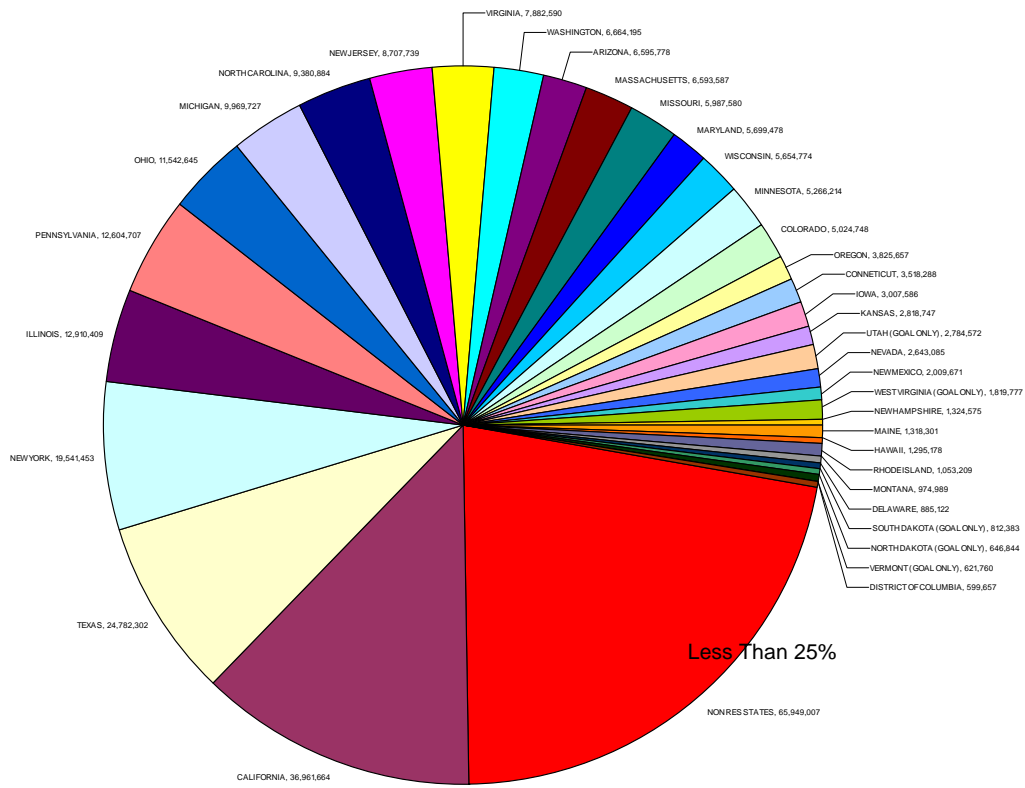


- State renewable portfolio standard
- State renewable portfolio goal
- Solar water heating eligible
- Minimum solar or customer-sited requirement
- \* Extra credit for solar or customer-sited renewables
- † Includes non-renewable alternative resources

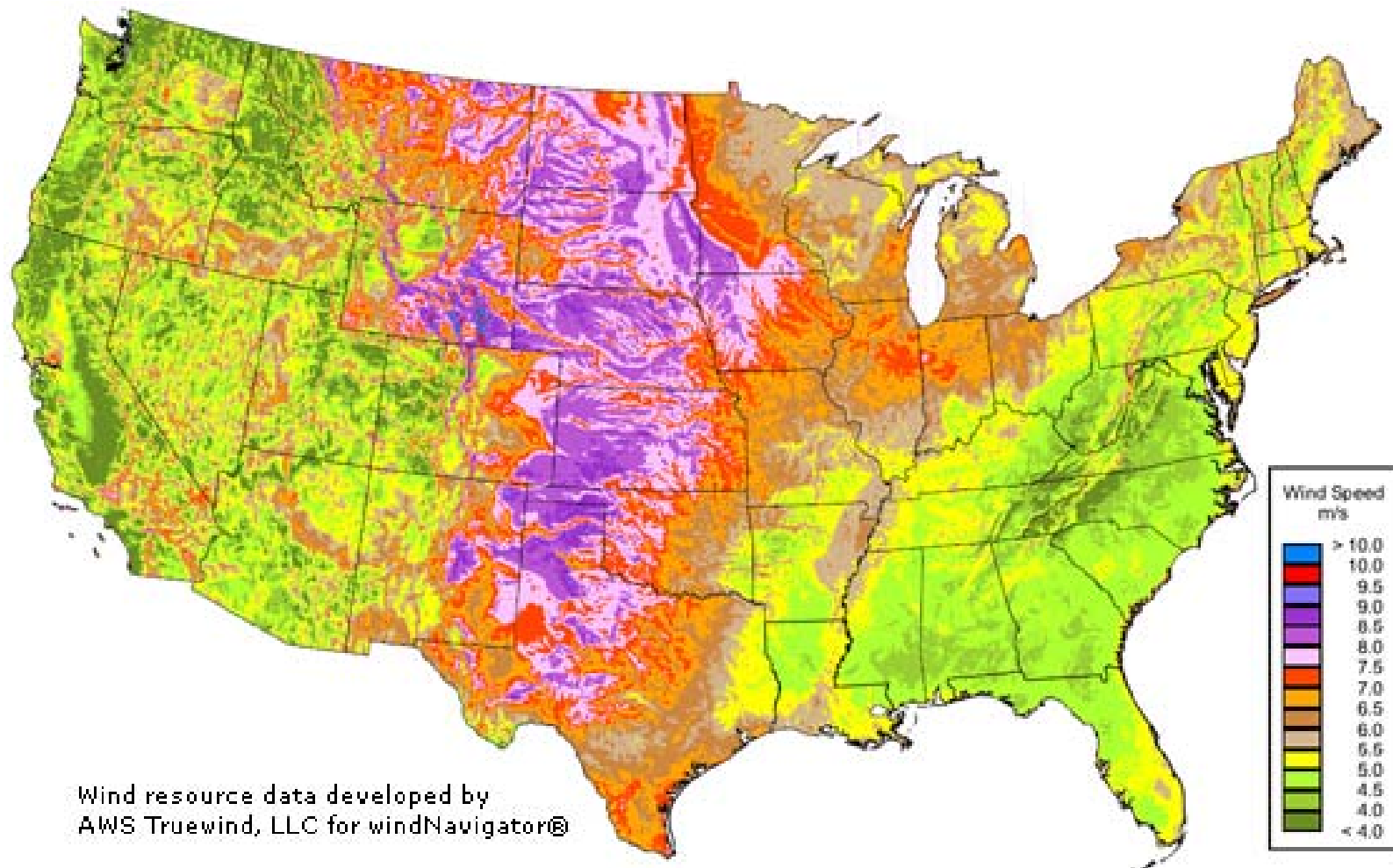
**29 states + DC have an RPS**  
*(6 states have goals)*

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

# Current Renewable Energy Standards State by State Population – RES States: >75%



# National Renewable Energy Laboratory – AWSTRU Wind New U.S. Land Wind Potential 300% Higher Than Previously Estimated

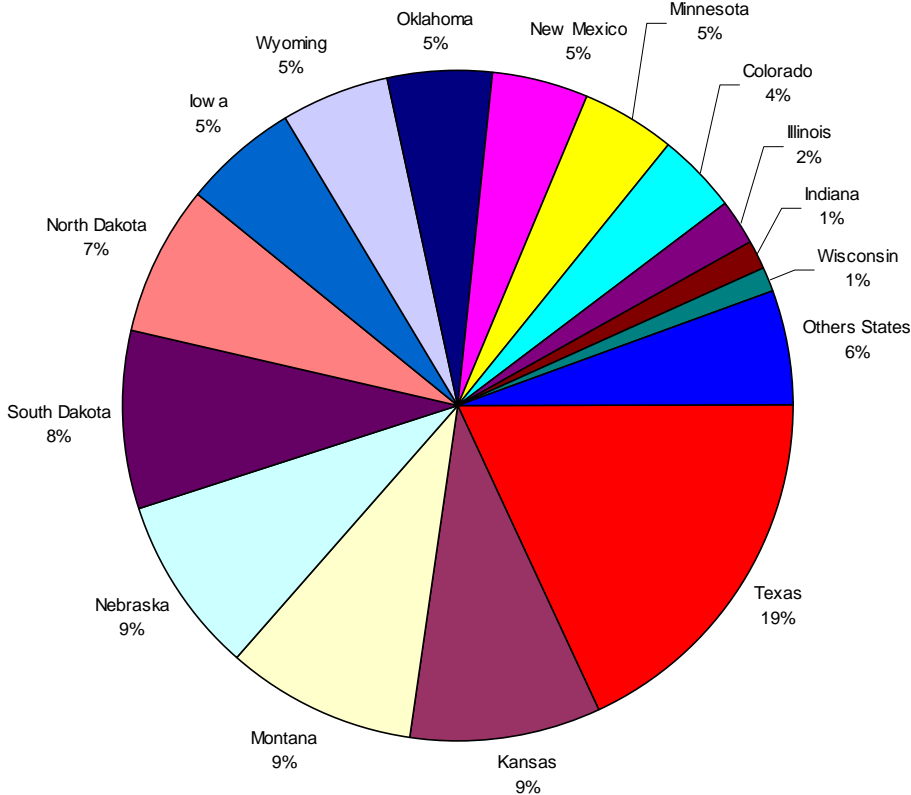


Wind resource data developed by  
AWS Truewind, LLC for windNavigator®

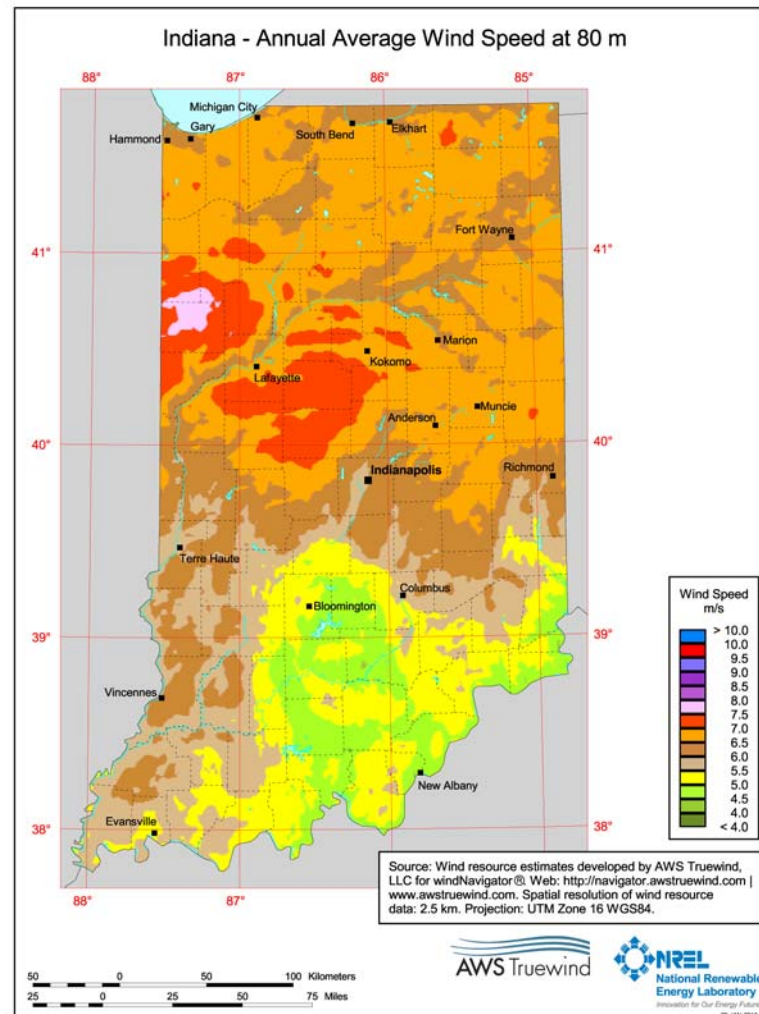
## Land Wind Energy Potential – Installed Capacity – Top 15 States

<u>State</u>	<u>Megawatts of Rated Capacity</u>	
1 Texas	1,901,529.70	18.18%
2 Kansas	952,370.90	9.11%
3 Montana	944,004.40	9.03%
4 Nebraska	917,998.70	8.78%
5 South Dakota	882,412.40	8.44%
6 North Dakota	770,724.30	7.37%
7 Iowa	570,714.20	5.46%
8 Wyoming	552,072.60	5.28%
9 Oklahoma	516,822.10	4.94%
10 New Mexico	492,083.30	4.70%
11 Minnesota	489,270.60	4.68%
12 Colorado	387,219.50	3.70%
13 Illinois	249,882.10	2.39%
14 Indiana	148,227.50	1.42%
15 Wisconsin	103,757.10	0.99%
Others States		5.54%
Top 15 State Total:	9,879,089.40	94.46%
US 48 State Total:	10,458,945.00	100%

# Land Wind Energy Potential - Installed Capacity Top 15 States as of February 4, 2010

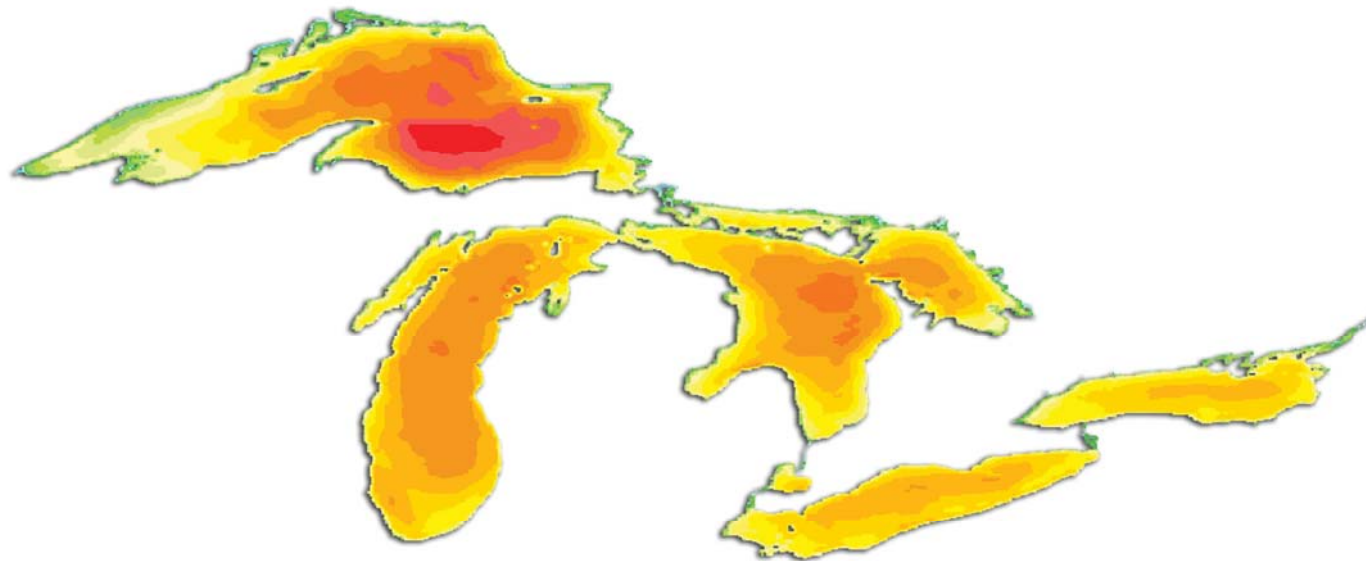


# Indiana "On Land" Wind Potential – Only 14<sup>th</sup> In The U.S. 36,420 Sq. M. With 148,228 MW Rated Capacity

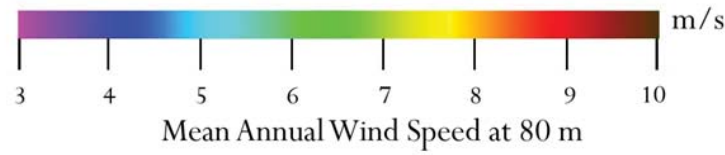


# Off-Shore Development Potential Also Increases

## WIND RESOURCE OF THE GREAT LAKES



windNAVIGATOR®  
Chart Your Course™  
AWS Truewind  
POWERFUL SOLUTIONS™

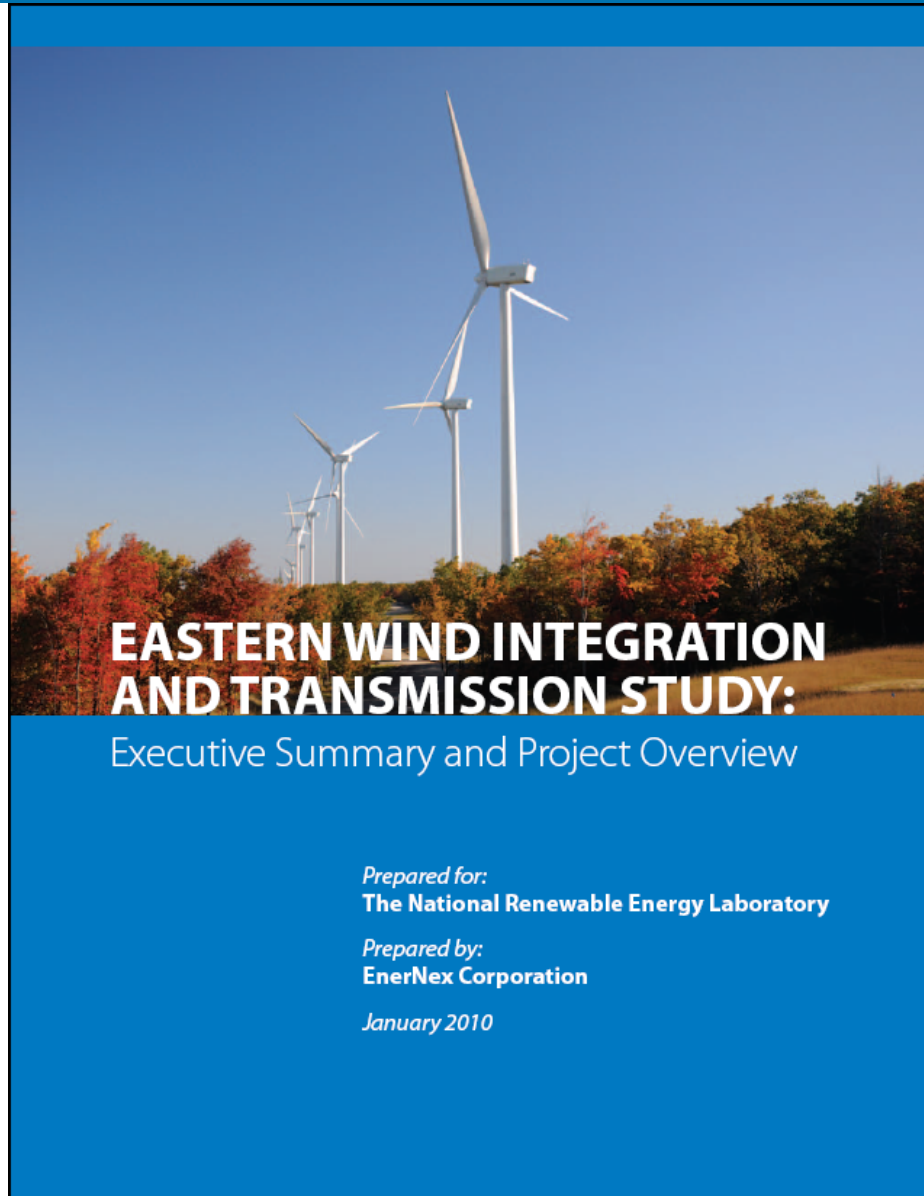


**Wind Resource of the Great Lakes  
at 2.5km grid cell resolution.**  
SOURCE: Data and image developed by  
AWS Truewind® for windNavigator®.  
[www.windnavigator.com](http://www.windnavigator.com) | [www.awstruewind.com](http://www.awstruewind.com).

## The Five Great Lakes – 295,000 Sq. m.







# **EASTERN WIND INTEGRATION AND TRANSMISSION STUDY:**

Executive Summary and Project Overview

*Prepared for:*  
**The National Renewable Energy Laboratory**

*Prepared by:*  
**EnerNex Corporation**

*January 2010*

## SCENARIO DESCRIPTION

The four scenarios are as follows:

- Scenario 1, 20% penetration—High Capacity Factor, Onshore
- Scenario 2, 20% penetration—Hybrid with Offshore
- Scenario 3, 20% penetration—Local with Aggressive Offshore
- Scenario 4, 30% penetration—Aggressive On- and Offshore

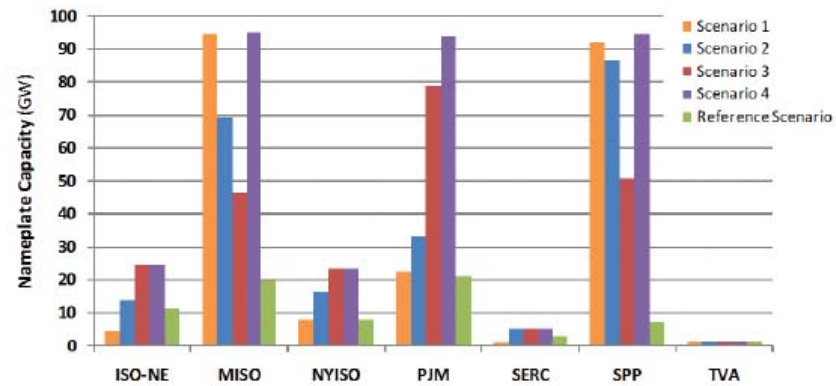
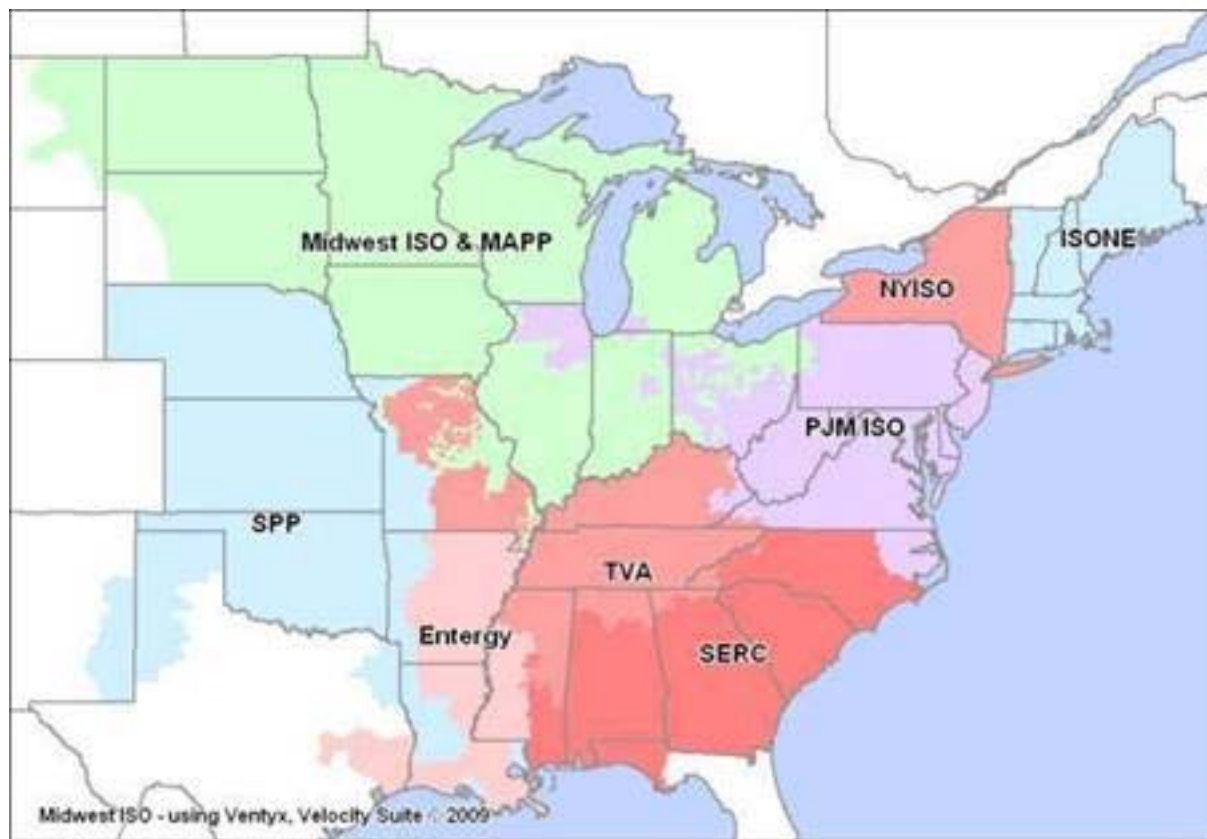


Figure 2. Summary of Installed wind generation capacity by operating region for each scenario (Notes: ISO-NE = New England Independent System Operator, MISO = Midwest ISO, NYISO = New York ISO, PJM = PJM Interconnection, SERC = Southeastern Electric Reliability Council, SPP = Southwest Power Pool, TVA – Tennessee Valley Authority)

TABLE 1. TOTAL AND OFFSHORE WIND IN THE SCENARIOS								
Region	Scenario 1 20% High Capacity Factor, Onshore		Scenario 2 20% Hybrid with Offshore		Scenario 3 20% Local, Aggressive Offshore		Scenario 4 30% Aggressive On- and Offshore	
	TOTAL (MW)	Offshore (MW)	Total (MW)	Offshore (MW)	Total (MW)	Offshore (MW)	Total (MW)	Offshore (MW)
MISO/ MAPP <sup>a</sup>	94,808		69,444		46,255		95,046	
SPP	91,843		86,666		50,958		94,576	
TVA	1,247		1,247		1,247		1,247	
SERC	1,009		5,009	4,000	5,009	4,000	5,009	4,000
PJM	22,669		33,192	5,000	78,736	39,780	93,736	54,780
NYISO	7,742		16,507	2,620	23,167	9,280	23,167	9,280
ISO-NE	4,291		13,837	5,000	24,927	11,040	24,927	11,040
<b>TOTAL</b>	<b>223,609</b>	<b>0</b>	<b>225,902</b>	<b>16,620</b>	<b>230,299</b>	<b>64,100</b>	<b>337,708</b>	<b>79,100</b>

<sup>a</sup> MAPP stands for Mid-Continent Area Power Pool.



# Moving Wind Turbines by Ship



- Indiana's Lake Michigan port handles wind turbines shipment from Europe



# KRIEG DEVAULT OVERVIEW

- For clients throughout the Midwest and across the country, Krieg DeVault provides clear, practical legal advice that takes in the big picture without losing sight of the details. That's how we approach your legal challenges and how we deliver solutions that are focused on your needs, your business and your world.
- While much has changed since Krieg DeVault's founding in Indianapolis, over 130 years ago, our commitment to listening to our clients has not. Client satisfaction and loyalty have allowed us to grow from a two-lawyer general practice in the mid-1870s to our current status as a premier business-focused law firm. From offices that reach from the nation's heartland to the Sun Belt, we are ideally positioned to serve the needs of our diversified client base.
- Financial institutions, global manufacturers, national healthcare providers, successful organizations of various sizes and market focus, as well as individuals all rely on us for solutions that create success. They know their important cases, sophisticated transactions, and complex business issues require the big picture approach that has become a Krieg DeVault hallmark.

**"Clients expect us to help them achieve their goals. They entrust us with their most important legal matters. At Krieg DeVault, we never take that trust for granted. We learn our clients' businesses; we communicate openly, we follow up frequently; we respond timely; and we are always available. In short, we develop a relationship with our clients. Our clients' goals become our goals."**

Michael E. Williams, Managing Partner

# KRIEG DEVAULT GLOBAL AFFILIATION

## **Meritas. Law Firms Worldwide.**

No matter what their legal needs, we can ensure that our clients are well represented in jurisdictions around the world thanks to Krieg DeVault's invitation-only affiliation with Meritas. One of the world's largest and most respected legal resources, Meritas is an integrated, non-profit alliance of more than 170 independent commercial law firms located in over 60 countries. That means no fewer than 6,500 experienced lawyers are available to our clients worldwide.

## **Unsurpassed Advantages**

As a Meritas member, Krieg DeVault can offer our clients a wealth of advantages not available through even the largest multinational law firms. Meritas member firms, including our own, must meet rigorous service standards and undergo regular recertification to ensure that all client inquiries are answered within 24 hours, to demonstrate compliance with the highest ethical and client satisfaction benchmarks, and to provide alternative dispute resolution options. Member firms are linked by common technology platforms to facilitate cross-border teams, and comprehensive databases provide information on lawyer capabilities and firm client evaluations.

## **International Perspective**

Meritas members invest in improving services and resources rather than opening costly branch offices. All Meritas firms offer the full complement of litigation and corporate services necessary to handle business matters in any industry. Since Meritas firms are well established in their local markets, our clients have the advantage of a legal partner who knows the nuances of local legal procedures and business customs. When combined with the international perspective of our firm's own lawyers (who handle multinational matters ranging from dispute resolution to energy and financing transactions), Krieg DeVault's participation in Meritas gives our clients the global resources they need, coupled with the value and service they want.

# KRIEG DEVAULT LOCATIONS

## Working Where Clients Need Us

Krieg DeVault lawyers are at work where our clients do business, in major urban centers and dynamic smaller communities throughout the Midwest and Southeast. Some of our offices offer a broad range of legal services, while others are more focused on specific legal needs. They all, however, reflect the firm's commitment and capabilities for achieving solutions to real-world legal issues.

### [Indianapolis Office](#)

One Indiana Square  
Suite 2800  
Indianapolis, IN 46204-2079  
P: (317) 636-4341  
F: (317) 636-1507

### [Carmel Office](#)

12800 North Meridian Street  
Suite 300  
Carmel, IN 46032-9422  
P: (317) 566-1110  
F: (317) 636-1507

### [Noblesville Office](#)

949 E. Conner Street  
Suite 200  
Noblesville, IN 46060  
P: (317) 773-7818  
F: (317) 773-7918

### [Schererville Office](#)

833 West Lincoln Highway  
Suite 410W  
Schererville, IN 46375  
P: (219) 227-6100  
F: (219) 227-6101

### [Mishawaka Office](#)

4101 Edison Lakes Parkway  
Suite 100  
Mishawaka, IN 46545  
P: (574) 277-1200  
F: (574) 277-1201

### [Chicago Office](#)

30 North LaSalle Street  
Suite 3516  
Chicago, IL 60602  
P: (312) 423-9300  
F: (312) 423-9303

### [Atlanta Office](#)

1230 Peachtree Street NE  
Suite 2490  
Atlanta, GA 30309  
P: (404) 607-0600  
F: (404) 665-3628

### [Boca Grande Office](#)

431 Palm Avenue  
P.O. Box 1911  
Boca Grande, FL 33921  
P: (941) 964-0018  
F: (317) 636-1507