

# Location Trends of Today's Thriving Industries

*Presented to:*

**MAEDC**

*Presented by:*



# Not that many slides...Promise!



# About FCG

- Site selection, economic development, real estate & workforce consulting company
- Founded by Deane Foote, CEcD
  - 30+ years development experience
  - Worked for Jacobs Carter-Burgess, Paragon Decision Resources, Fantus, Urbana-Champaign (IL) EDC
  - Worked on site selection projects that created over 5,000 jobs & \$900 million in capital investment in recent years
  - Completed many successful economic development plans that have created hundreds of jobs.

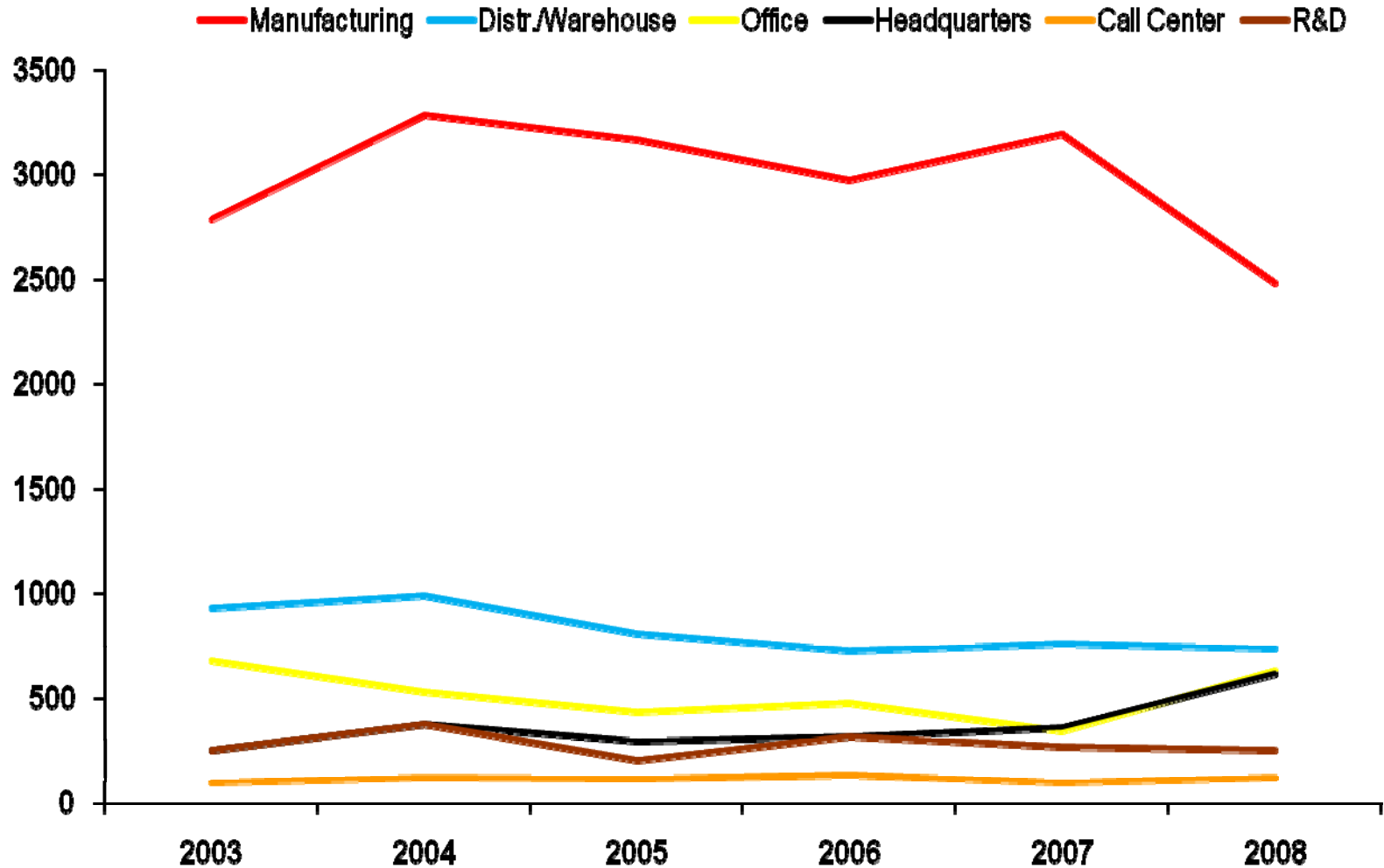


# Objectives Today

- Understanding location/expansion trends
- Look at growth sectors
- Look at renewable (clean) energy growth
- Understanding your growth sectors
- Solar plant attraction
- Wind turbine plant attraction

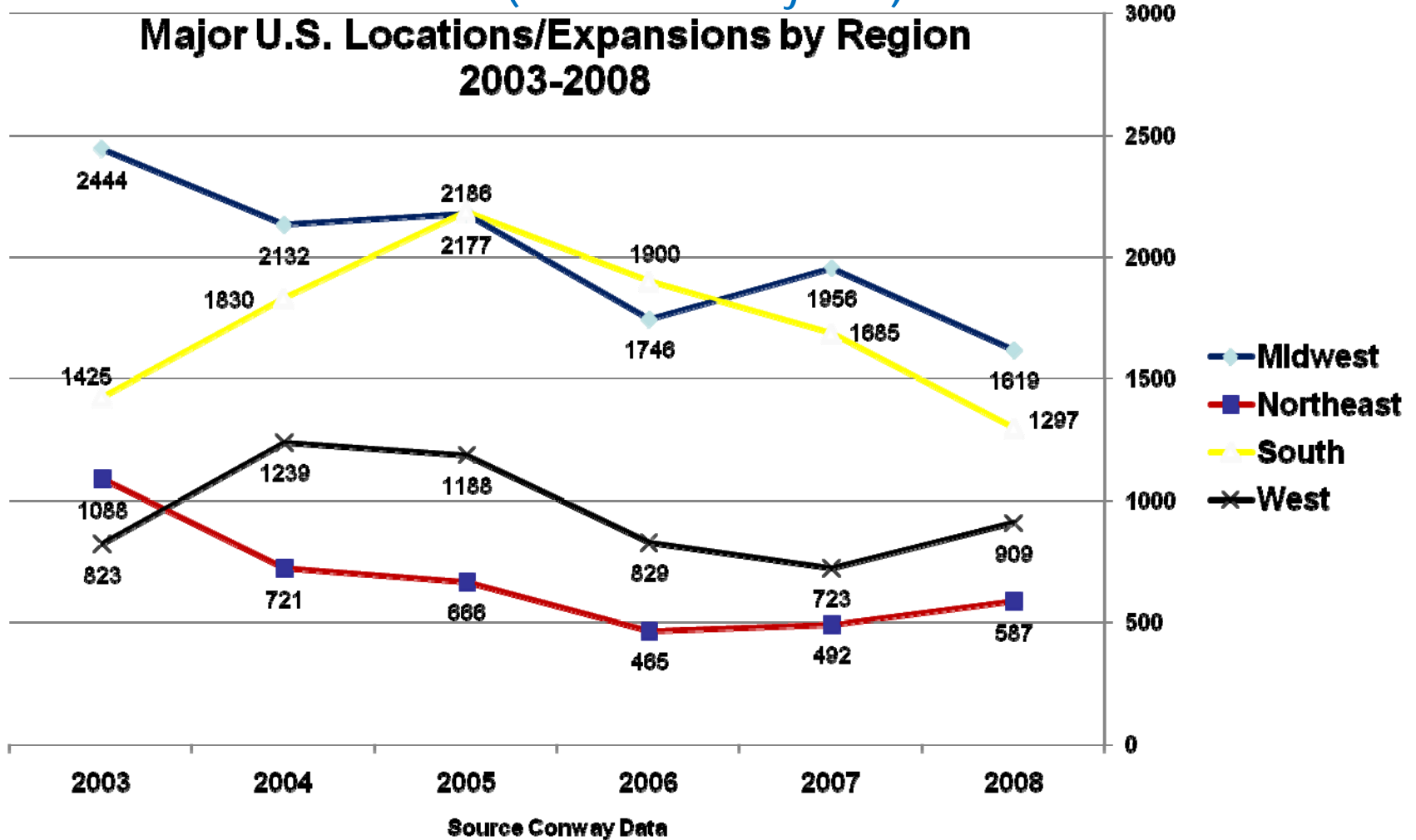
# US Locations/Expansions

2003-2008 (Source: Conway Data)



# Regional Location Trends

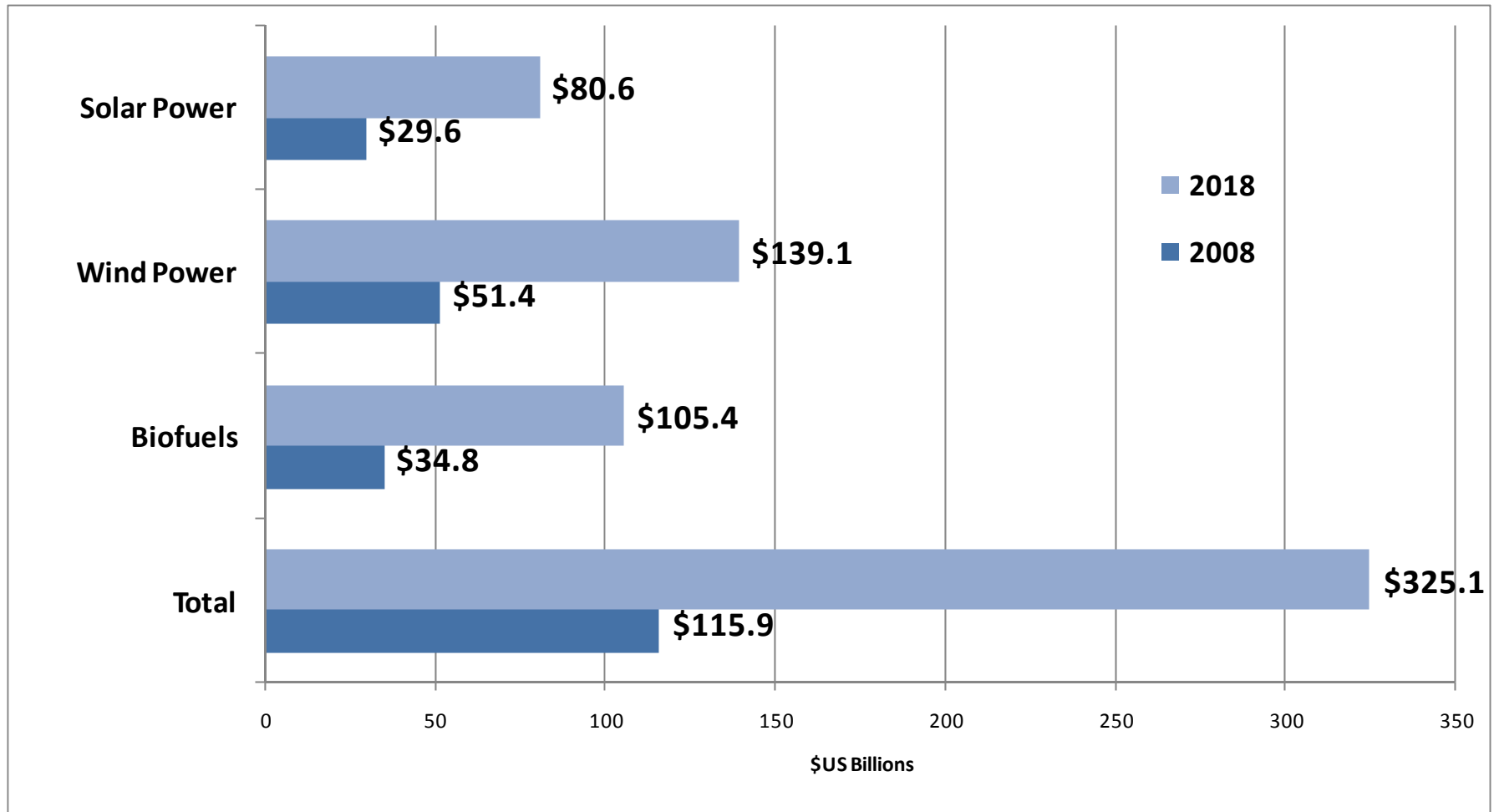
(Source: Conway Data)



# Sectors expected to grow nationally

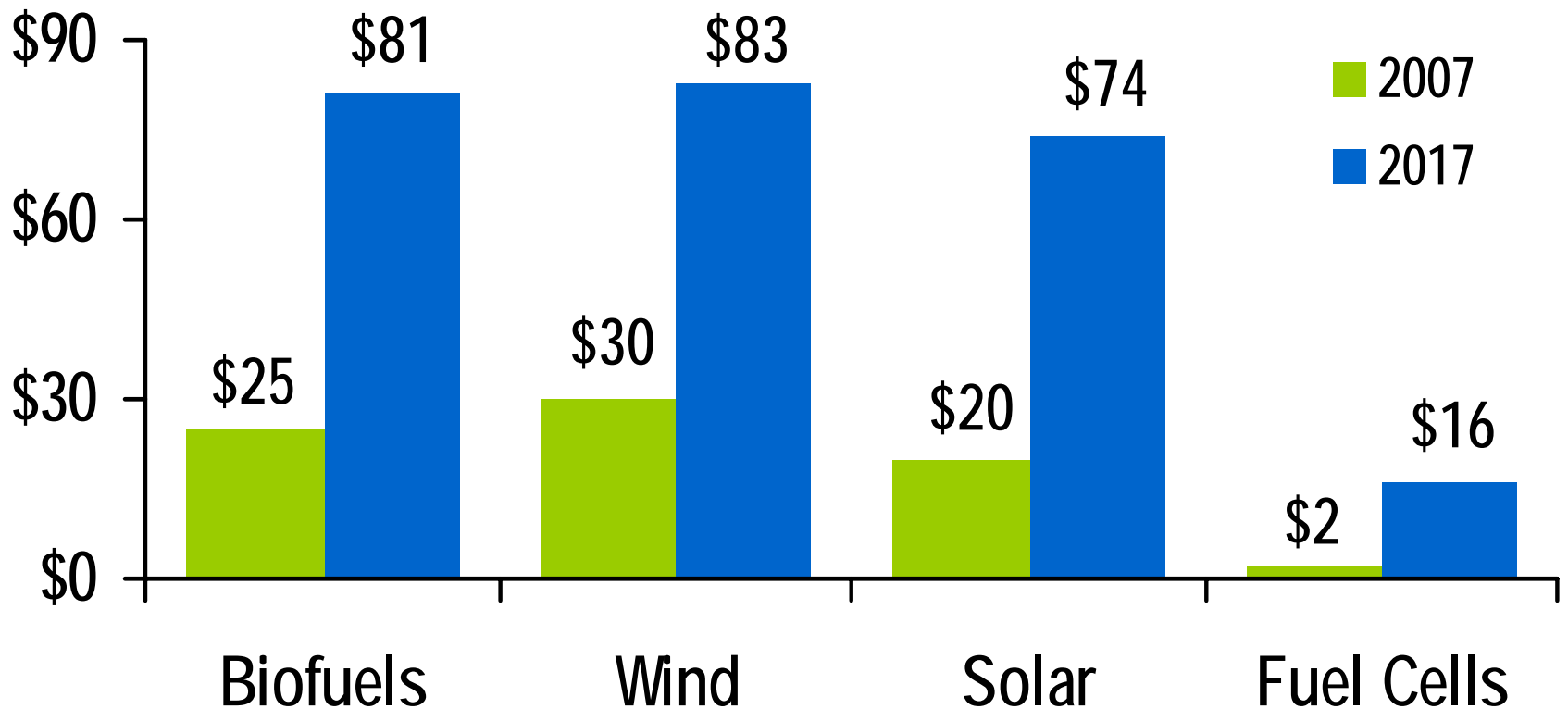
- **Renewable Energy**
  - Almost 3x growth in wind, biofuels, solar, and fuel cells (2008-2018)
- **Data Centers/Management**
  - Servers has grown from 2.6 million to 11.6 million in the past decade
- **Defense Security Systems** – cyber communications; UAV; border related
- **Creative Media**
  - Video game revenues now exceed those of music and film industries
- **Software Development**
  - Mobile devices, netbooks, “wearable” technology; very high speed computing
- **Healthcare and Medical Devices**
  - Health services, medical supplies, and device manufacturing
  - **Biotechnology and Life Sciences** - Gene and stem cell research
- **Warehouse/Distribution (DC)**

# Global Clean-Energy Projected Growth, 2008-2018 (\$US Billions)





# U.S. Clean-Energy Projected Growth, 2007-2017 (\$US Billions)



# Renewable Projects 2002-09

(Source:FDI Intelligence)

- Top Source Countries - #
- Germany - 193
- USA - 151
- Spain – 149
- UK – 95
- France - 92
- Top Destination Countries - #
- USA – 119
- Spain – 106
- France – 82
- UK – 76
- China - 56

# Top Renewable States

- Top Ranked for Building Solar Mfg (Source:Greentech Media)
- Oregon
- Michigan
- Arizona
- Washington
- Pennsylvania
- Ohio
- New Mexico
- Texas
- New York
- Colorado
- Top Renewables Destinations - # (Source: Fdi)
- Texas – 33
- California – 20
- Illinois – 14
- Indiana – 13
- Nebraska – 10
- Iowa – 10
- New York – 10
- Pennsylvania - 10

# Foreign investment in renewables in US will be huge!

- \$33 billion in 2009-10; 1/3 from Europe
  - Iberdrola Renovables (Spain) –
    - #2 in wind; will spend \$2 billion/year thru 2012
  - EDP Renovaveis (Portugal)
    - #3 in wind; will spend \$5 billion thru 2012
  - Vestas (Denmark) – world's largest turbine co
    - GE - #2; Gamesa (Spain) - #3
    - 3 new plants in Colorado alone by 2010
  - Investors scrambling to grab stimulus \$!

Source: *Business Week*

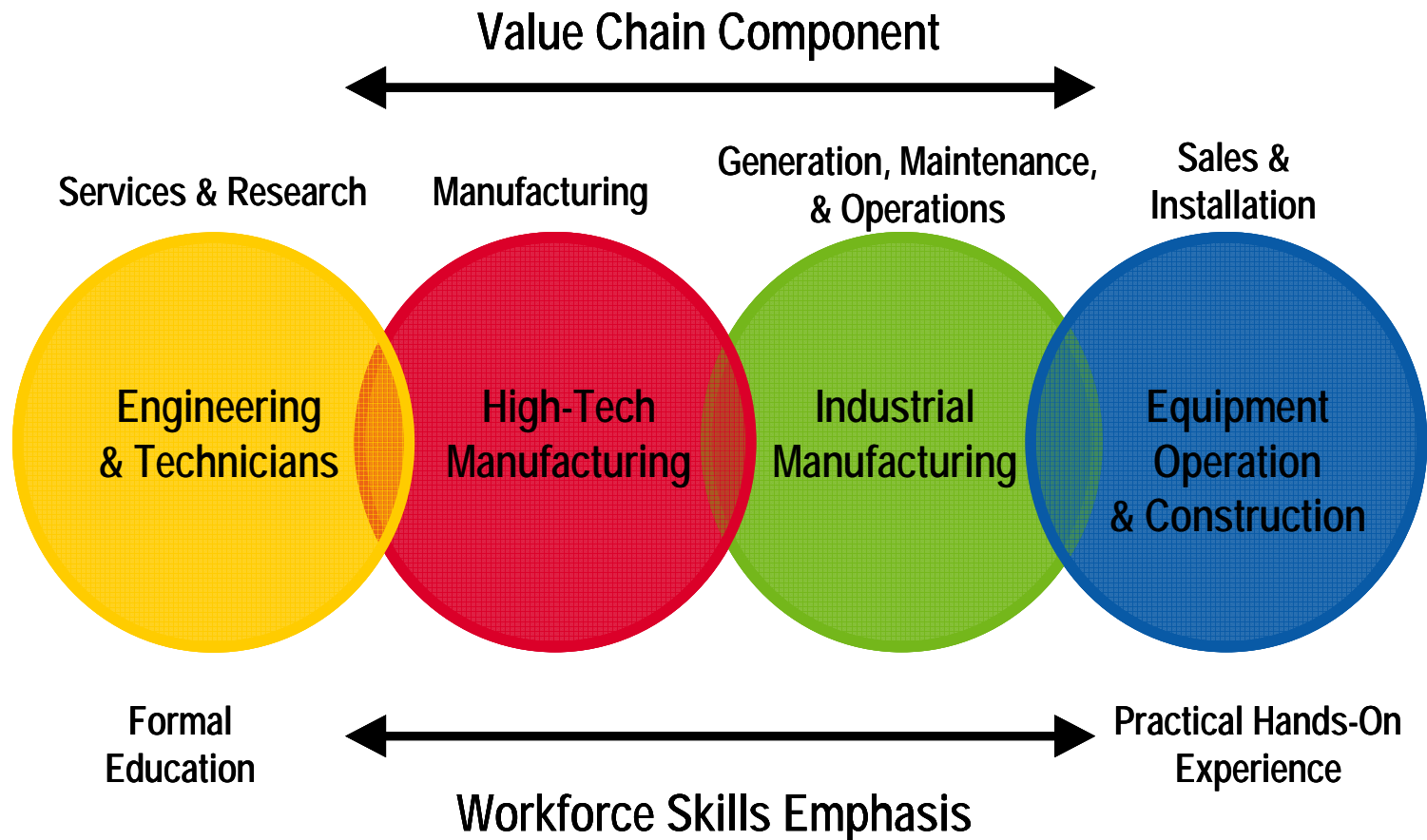
# Foreign Prospects will need “hand holding”

- Understanding power company structures and politics:
  - Investor-owned versus public/coops, etc.
  - Commerce Commission regulations & goals
  - *We are years behind Europe!*
- Permit process for building farms
  - In Spain permits can be obtained in weeks
  - APS (AZ) RFP process can take up to 2 years
  - Need for extensive public outreach here
  - Water rights
- Pricing structures
  - Per Kwh to produce: Europe-\$0.28; U.S.- \$0.40
- Grid constraints/responsibilities; storage
- Incentives

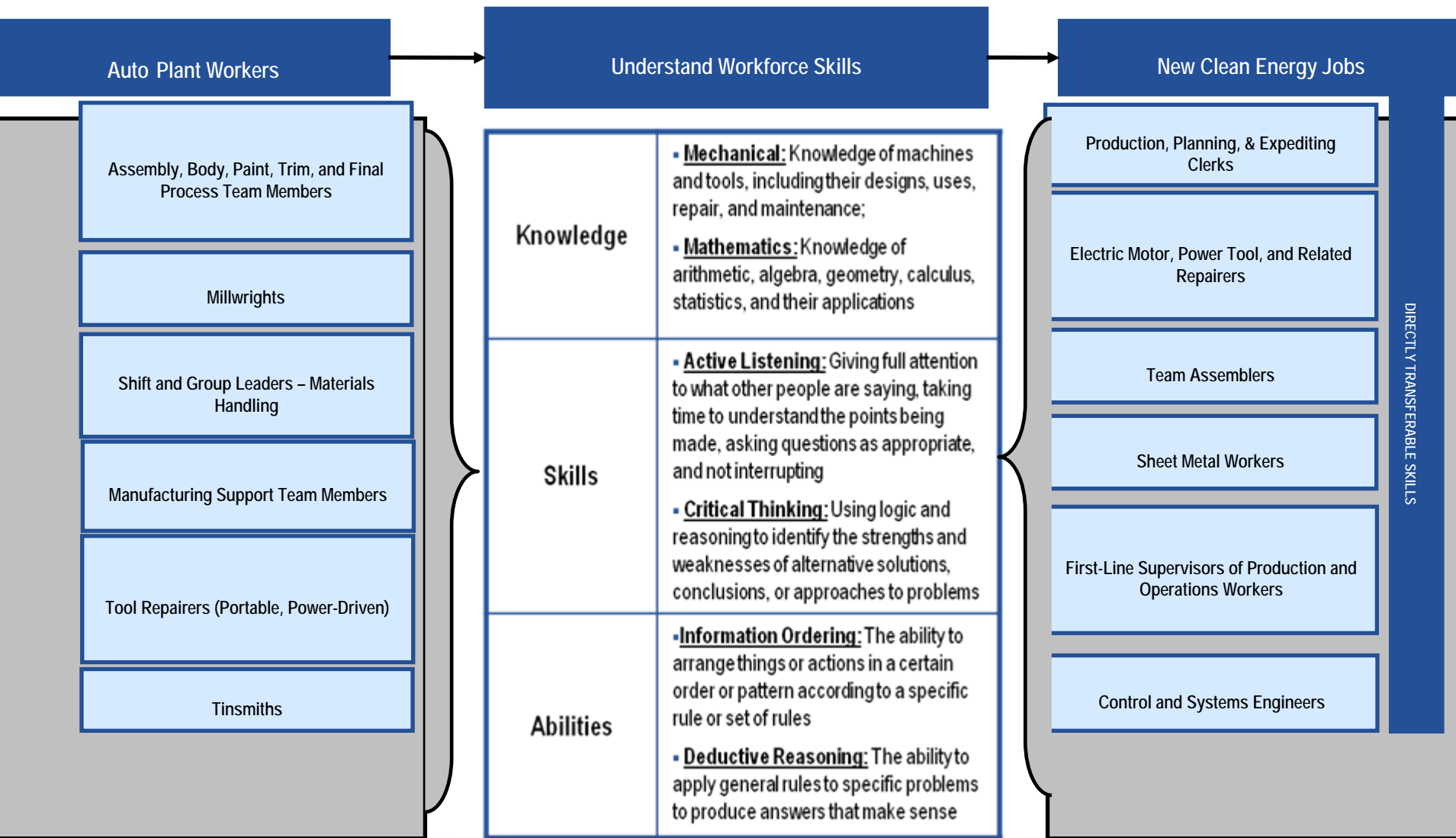


# Renewable Energy Workforce

## RENEWABLE ENERGY WORKFORCE DEVELOPMENT PIPELINE



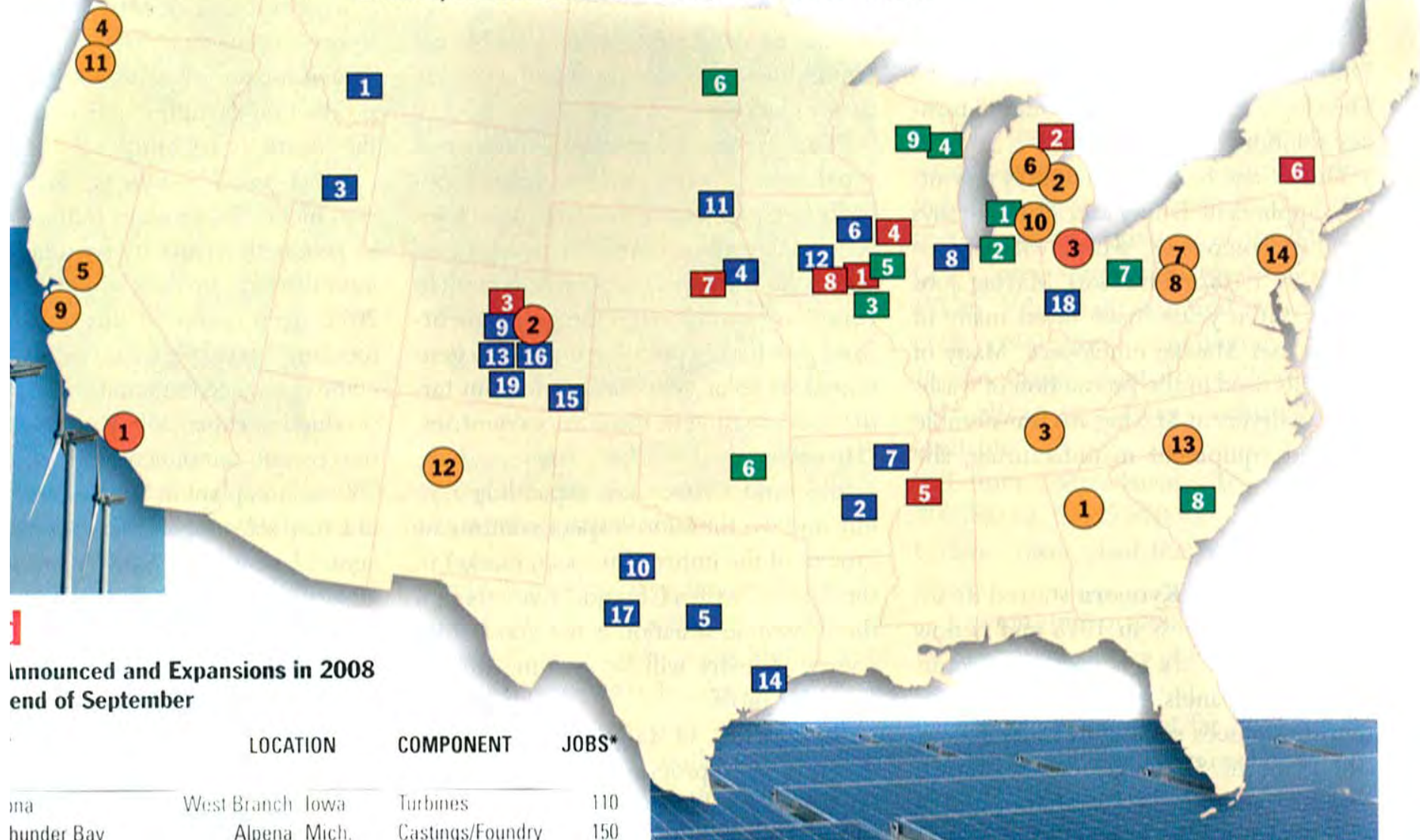
# Importance of Transferable Skills





# Solar & Wind Industry Manufacturing Facilities

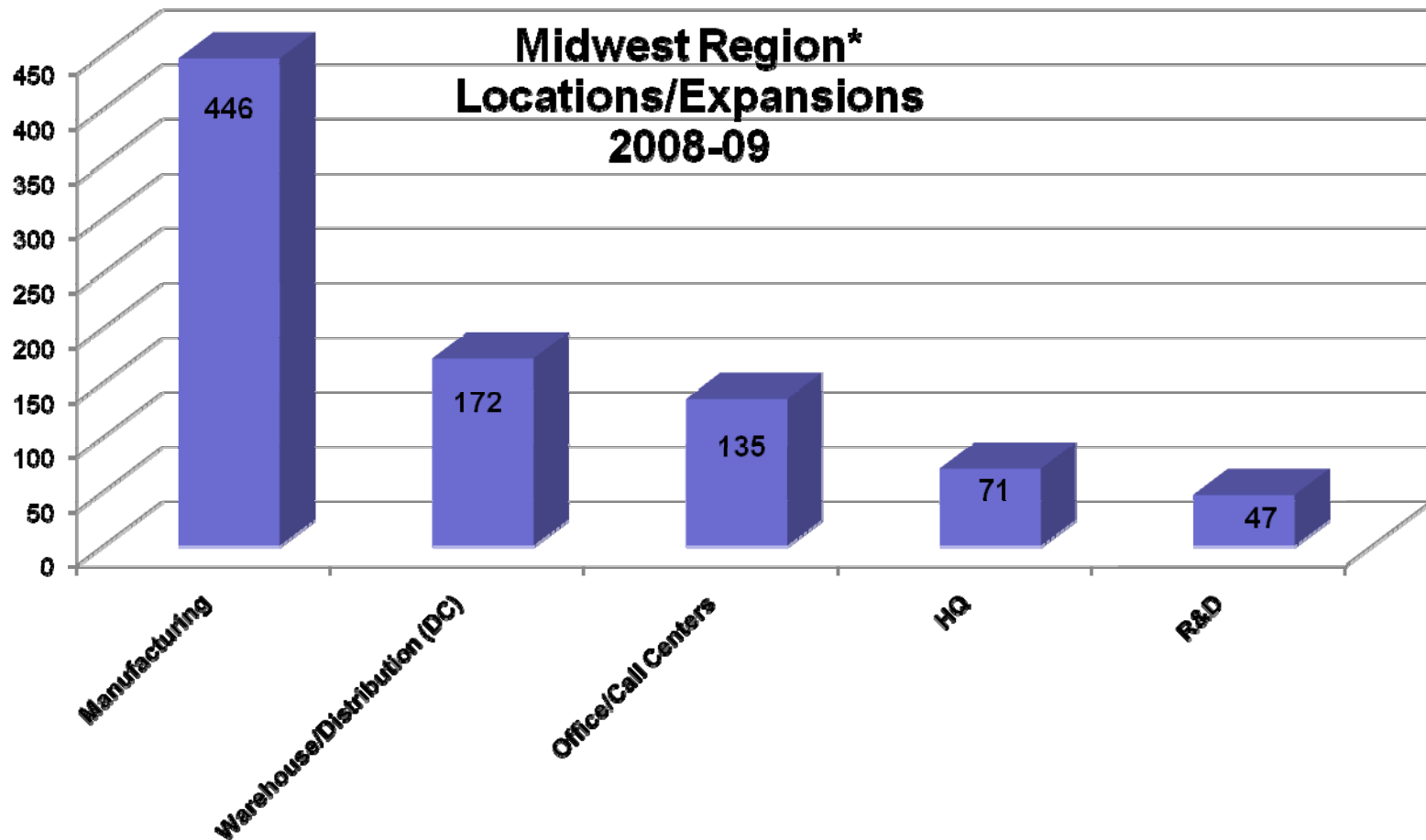
Online, Announced and Expansions in 2008



(Source: *Site Selection Magazine*)



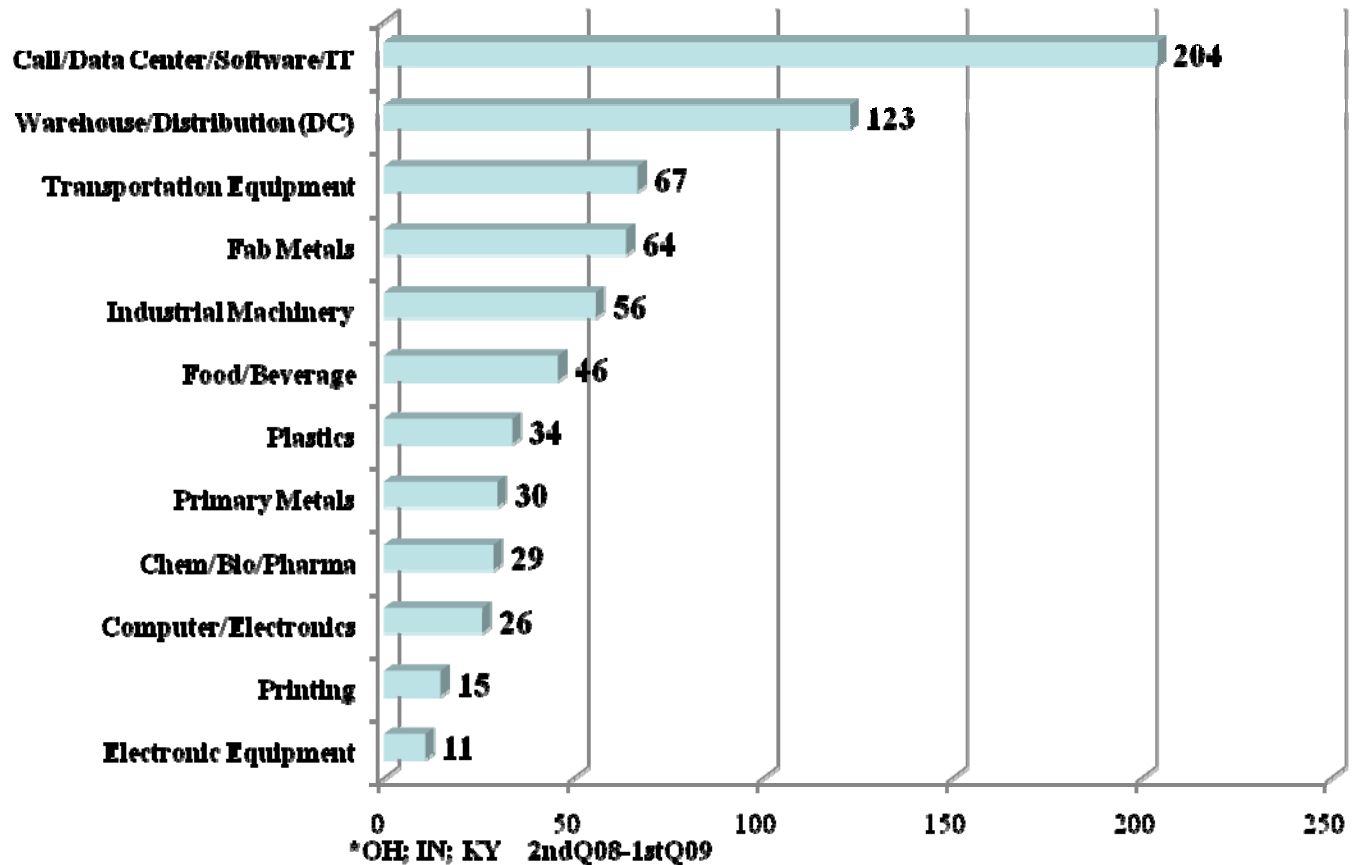
# Understand Your Active “Sectors”



\*OH, IN & KY; 2ndQ08-1stQ09; Source: Foote Consulting & Conway Data

# *Your Active “Sectors”*

## **Midwest Region\* Major Locations/Expansions 2008 - 09**



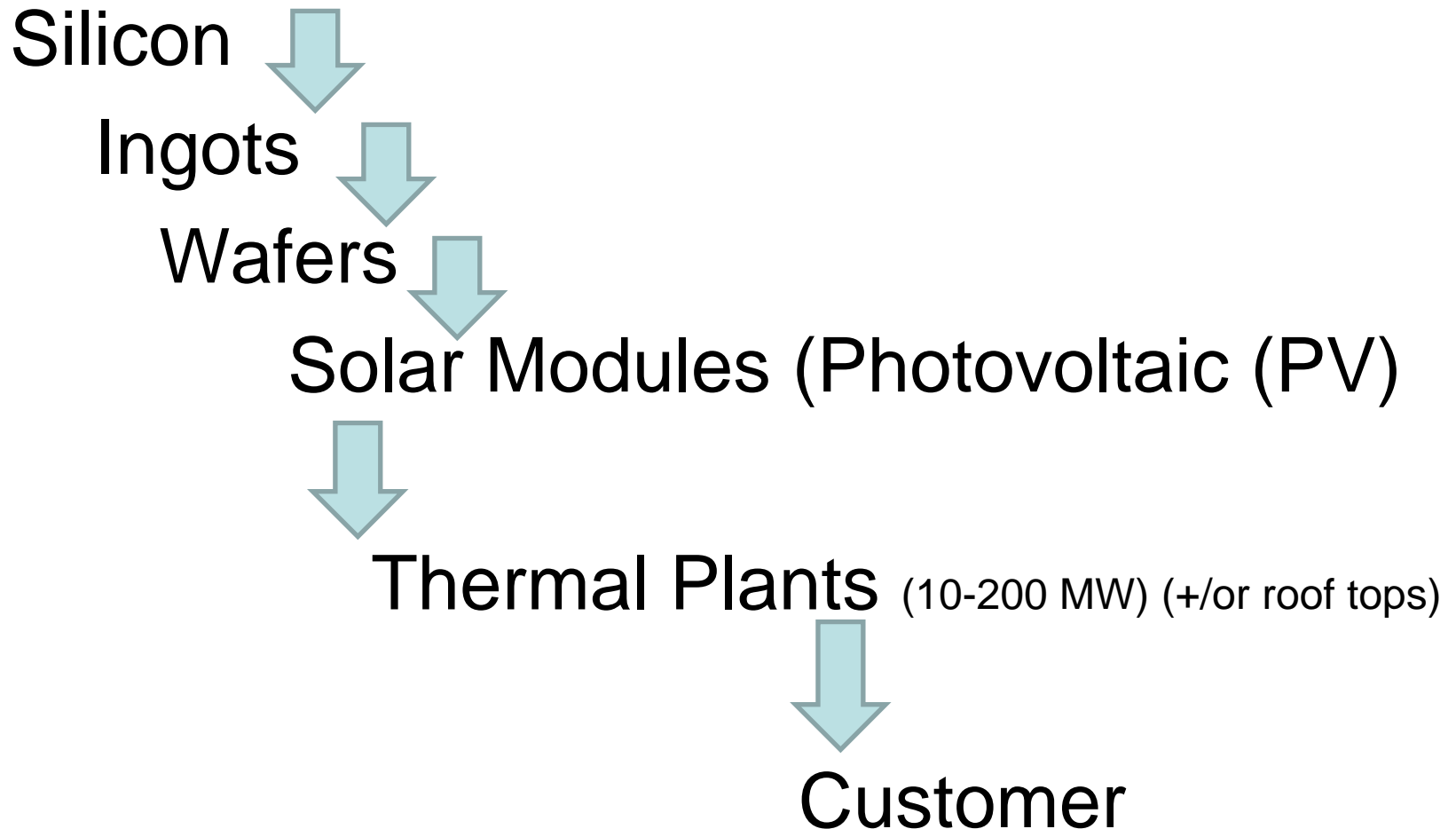
Source: Foote Consulting Group, LLC from Conway Data

# Renewables are active & will locate again!

## Major Deals (OH, IN, KY) - 2<sup>nd</sup> Half, 2008

<i>Location</i>	<i>Company</i>	<i>Product/Service</i>	<i>Jobs</i>	<i>Sq.Ft.</i>
<b>Franklin, KY</b>	<b>Integrity Auto</b>	<b>Electric Autos</b>	<b>4000</b>	<b>1,000,000</b>
<b>Indianapolis, IN</b>	<b>EnerDel</b>	<b>Lithium Ion Batteries</b>	<b>855</b>	
<b>Muncie, IN</b>	<b>Brevini</b>	<b>Wind Turbines</b>	<b>455</b>	<b>150,000</b>
Hamilton, OH	BAE Systems	Metals	526	346,000
West Chester, OH	Humana	Call Center	400	140,000
Monroe, OH	Home Depot	Retail Products	500	657,000
Plainfield, IN	Amazon	Retail Products	350	950,000
Jeffersonville, IN	CLC Air	Air Filtration Systems	426	450,000
<b>Waterford , OH</b>	<b>Soloil</b>	<b>Silicon</b>	<b>350</b>	<b>150,000</b>
<b>Perrysburg, OH</b>	<b>1<sup>st</sup> Solar</b>	<b>Solar Panels</b>	<b>134</b>	<b>500,000</b>

# “Life Cycle” of Solar Production



# Solar Photovoltaic (PV) Plant Site Criteria

- Location with good access to market
  - supports supply chain for raw materials (glass, frames)
  - finished modules delivered to solar sites
- Skilled workers trained in automation, clean room operations
- Reliable and low cost electricity
- Buildings that allow putting solar modules on the roof
- Communities that support green and sustainable practices
- Attractive/clean environment for plant
- Incentives (especially sizable tax credits).

# Wind Turbine Site Criteria

Nacelle units (gearbox, generator and transformer components) & Blade assembly

- Access to market - wind farms
- Available labor (up to 1000 jobs) - machining and electronics skills with good quality
- Rail (more than one provider preferred)
- Sites (up to 200 acres)/available industrial buildings (up to 500,000 sq.ft./high ceilings)
- Free of earthquake or flood zones
- Training – college offering mechanical and electrical engineering degrees; plus machining and electronics
- Incentives and positive state/local policies.

# Case Study: “Project Gust”

- Based on a hypothetical, yet realistic project: a turbine manufacturing plant
- Competitors:
  - Moraine, OH
  - Wixom, MI
  - Georgetown, MI
  - Lafayette, IN
  - Janesville, WI

# Project “Gust”

## *Wind Turbine Facility*

- **Labor:** 600 total
  - 150 skilled welders/machinists
  - 200 semi-skilled machine operators
  - 100 electronic techs/assemblers
- **Electric Power:** 1,000 KW; 1,500,000 KwH/month (ave.)
- **Building:** 725,000 sqft mfg; 25,000 sqft office; 30’ clear span
- **Transportation:** rail and direct Interstate access
- **Other needs:**
  - Access to skilled workforce
  - Good labor/management relations
  - Access to suppliers
  - Training and other incentives
  - Affordable housing



# Project “Gust” Analysis

## *“Weighted” ratings – 12 factors*

- Access to market – 10
- Skills availability – 10
- Building avail – 10
- Wages – 10
- Electric power – 9
- Lease cost – 9
- Incentives – 8
- Education – 7
- Taxes (per person) – 7
- Cost of living – 6
- Crime – 5
- Commute time – 4

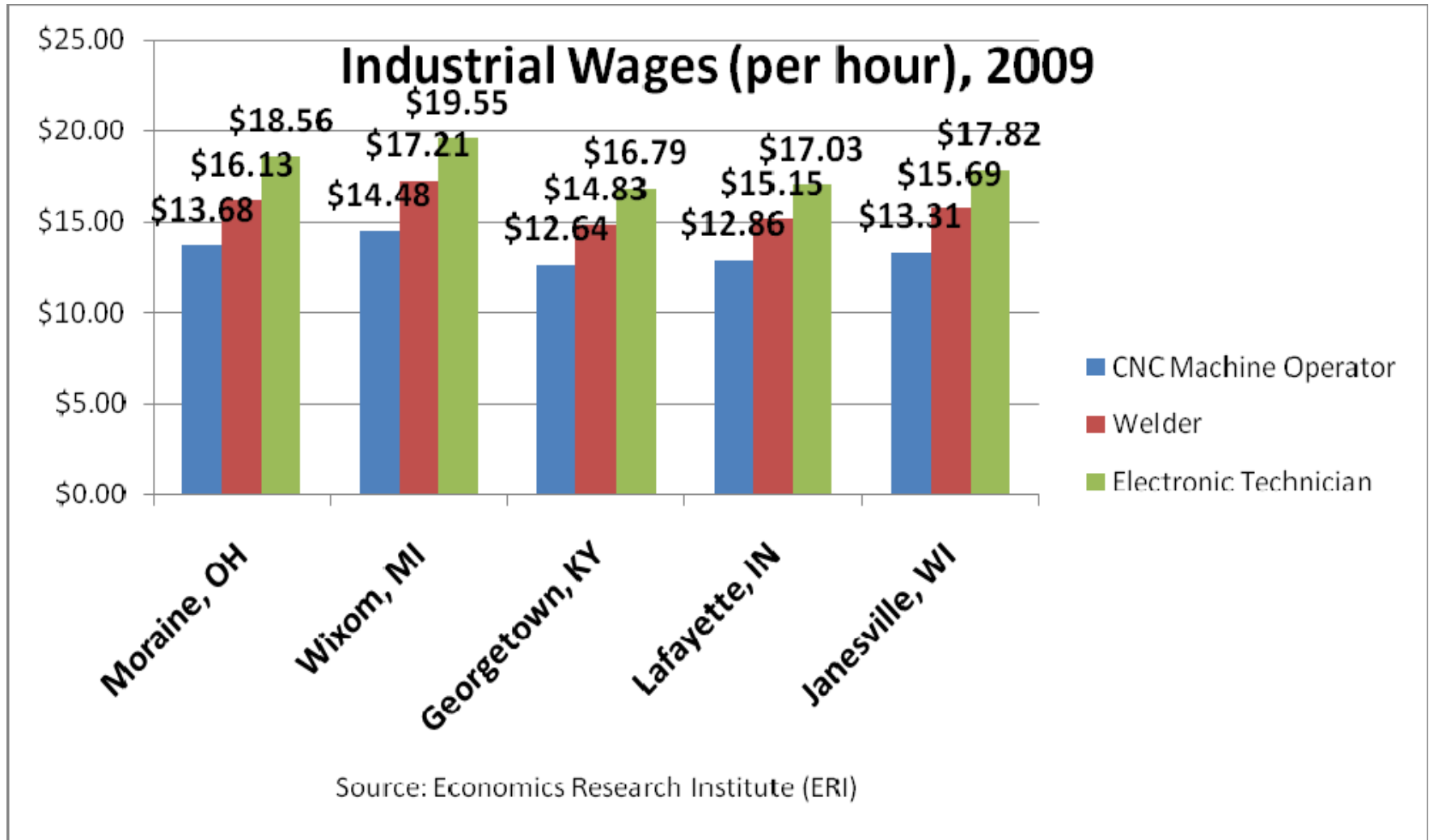
# Labor Availability (weighted – 10)

- Moraine has “good” availability of skilled machine and technicians skills.
- Scores:

	<u>Unemployment rate</u>	<u>WF growth (90-08)</u>
– Georgetown – 5	10.2%	87.9%
– Wixom – 4	11.7%	49.8%
– Janesville – 3	13.6%	21.5%
– <b>Moraine – 2</b>	11.3%	13.5%
– Lafayette – 1	8.7%	12.4%

# Wages (weighted – 10)

*Moraine wages are 2<sup>nd</sup> highest (score=2)*

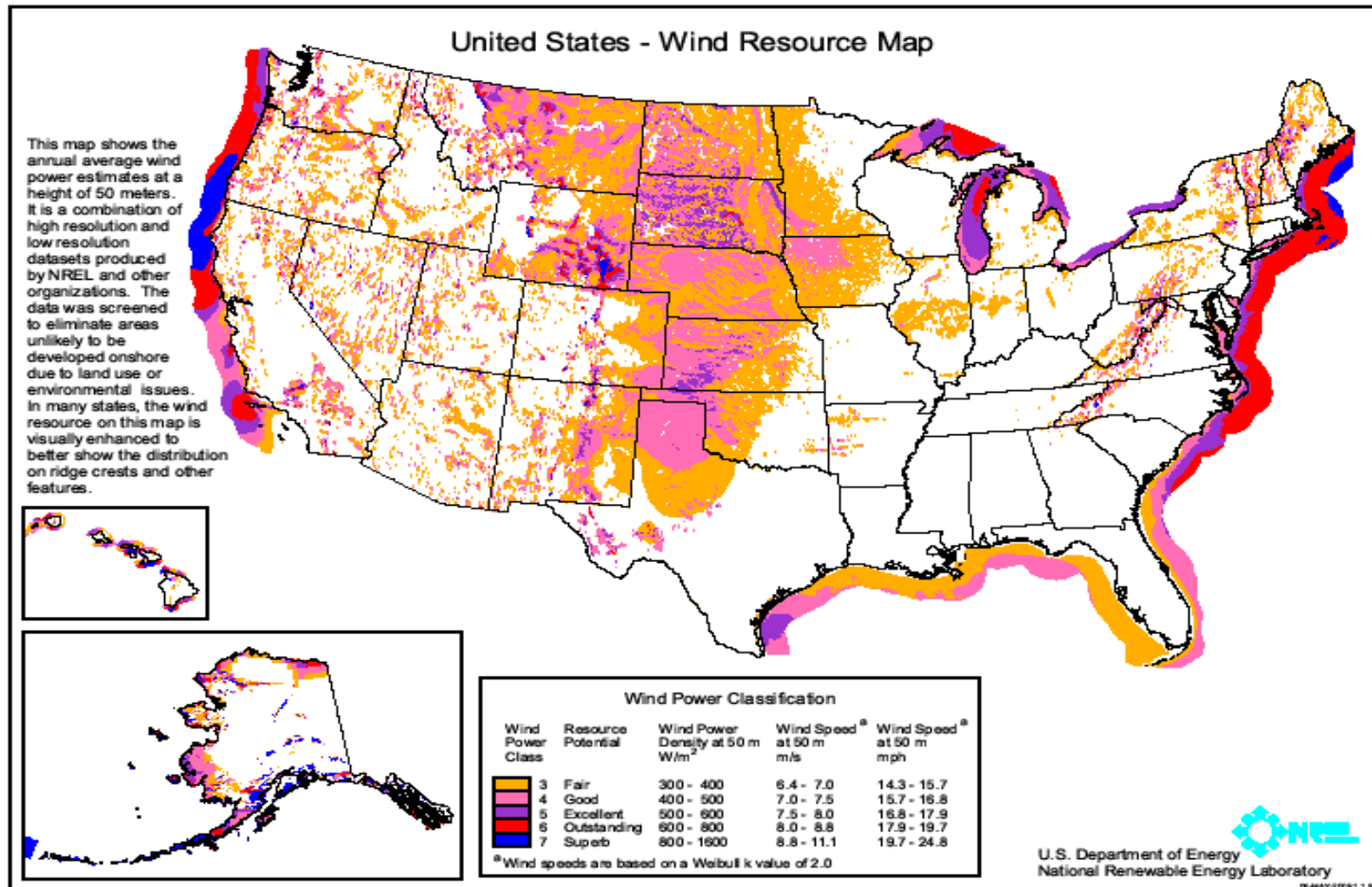


# Building Availability (weighted – 10)

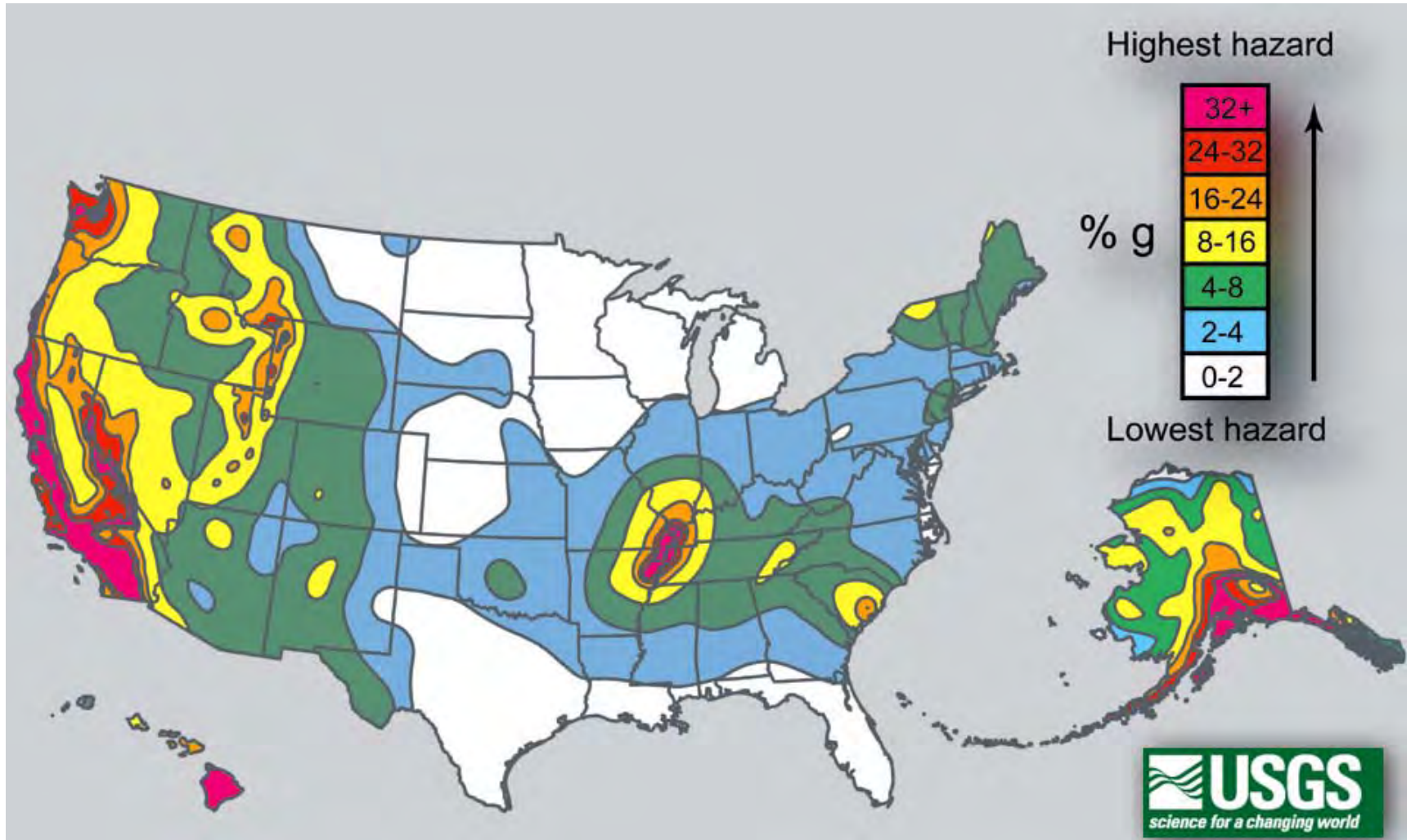
- The GM facility in Moraine matches the requirement as do closed GM facilities in Janesville and Wixom.
- Scores:
  - **Moraine – 5**
  - Janesville – 5
  - Wixom – 5
  - Georgetown – 0
  - Lafayette – 0

# Access to Markets (weighted – 10)

## *Moraine is 2<sup>nd</sup> furthest from markets (Score=2)*

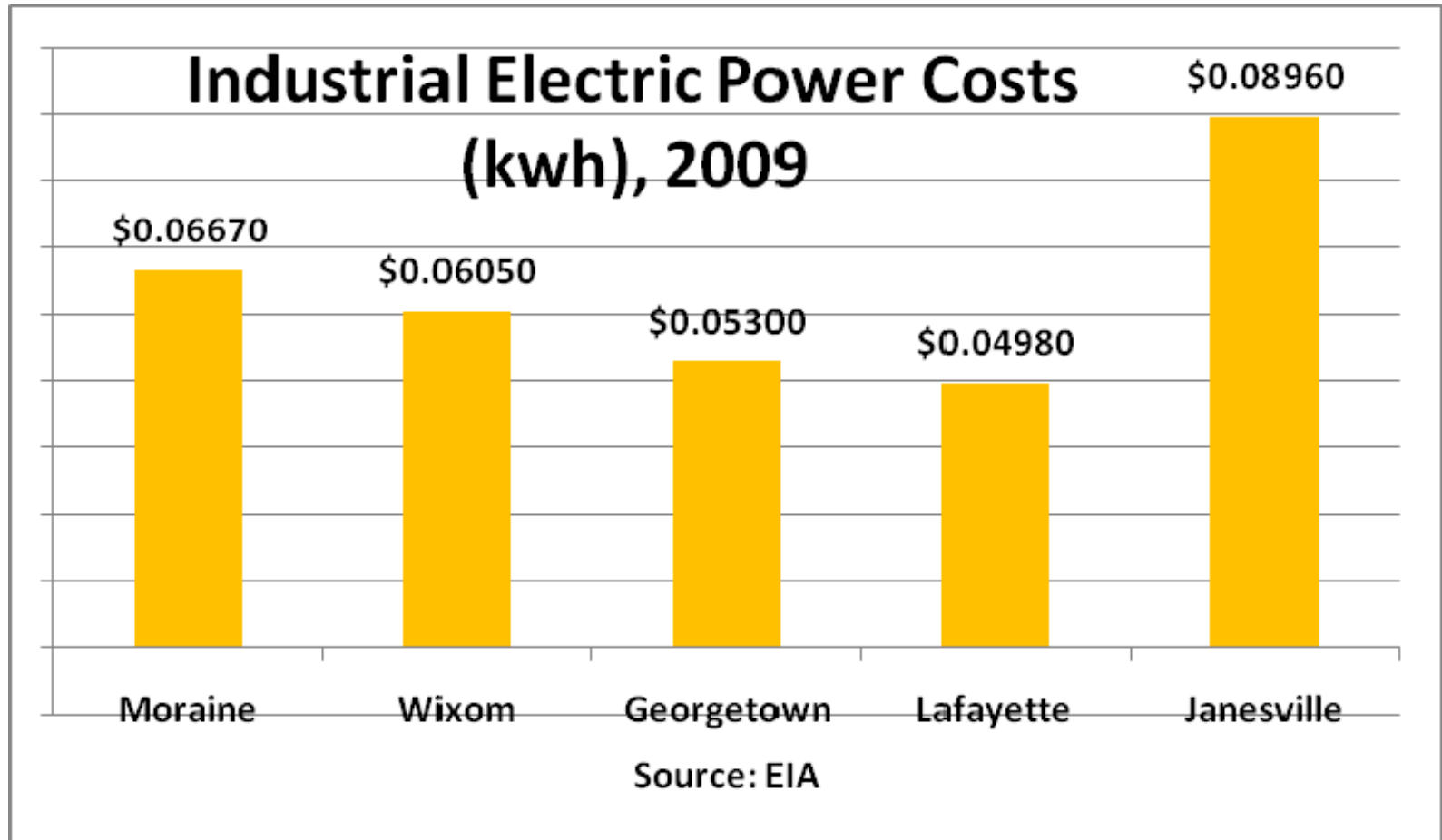


# *Seismic Data could also be valuable (not used here)*



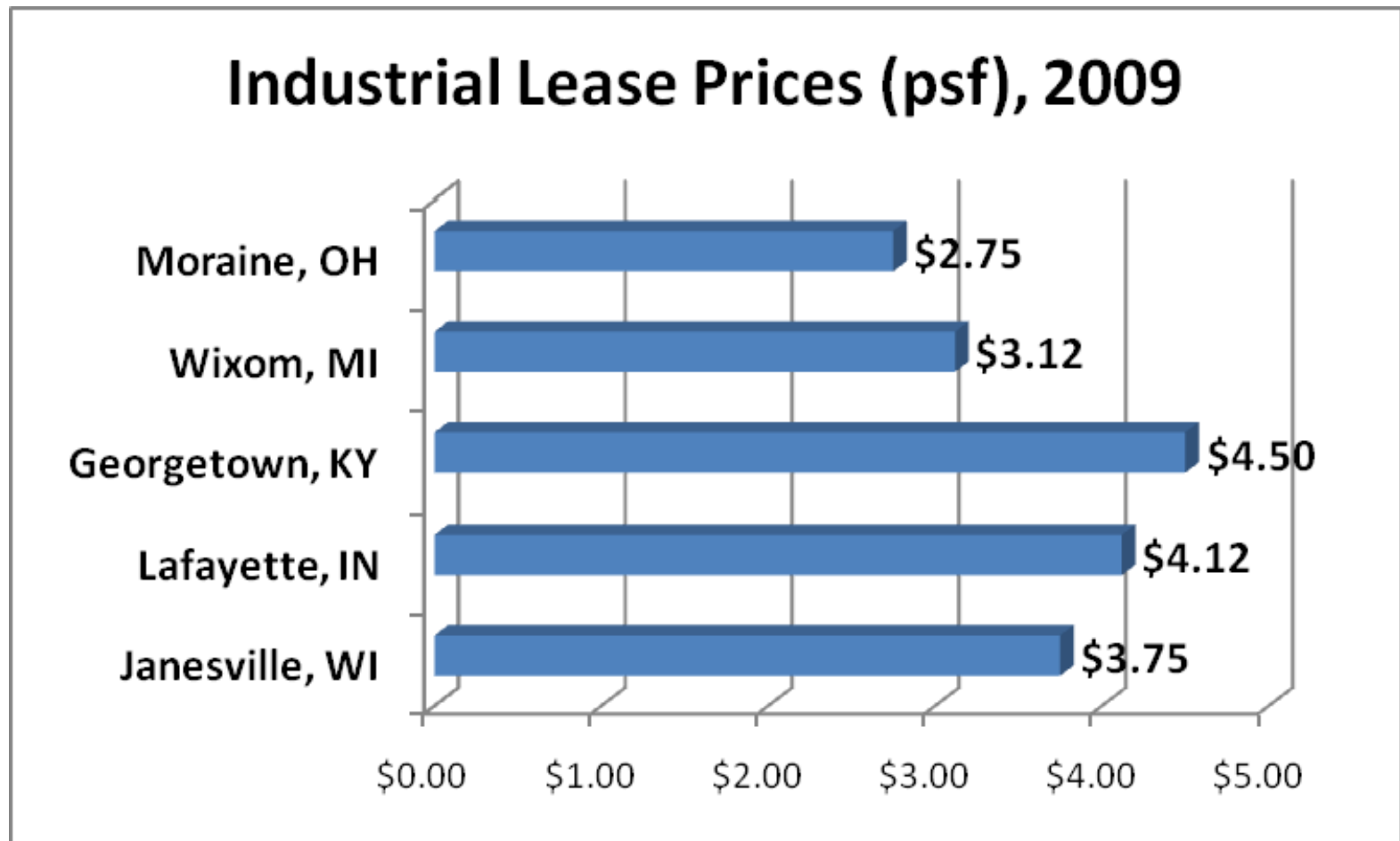
# Electric Power (weighted – 9)

*Moraine rates are 2<sup>nd</sup> highest (Score = 2)*



# Lease Costs (weighted – 9)

*Moraine are lease prices are lowest  
(Score = 5)*





# Incentives (weighted - 8)

*Moraine incentives are competitive (Score = 3)*

Incentive	Benchmarks				
	Moraine	Wixom	Lafayette	Janesville	Georgetown
Employee training	X	X	X	X	X
Enterprise zone	X	X	X	X	X
Industry specific sales tax abatements	X	X	X	X	X
Green businesses incentives		X			X
Tax credits	X	X	X		X
Venture capital tax credits		X			
Property tax abatements	X	X	X	X	X
Sales tax abatements	X	X	X	X	X
New job credits	X	X	X	X	X
Tax increment financing (TIF)	X	X	X	X	X
Low/No interest loan programs	X	X	X	X	X
Capital investment tax credits	X	X	X	X	X
Utility incentives	X	X	X	X	X
Municipal bonds		X			

# Cost of Living (weighted – 6)

*Moraine has the 2<sup>nd</sup> lowest cost of living (Score=4)*

## Cost of Living/Executive Housing, 2009



\$100,000 income; family of 4; 2269 sqft home

Source: ERI



# Conclusions

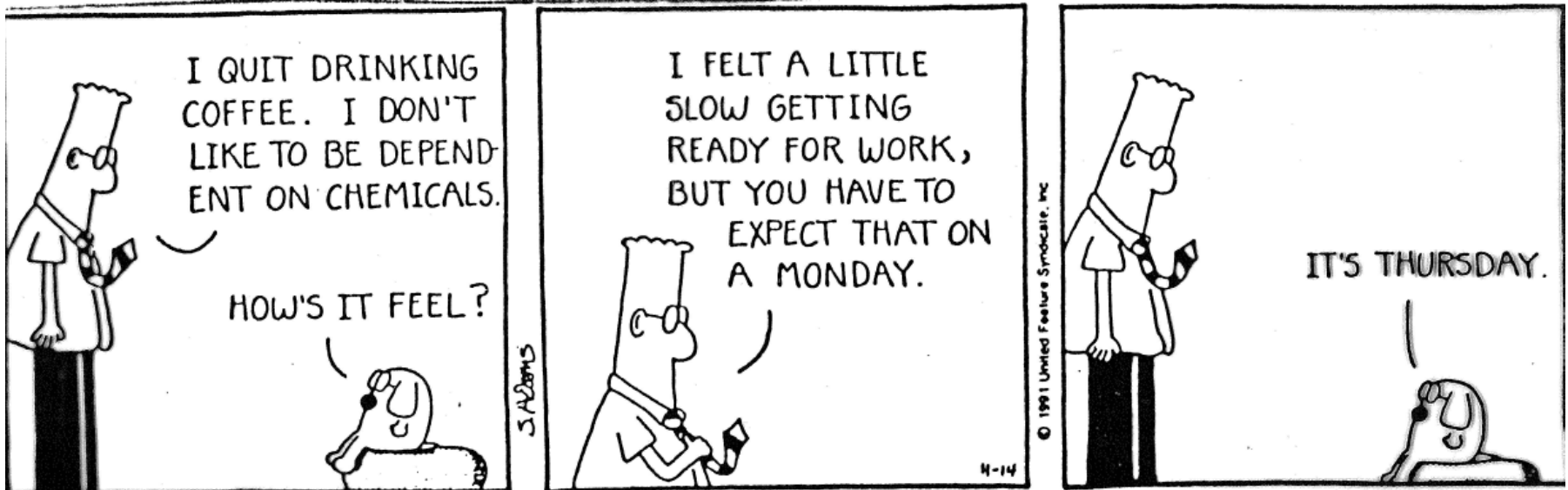
- Final weighted scores based on the 12 factors:
  - **Moraine - 324**
  - Georgetown - 299
  - Janesville - 287
  - Wixom - 283
  - Lafayette - 237
- **We would recommend to our client that Moraine be selected for the new plant!**

# Recommendations

- Develop a freight/logistics model for manufacturing projects.
- Conduct a detailed engineering cost analysis of the GM facility.
- Conduct a detailed skills matching analysis for wind turbine industry.
- Promote the positive aspects of this analysis in your economic development marketing.

# Stay Alert for those Projects!

## ...Questions?



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