



WAYNE COUNTY (IN) AS A LOCATION FOR A RENEWABLE ENERGY (WIND POWER) PROJECT



Prepared for the:

EDC of Wayne County (IN)



Prepared by:



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Introduction

This report, **Wayne County (IN) as a Location for a Renewable Energy (Wind Power) Project**, identifies business costs (pre-incentive) and conditions associated with the development of a plant in Wayne County. The report compares costs in Wayne County versus:

- Davenport, IA (Iowa-Illinois Quad Cities)
- Dayton, OH
- St. Louis, MO.

Costs are drawn from a hypothetical renewable energy (wind power) project (see model description on page 5), which was based on our actual site selection experience. Key site location cost factors are examined in this report, including:

- Freight
- Salary and wages
- Fringe benefits
- Build-to-suit costs
- Select taxes
- Electric power
- Cost of living.

The cost comparison spreadsheet follows on pages 6-8. Costs were derived from actual field research in the Wayne County Area as a part of the recent target industry analysis and research on competitor communities. The latest available data was used for all cost comparisons.

Foote Consulting Group, LLC (FCG) is a global site selection and economic development firm based in the Phoenix area. Our partner, TranSystems, is an expert in freight/logistics modeling and analysis.

Project Model

Renewable Energy (Wind Power) Project

- **Purpose:** Manufacturing plant for nacelle units for wind turbines – gearbox, generator, and transformer components
- **Hours of Operation:** 3 shifts; 5 days per week
- **Labor:** 175 jobs
 - 5 management
 - 10 engineers (5 electrical; 5 mechanical)
 - 10 clerical
 - 25 machinists
 - 50 machine operators
 - 25 electronic technicians
 - 25 electronic assemblers
 - 25 material handlers/warehouse workers
- **Building:** 170,000 sq.ft.: 150,000 sq.ft. with 30' clear ceilings/rail; 20,000 sq.ft. office
- **Land:** Fully improved 25 acre industrial site with rail required
- **Utilities:** Electric Power – Demand: 1,000 KW; Energy: 400,000 Kwh/month (average)
- **Machinery and Equipment Value:** \$3,000,000
- **Inventory Value:** \$2,000,000
- **Freight:** Inbound: Based on average miles and rates from suppliers via 40% TL and 60% rail; Outbound: Product classification – 100; 12,000,000 units/year; weight per unit – 20 lbs.; 65% TL, 10% LTL, 20% rail, 5% small parcel to Midwest (including wind belt) markets
- **Other Critical Factors:** Free of earthquake or flood zones; training – college offering mechanical and electrical engineering degrees, plus machining and electronics; incentives and positive state/local policies; access to good supplier network.

RENEWABLE ENERGY (WIND POWER) PROJECT*FIRST YEAR OPERATING COSTS*

Labor Costs (175 jobs)	Wayne Co, IN	Davenport, IA	St. Louis, MO	Dayton, OH
Management/Number	5	5	5	5
Annual Salary	\$73,395	\$77,247	\$82,648	\$81,516
Total Management Salary	\$366,975	\$386,235	\$413,240	\$407,580
Engineers				
Number	10	10	10	10
Annual Salary	\$53,978	\$58,184	\$60,344	\$59,089
Total Engineering Salary	\$539,780	\$581,840	\$603,440	\$590,890
Clerical				
Number	10	10	10	10
Annual Salary	\$25,017	\$26,163	\$28,171	\$27,395
Total Clerical Salary	\$250,170	\$261,630	\$281,710	\$273,950
Skilled Machinists				
Number	25	25	25	25
Annual Salary	\$34,418	\$35,353	\$37,526	\$36,900
Total Machinists Wages	\$860,450	\$883,825	\$938,150	\$922,500
Skilled Electronic Technicians				
Number	25	25	25	25
Annual Salary	\$35,156	\$37,888	\$40,192	\$38,990
Total Electronic Technicians Wages	\$878,900	\$947,200	\$1,004,800	\$974,750
Semi-Skilled Machine Operators				
Number	50	50	50	50
Annual Salary	\$27,125	\$27,761	\$29,557	\$28,991
Total Machine Operator Wages	\$1,356,250	\$1,388,050	\$1,477,850	\$1,449,550
Unskilled Electronic Assemblers				
Number	25	25	25	25
Annual Salary	\$22,476	\$22,884	\$24,417	\$23,909
Total Assembler Wages	\$561,900	\$572,100	\$610,425	\$597,725
Unskilled Warehouse Workers				
Number	25	25	25	25
Annual Salary	\$20,915	\$22,917	\$24,452	\$23,943
Total Warehouse Worker Wages	\$522,875	\$572,925	\$611,300	\$598,575
<u>Total Annual Wage/Salary Costs</u>	<u>\$5,337,300</u>	<u>\$5,593,805</u>	<u>\$5,940,915</u>	<u>\$5,815,520</u>

RENEWABLE ENERGY (WIND POWER) PROJECT (continued)

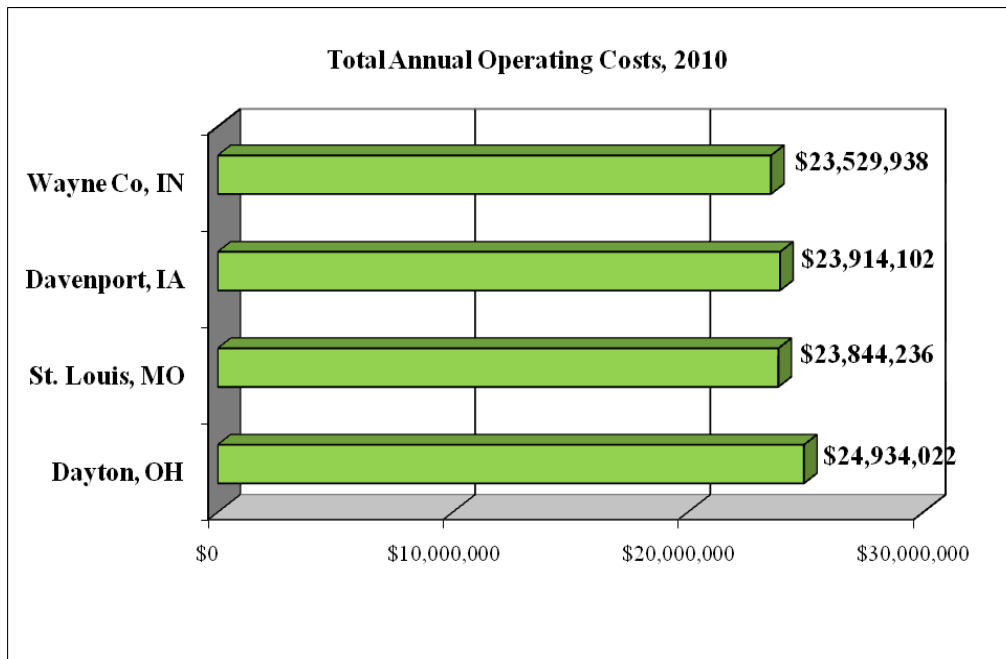
Fringe Benefits	Wayne Co, IN	Davenport, IA	St. Louis, MO	Dayton, OH
Medical/Dental/Vision @ 25%	\$1,334,325	\$1,398,451	\$1,485,229	\$1,453,880
Disability @.15%	\$8,006	\$8,391	\$8,911	\$8,723
FICA @ 7.5 %	\$400,298	\$419,535	\$445,569	\$436,164
Life @ .5 %	\$26,687	\$27,969	\$29,705	\$29,078
Unemployment Ins. Rate	2.70%	1.50%	3.51%	2.70%
UI Cost	\$33,075	\$64,313	\$79,853	\$42,525
Workers Comp Rate-Plant (per \$100)	\$3.89	\$4.78	\$4.15	\$8.08
Worker Comp Rate-Office (per \$100)	\$0.19	\$0.03	\$0.15	\$0.55
Workers Compensation Cost	\$164,815	\$208,961	\$194,612	\$374,081
Fringe Benefit Load Factor	36.86%	38.04%	37.77%	40.31%
<u>Total Annual Fringe Benefits Costs</u>	<u>\$1,967,205</u>	<u>\$2,127,619</u>	<u>\$2,243,878</u>	<u>\$2,344,451</u>
Build to Suit Costs	Wayne Co, IN	Davenport, IA	St. Louis, MO	Dayton, OH
Square Feet Office	20,000	20,000	20,000	20,000
Square Feet Mfg	150,000	150,000	150,000	150,000
Total Square Feet Required	170,000	170,000	170,000	170,000
Cost per Square Foot of Office	\$60.00	\$75.00	\$85.00	\$50.00
Cost per Square Foot of Mfg.	\$40.00	\$45.00	\$32.00	\$32.50
<u>Total Building Cost</u>	<u>\$7,200,000</u>	<u>\$8,250,000</u>	<u>\$6,500,000</u>	<u>\$5,875,000</u>
Land Costs	Wayne Co, IN	Davenport, IA	St. Louis, MO	Dayton, OH
Cost per Acre	\$11,550	\$44,889	\$62,000	\$45,000
Acres Required	25	25	25	25
Total Land Cost	\$288,750	\$1,122,225	\$1,550,000	\$1,125,000
Total Building & Land Cost	\$7,488,750	\$8,322,225	\$8,050,000	\$7,000,000
<u>Annual Payment (@ 5%, 15 yrs)</u>	<u>\$721,483</u>	<u>\$801,782</u>	<u>\$775,555</u>	<u>\$674,396</u>
Property Tax Costs	Wayne Co, IN	Davenport, IA	St. Louis, MO	Dayton, OH
Value of Real Estate	\$7,488,750	\$8,322,225	\$8,050,000	\$7,000,000
Assessment Ratio	100%	100%	100%	100%
Property Tax Rate	2.65	38.33	2.48	82.48
Real Estate Taxes	\$198,452	\$318,991	\$199,640	\$577,360
Machinery & Equipment Value	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Personal Property Tax Rate	0	0	2.41	0
Personal Property Tax	\$0	\$0	\$23,859	\$0
Value of Inventory	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Inventory Tax Rate	0	0	0	0
Inventory Tax	\$0	\$0	\$0	\$0
<u>Total Annual Property Taxes</u>	<u>\$198,452</u>	<u>\$318,991</u>	<u>\$223,499</u>	<u>\$577,360</u>

RENEWABLE ENERGY (WIND POWER) PROJECT (continued)

Corporate Income Taxes	Wayne Co, IN	Davenport, IA	St. Louis, MO	Dayton, OH
Adjusted State Taxable Income	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Tax Rate (Federal)	34.00%	34.00%	34.00%	34.00%
Tax Rate (State)	8.50%	0.05%	5.20%	0.26%
<u>Total Federal and State taxes</u>	<u>\$850,000</u>	<u>\$681,000</u>	<u>\$784,000</u>	<u>\$685,200</u>
Electric Power Costs	Wayne Co, IN	Davenport, IA	St. Louis, MO	Dayton, OH
KW Demand	1000	1000	1000	1000
KwH/Month Usage	400000	400000	400000	400000
Cost/KwH	\$0.07	\$0.06	\$0.06	\$0.09
<u>Total Annual Electric Power Cost</u>	<u>\$316,800</u>	<u>\$268,320</u>	<u>\$292,800</u>	<u>\$408,000</u>
Freight Costs (see freight model)	Wayne Co, IN	Davenport, IA	St. Louis, MO	Dayton, OH
Inbound	\$2,201,600	\$2,201,600	\$2,201,600	\$2,201,600
Outbound	\$11,937,098	\$11,920,985	\$11,381,989	\$12,227,495
<u>Total</u>	<u>\$14,138,698</u>	<u>\$14,122,585</u>	<u>\$13,583,589</u>	<u>\$14,429,095</u>
<u>Total Annual Operating Costs</u>	<u>\$23,529,938</u>	<u>\$23,914,103</u>	<u>\$23,844,237</u>	<u>\$24,934,022</u>
<i>Operating costs greater than Wayne Co., IN</i>		\$384,165	\$314,299	\$1,404,084
<i>Percentage greater than Wayne Co., IN</i>		2%	1%	6.00%

Total Project Operating Costs

Wayne County is the lowest cost locale for this wind power project. Over \$1.4 million per year could be saved by locating this project in Wayne County versus the highest cost area, Dayton.



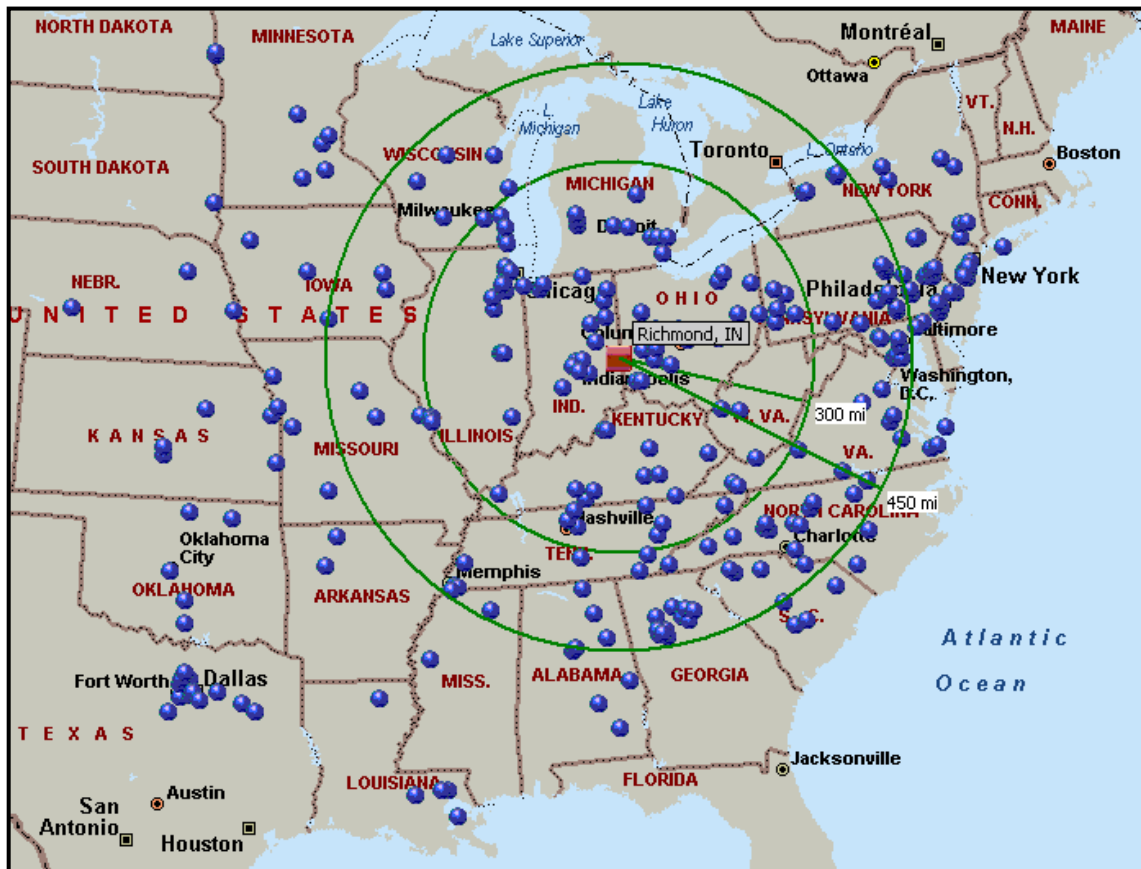
Freight

Freight costs represent the largest annual operating cost item for this project, approximately 60%. A separate, detailed freight model is available and can be used as a reference.

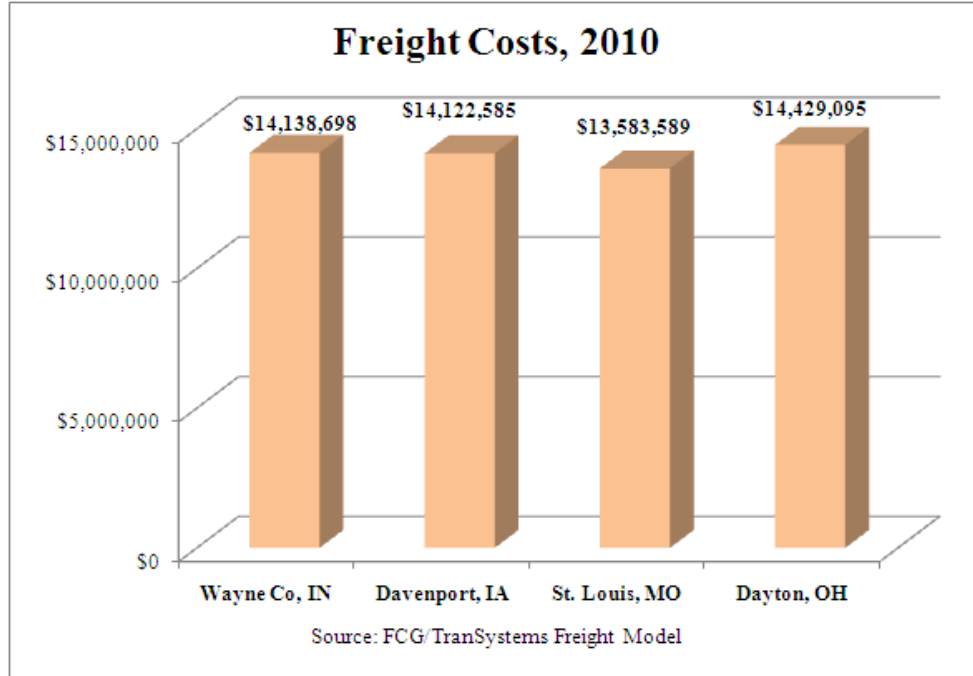
Products will be shipped outbound from the plant to areas (some close to the wind belt) within a 450-mile radius of the plant site. Inbound freight is based on the average miles from suppliers and is assumed to be equal to each location.

The following map depicts the desired distribution area up to a 450-mile radius and covers the major markets of Midwest, Mid-Atlantic, and Mid-South. The blue dots depict TranSystems client base and the locations of their DCs which serve all major markets. A sample of TranSystems clients:

- Kroger
- SuperValu
- Wal-Mart
- Meijer
- Spartan Stores
- Aldi
- 7-Eleven
- Trader Joe's
- Costco
- Dollar General
- HT Hackney



Wayne County has the second highest freight costs. Freight costs are lower in Davenport and St. Louis since these areas are closer to the Midwest wind belt.



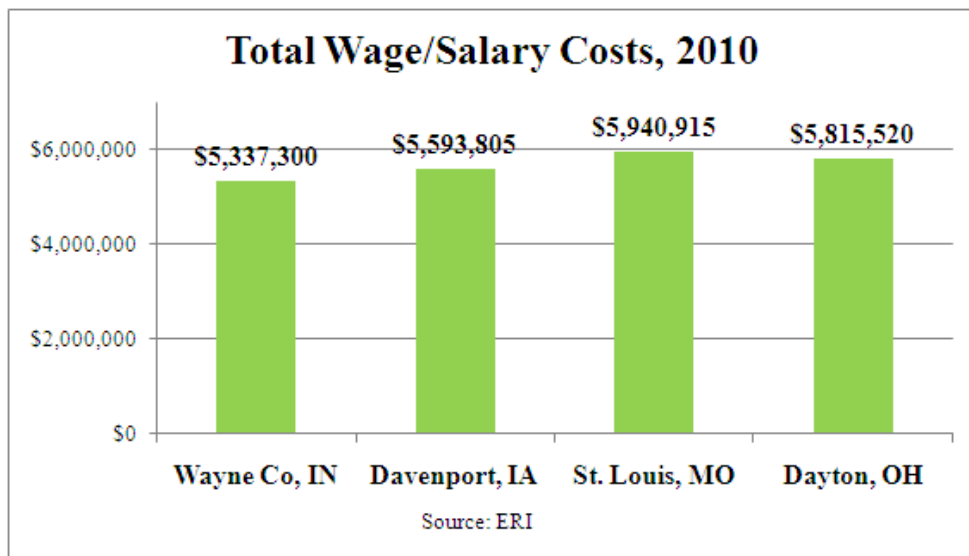
Labor

Wages/Salaries and Fringe Benefits

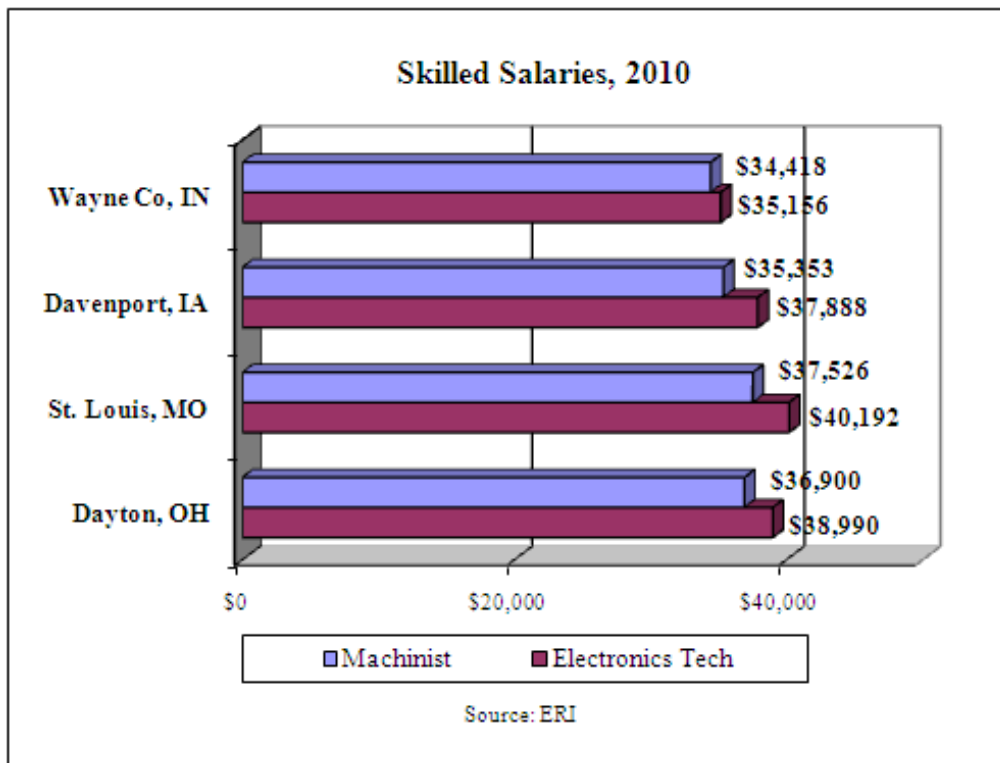
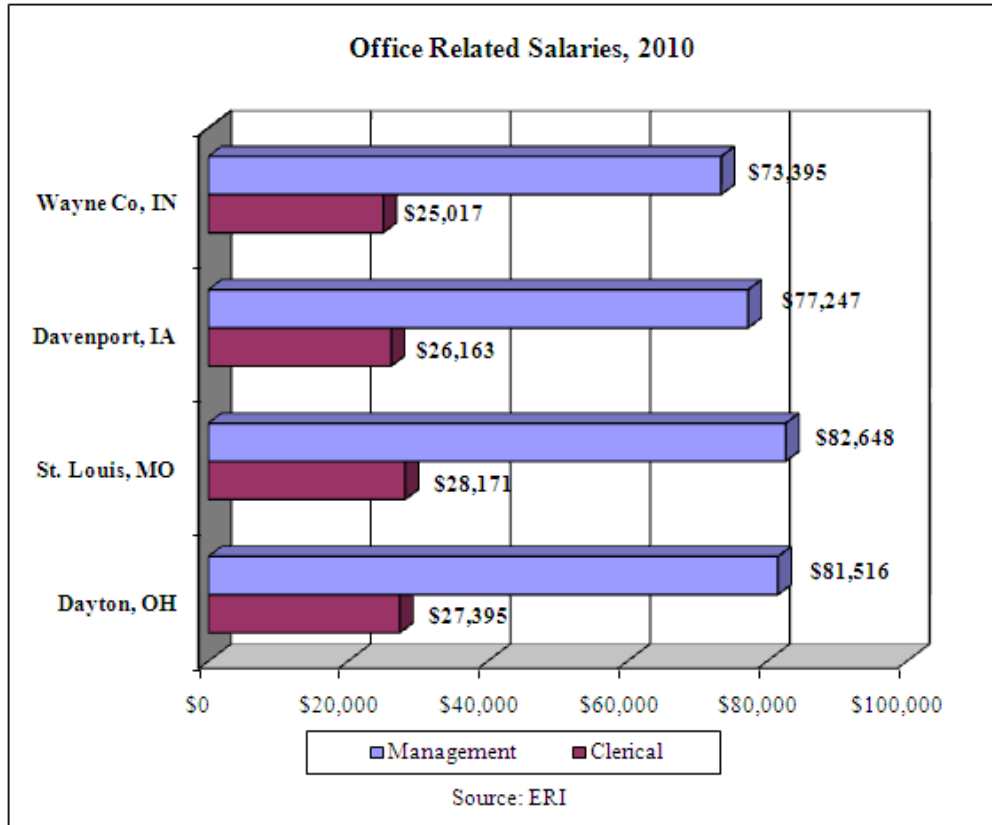
Labor costs (wage/salary/fringe benefits) represent about 23% of the total operating costs for this project. This is the second largest annual cost factor.

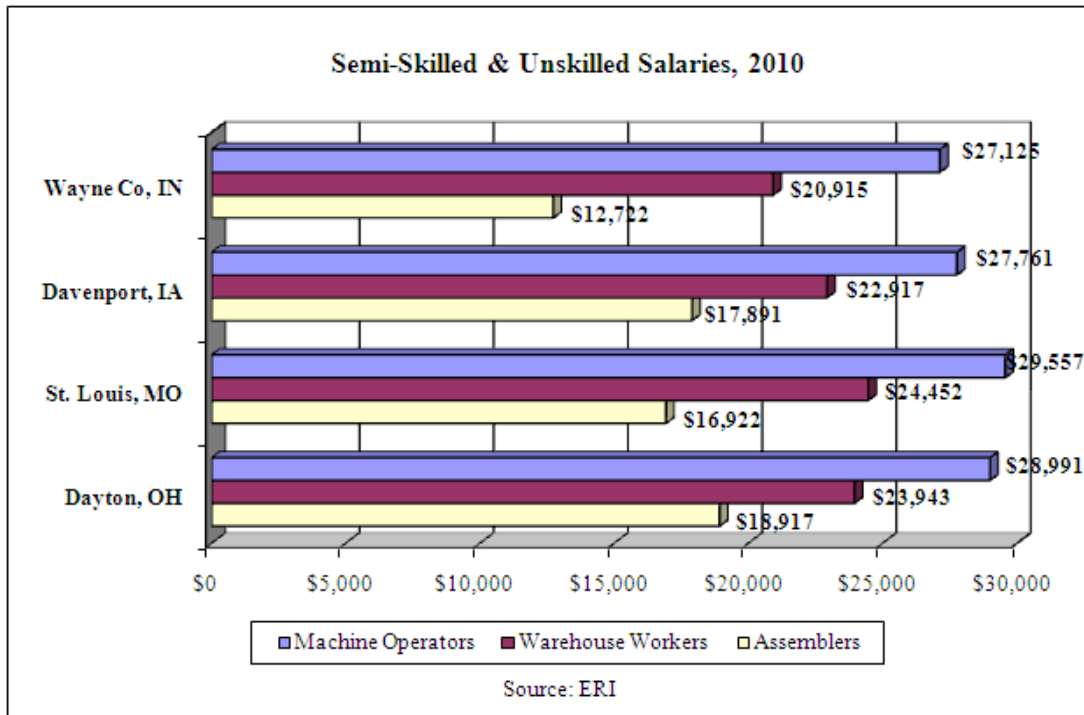
Wages and salaries are used in the model are for incumbent worker median salary range positions. All wages come from our national data resource, Economic Research Institute (ERI).

Wayne County has the lowest overall wage/salary costs. Over \$600,000 would be saved annually by locating this project in Wayne County instead of the highest cost locale, St. Louis.

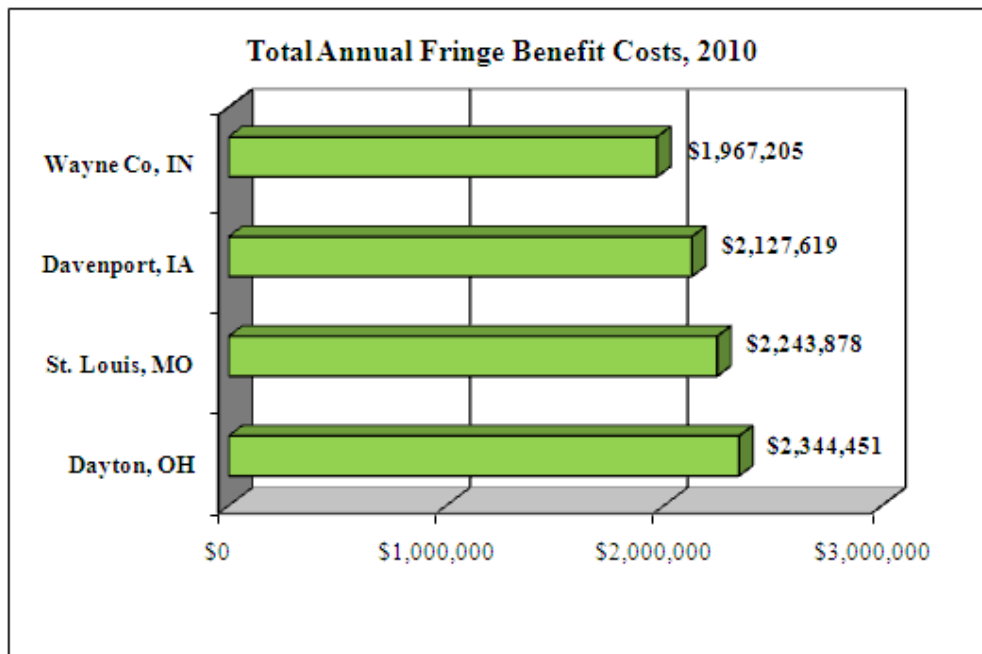


Following are specific salary comparisons:





Wayne County has the lowest fringe benefit load. This was due to lower overall wages which translates into lower FICA, health care, disability and life insurance costs; and lower unemployment insurance costs.

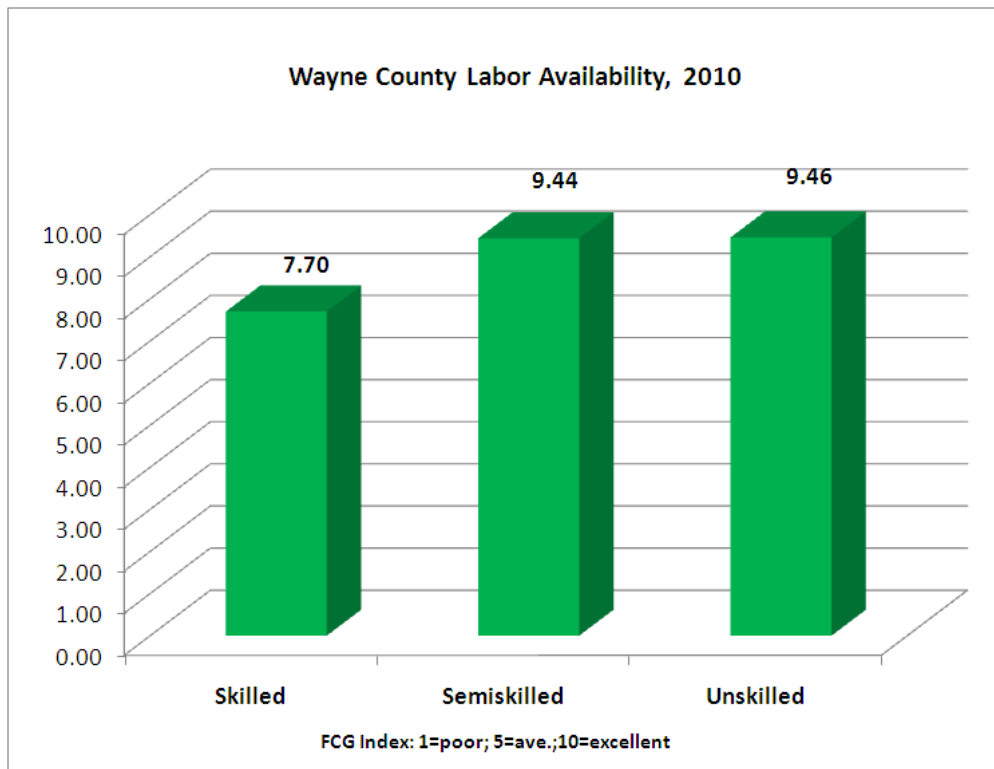


Labor Availability & Quality in the Wayne County Area

Good labor availability and quality are critically important to the success of this project. We have compared both availability and quality in the region using our unique *FCG Index*. The index factors on a 1 (very poor) to 10 (excellent) point scale (5 is average). The index takes the results of our fieldwork interviews conducted during the recent target industry analysis and measures the combined opinions of company decision-makers. The resulting index is a very realistic way of comparing communities on an “apples-to-apples” basis.

Availability

- **The availability of skilled manufacturing workers is good.**
- **Semi-skilled and unskilled availability is excellent.**
- Management talent is more difficult to recruit, hire and relocate (rated 5.25 – or average).



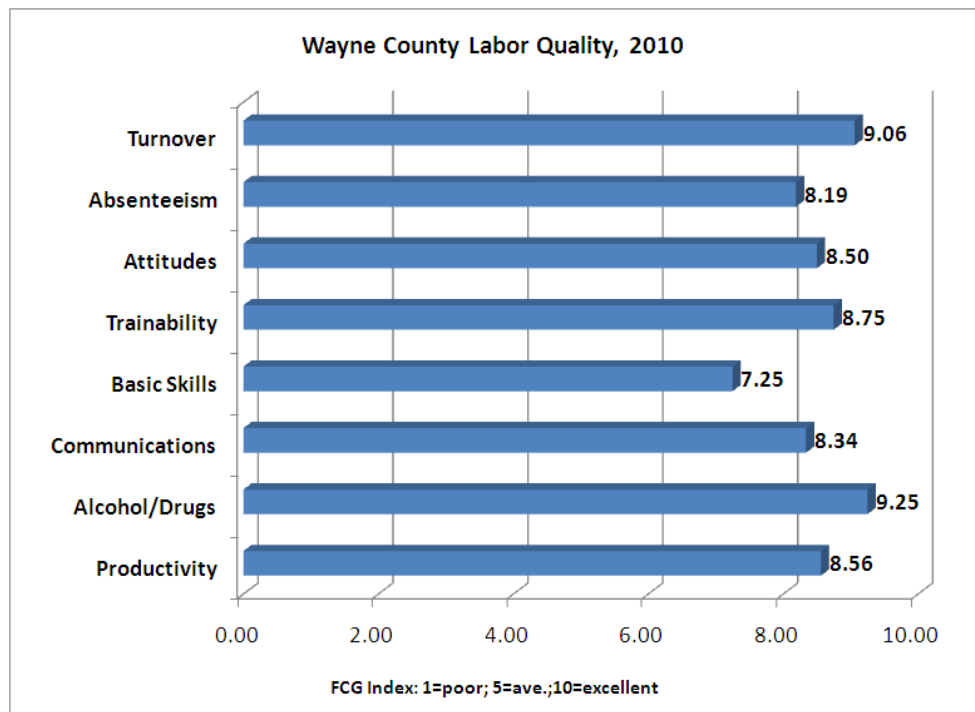
The following are employer quotes regarding availability:

- *“Good skills and manufacturing culture here”*
- *“It is a challenge to retain some workers...grass is always greener elsewhere. However, more are realizing that they are fortunate to work for a safe, dependable and supportive company, especially during this tough economy.”*
- *“It is a great area to set up a plant because of the skilled workforce and the great cooperation and assistance of the college.”*

- *“Richmond has provided this firm with a great workforce for years and years.”*
- *“Skills are here due to closures.”*
- *“The greatest strength in the area is the skills of the workforce and the relationships between employers and employees.”*
- *“There are now an overwhelming number of good candidates for positions in our plant because of all the closures and layoffs in the area.”*
- *“Unskilled workers are readily available.”*

Quality

- **Overall labor quality is rated very good (8.49), with no weak spots.**
- **All sectors, except basic skills, are rated very good to excellent.**
 - Basic skills (rated “good”) are better here than most other places in the country right now.



Employers tell us:

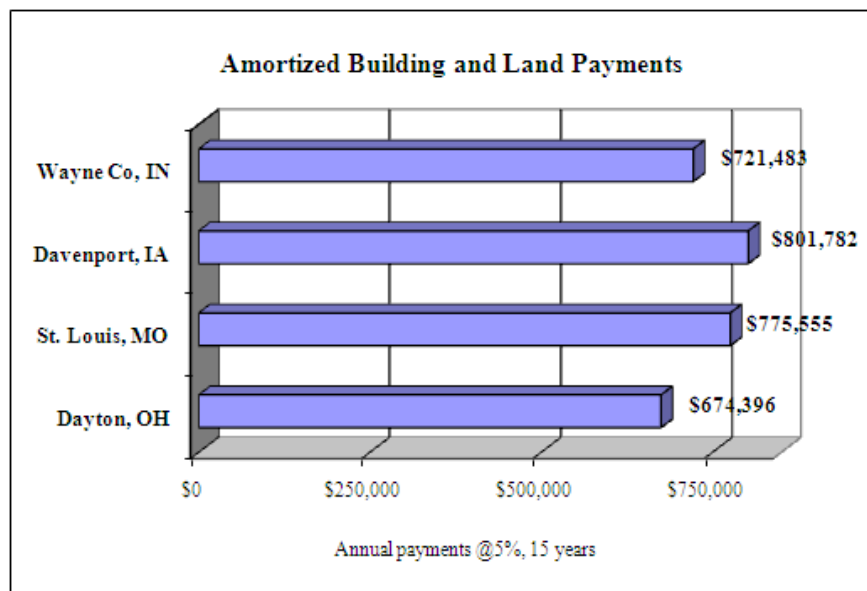
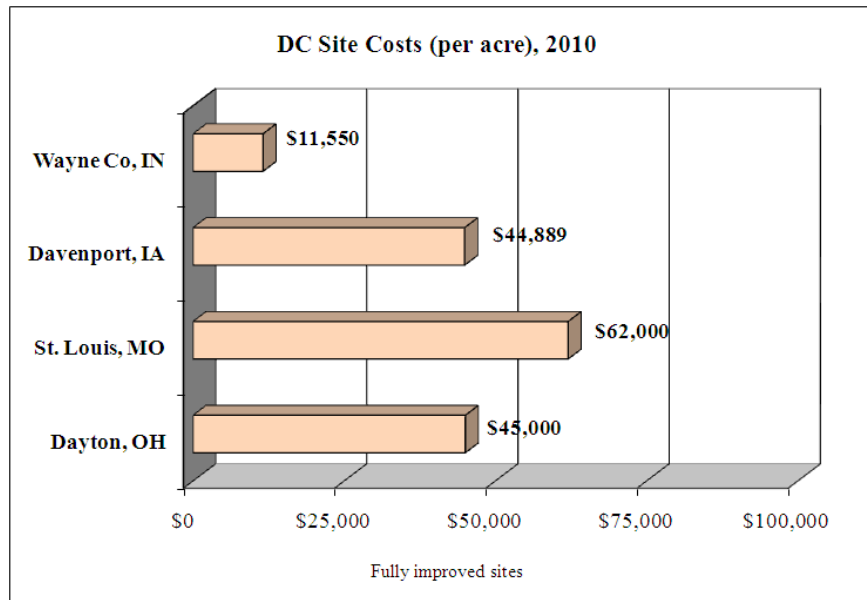
- *“All labor quality characteristics are high, but there are concerns over recent attitudes because of the economy.”*
- *“Area is innovative and entrepreneurial and employees have a great work ethic”*
- *“Attitudes are fantastic and morale is high, especially after we passed out those bonus checks!”*
- *“Good labor-management relations”*
- *“Good skills and manufacturing culture here”*
- *“Good work ethic!”*

- *“No union noise due to proactive management...we would be crippled with a union”*
- *“Productivity has been so good that we have laid off people.”*
- *“Quality is excellent (plant tour showed positive attitudes and communications)”*
- *“Rate quality characteristics high except basic skills”*
- *“The greatest strength in the area is the skills of the workforce and the relationships between employers and employees.”*

Build-to-Suit Costs

Annual building and site costs represent only approximately 2% of total annual operating costs in the model (this cost is amortized).

Wayne County annual building costs are second lowest. Industrial site costs are the lowest and there is good availability of fully improved sites.



Taxes

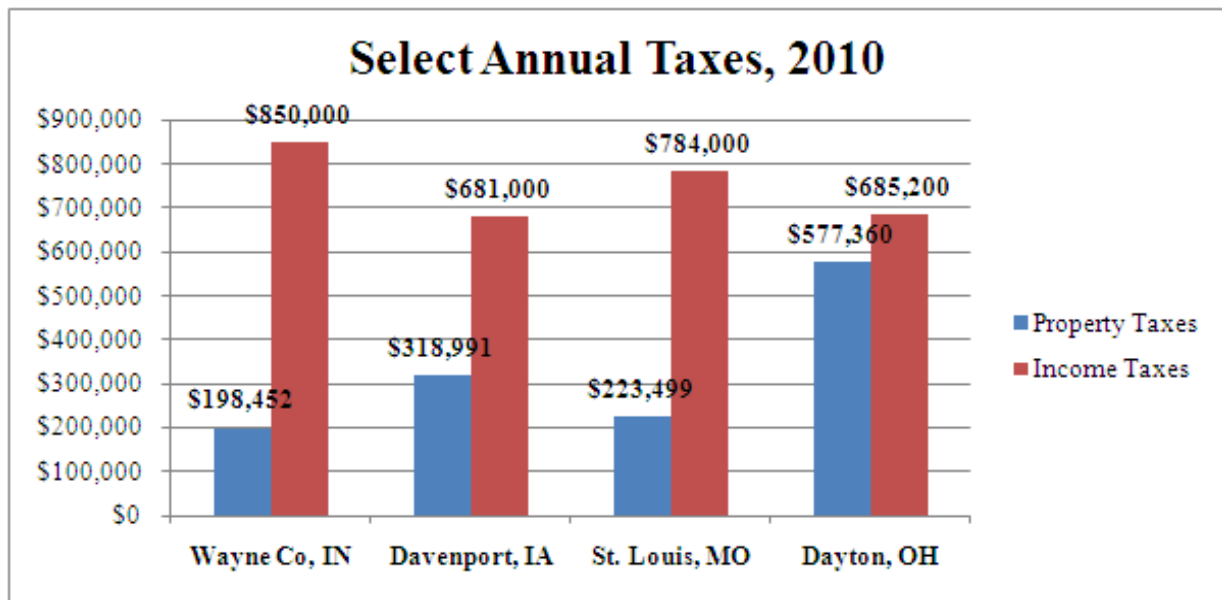
Property Taxes

Property taxes consist of real estate and personal property taxes, which may include taxes on machinery and equipment (M&E). They represent approximately 1% of the annual operating costs.

Wayne County property taxes¹ are modest compared to the other cities since there is no tax assessed on M&E (assume abated²) or inventories. Missouri still taxes personal property.

Corporate Income Taxes

Corporate income taxes were examined at a high level. They represent approximately 3% of the annual operating costs. Corporate income taxes were figured on an adjusted taxable income of \$3,000,000.



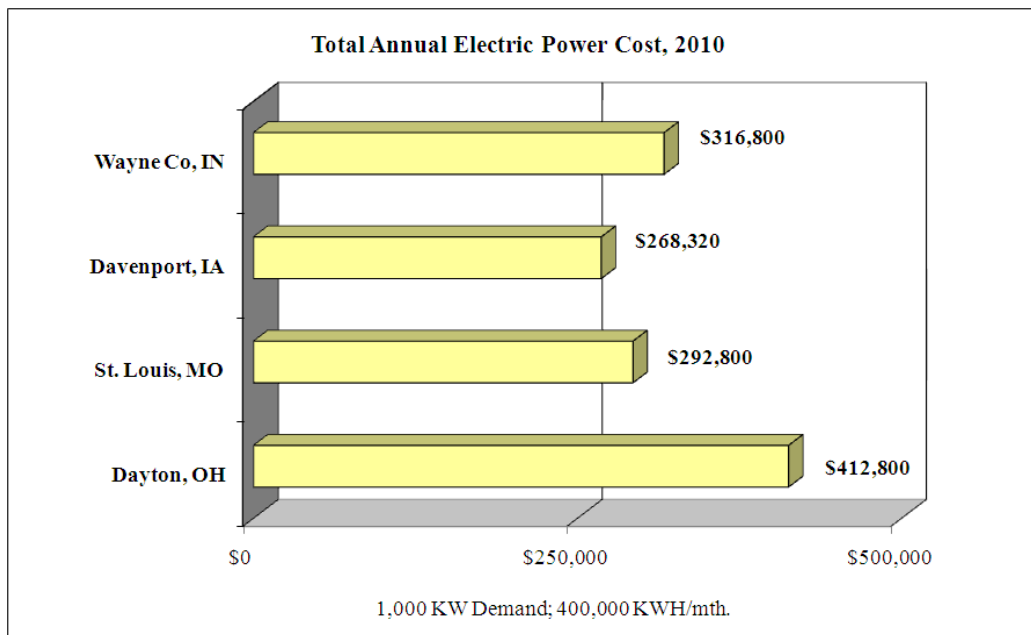
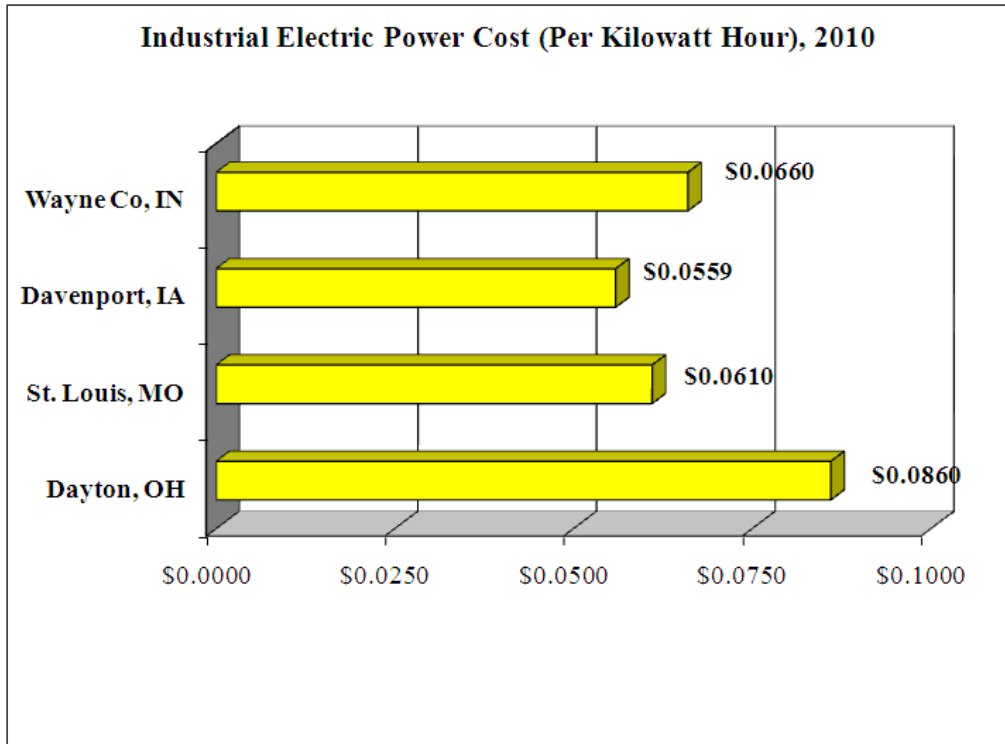
¹ Property tax caps - 1% of a homestead property's gross assessed value, 2% on investor owned residential properties and on agricultural land's gross assessed value and 3% cap of the gross assessed value on all other real and personal properties.

² Property tax on M&E would be phased in over a period of 10 years if the full 10 year abatement was awarded to the company.

Utilities

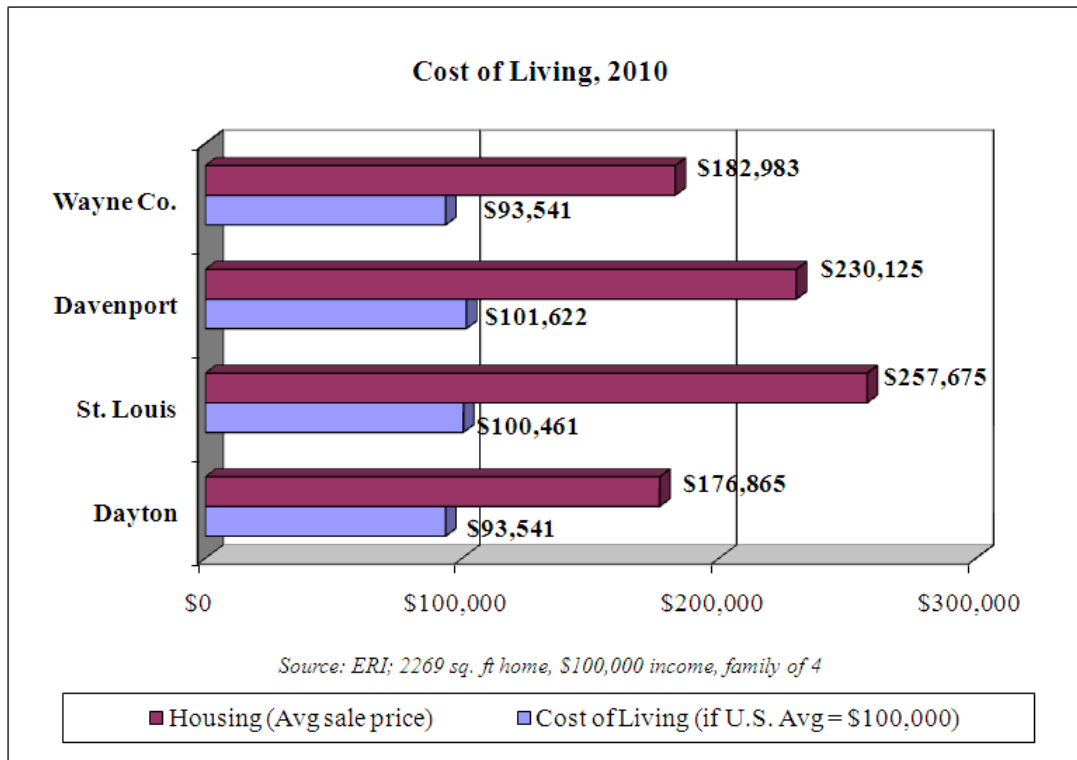
Electric Power

Power costs represent only about 1% of total operating costs. Wayne County has the second highest electric power rates.



Cost of Living

The cost of living will influence the relocation of key personnel to the project city. It should be relatively easy to sell employees on Wayne County’s low costs. One company executive said: “I have moved six times around the globe and after moving here I felt that I had died and gone to heaven.”



Incentives

Wayne County and Indiana have a number of attractive incentives available. The programs that can best assist a Renewable Energy (Wind Power) project include:

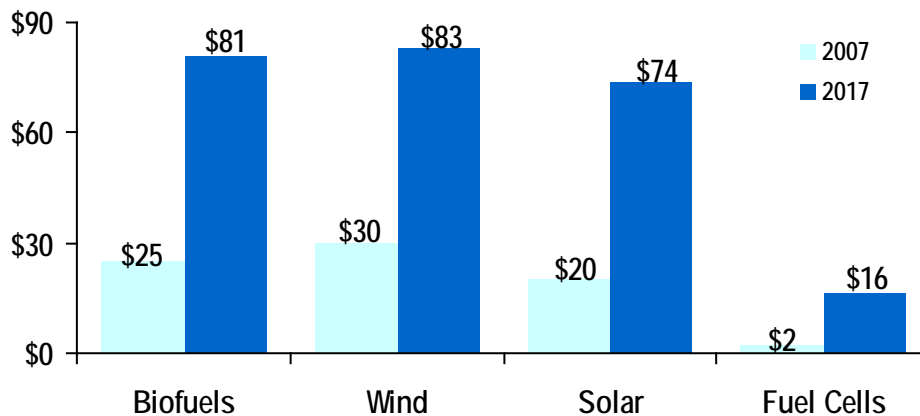
- **EDIT** – Flexibility to assist both labor intensive operations such as call centers and capital intensive projects such as food processing, industrial machinery, and renewable energy. \$1 million plus local fund.
- **EDGE** – Provides valuable tax credits for any locating or expanding target creating new jobs for up to 10 years
- **Indiana Training Grant Program** – One of the best training programs in the country, it offers grants that can cover up to 50% of the total training budget up to \$200,000 for projects that create new jobs.

The Renewable Energy Industry in the Wayne County Area

Understanding the Sector

The renewable energy and energy efficiency industries are the newest to attract the attention of the development world due to the explosive investment in projects in recent years. Investment has been primarily spurred by the necessity to reduce the carbon footprint globally, and the U.S. Federal government's push to fund renewable projects. Much of the new investment is coming from Europe and Asia. U.S. investment projections are impressive (see below):

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



The industry is broadly defined by technologies and services that reduce or eliminate the environmental impact of primary energy production, energy consumption, and electricity generation. The industry can be divided into two broad subsectors: renewable energy and energy efficiency.

The renewable energy industry is focused on the production of energy forms that are environmentally sustainable and that reduce the environmental impacts of energy production. Companies in this subsector focus on several key areas of the energy infrastructure, including manufacturing of clean energy production equipment like solar panels, wind turbines and components, and biofuels, providing cost-effective, non-polluting machinery for electricity production or cleaner transportation fuels.

Energy efficiency's importance to the overall industry has risen dramatically. The energy efficiency industry is driven by advances in green building and energy and water conservation technologies, battery technologies and energy storage, smart grid technologies, superconducting electrical transmission lines, and a wide variety of electronic, mechanical, and industrial processes and services.

It is difficult to define renewable energy through traditional government employment statistics because there is a broad group of industries related to renewable energy and energy efficiency.

With that in mind, the following is a representative list of sectors that cover many parts of the industry, but not all:

NAICS Description

2211 – Electric Power Generation, Transmission & Distribution	3359 – Other Electrical Equipment and Component Manufacturing
2371 – Utility System Construction	4236 – Electrical and Electronic Goods Merchant Wholesalers
2382 – Building Equipment Contractors	4237 – Hardware Plumbing & Heating Equipment & Supplies Wholesalers
3251 – Basic Chemical Manufacturing	5413 – Architectural, Engineering, and Related Services
3336 – Engine, Turbine, and Power Equipment Manufacturing	5416 – Management, Scientific, and Technical Consulting Services
3344 – Semiconductor & Other Electronic Component Manufacturing	5417 – Scientific Research and Development Services
3353 – Electrical Equipment Manufacturing	

At least 20 locations/expansions directly related to the renewable sector occurred in 2009; projects included:

<u>City</u>	<u>State</u>	<u>Company</u>	<u>Sq.Ft.</u>	<u>Jobs</u>	<u>Type</u>	<u>NAICS</u>
Clinton	IN	POET Biorefining		38	Biofuels	325199
Glendale	KY	National Alliance		2000	Lithium ion batteries	335911
Greenville	OH	LAH Development		100	Wind turbines	333611
Henderson	KY	Allstate Towers	17,000	10	Towers	332
Lancaster	OH	Toxco		35	Lithium ion batteries	335911
Louisville	KY	GE		420	Electric hybrids	335228
Mount Vernon	OH	Rolls Royce Energy		100	Wind turbines	333611
<u>City</u>	<u>State</u>	<u>Company</u>	<u>Sq.Ft.</u>	<u>Jobs</u>	<u>Type</u>	<u>NAICS</u>
Nappanee	IN	Gulf Stream		1190	Electric/hybrids	336112
New Albany	IN	Windstream		261	Wind turbines	333611
North Canton	OH	Rolls Royce		60	Fuel cells	54171
Perrysville	OH	Willard & Kelsey	252,000	400	Solar panels	327211
Toledo	OH	Buckeye Silicon		100	Silicon	326291
Vincennes	IN	Schott Solar		300	Glass	327215
Waterford Twp	OH	Solsil, Inc.	150,000	400	Silicon for solar	327211
Yorkville	IN	VAT		120	Wind turbines	333611
Zanesville	OH	Jcore, LLC	50,000	56	Wind turbines	333611
	OH	Five Star Technologies		106	Solar cells	334413
	KY	Sirius Energies	152,000	500	Electric vehicles	336

<i>Wayne County Strengths</i>	<i>Wayne County Weaknesses</i>
<p>Renewable Energy (Wind)</p> <ul style="list-style-type: none"> • Access to market - wind farms • Available labor (strong occupational projections) • Labor quality • Improved sites with rail service • Electric power (reliability & costs) • Free of earthquake or flood zones • Incentives (capital intensive & training) • Regional location activity 	<ul style="list-style-type: none"> • Availability projections for select skills • Electric power cost is not as low as some competitors • Lack of existing buildings with rail • Sites with dual rail providers

The Wayne County Area’s Strengths for Renewable Energy (Wind Power) Firms - Summary

- Very competitive overall costs
- Good proximity and accessibility to markets (wind farms)
- Lowest wage rates and generally good availability of labor
- Good labor quality
- Good site and build-to-suit opportunities with rail
- Sites free of earthquake or flood zones
- Reliable, competitively priced electric power
- Attractive incentives could reduce costs even more
- Low cost of living.

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