

**NORTHWEST PENNSYLVANIA  
AS A LOCATION FOR THE  
INDUSTRIAL MACHINERY INDUSTRY**



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*(Phoenix, AZ, Fort Worth, TX and offices nation-wide)*

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## Introduction

This report, **Northwest Pennsylvania as a Location for the Industrial Machinery Industry**, identifies business costs and conditions associated with the development of an industrial machinery facility in Northwest Pennsylvania. Industrial machinery is long standing, dominant and traditional industry in the region.

The report compares cost in Northwest Pennsylvania versus select locations, including:

- Chicago, IL
- Minneapolis, MN
- Detroit, MI
- Cleveland, OH
- Buffalo, NY

Costs are drawn from a hypothetical industrial machinery project (see model description on page 4), which was based on actual site selection experience. Key site location cost factors are examined in this report including:

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

The cost comparison spreadsheet follows on pages 5-7. Costs were derived from actual field research in Northwest Pennsylvania and telephone research on competitor communities. The latest available data was used for all cost comparisons.

In addition, other regional conditions related to this industry are examined.

Carter & Burgess, Inc. is a world-renowned architecture/engineering, real estate and site selection firm based in Fort Worth, Texas and with offices nation-wide. The firm has located and designed over 100,000,000 square feet of commercial/industrial space over the last seven years.

**Project Model**  
***Industrial Machinery Facility***

**Purpose:** The machining, repair and/or manufacturing of industrial equipment and parts to serve global marketplaces.

**Hours of Operation:** 3 shift 5 days per week

**Labor:**

- 80 total
- 5-managerial/engineering
- 5- clerical/sales
- 5-technical; CAD design
- 20 skilled workers, welders, machinists
- 30 semiskilled, machine operators (CNC)
- 15 unskilled- machine helpers

**Utilities:** Electric Power- Demand: 500 KW;  
Energy: 500,000 KwH/month (average)

**Building:** 75,000 square feet, 65,000 of manufacturing space; 10,000 square feet of office space

**Land:** 20 level acres in a fully improved industrial park.

**Investment:** Land & Building: \$4-\$6 million; M&E: \$4 million; Inventory: \$3 million; estimate sales (first year): \$8 million.

**Other Critical Factors:** Good access to reasonably priced skilled workforce; reliable and economic electric power supply; access to good supplier and customer network; good technical college with flexibility in training, affordable housing.

**INDUSTRIAL MACHINERY PROJECT***FIRST YEAR OPERATING COSTS*

<b>Labor Costs</b>	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
<i>Managers</i>						
Number	2	2	2	2	2	2
Annual Salary	\$80,331	\$92,693	\$91,592	\$97,084	\$87,597	\$88,922
<i>Engineering</i>						
Number	3	3	3	3	3	3
Annual Salary	\$41,727	\$48,484	\$48,433	\$50,628	\$46,295	\$46,416
Total Managerial/Engineering Salary	\$285,843	\$330,838	\$328,483	\$346,052	\$314,079	\$317,092
<i>Sales</i>						
Number	2	2	2	2	2	2
Annual Salary	\$33,591	\$42,593	\$40,400	\$40,510	\$38,266	\$38,029
<i>Clerical</i>						
Number	3	3	3	3	3	3
Annual Salary	\$18,520	\$21,976	\$21,810	\$22,520	\$20,849	\$20,859
Total Sales/Clerical Salary	\$122,742	\$151,114	\$146,230	\$148,580	\$139,079	\$138,635
<i>Skilled CAD Design</i>						
Number	5	5	5	5	5	5
Annual Salary	\$32,984	\$39,046	\$39,193	\$40,856	\$37,286	\$37,224
<i>Skilled Machinists</i>						
Number	10	10	10	10	10	10
Annual Salary	\$24,865	\$28,983	\$29,205	\$30,557	\$27,852	\$27,842
<i>Skilled Welders</i>						
Number	10	10	10	10	10	10
Annual Salary	\$25,847	\$30,122	\$30,361	\$31,785	\$28,945	\$28,936
Total Skilled Salary	\$507,120	\$591,050	\$595,660	\$623,420	\$567,970	\$567,780
<i>Semi-Skilled CNC Machine Operators</i>						
Number	30	30	30	30	30	30
Annual Salary	\$21,069	\$24,580	\$24,740	\$25,813	\$23,630	\$23,615
Total Salary	\$632,070	\$737,400	\$742,200	\$774,390	\$708,900	\$708,450
<i>Unskilled Laborers</i>						
Number	15	15	15	15	15	15
Annual Salary	\$16,709	\$19,214	\$19,041	\$19,705	\$18,317	\$18,317
Total Salary	\$250,635	\$288,210	\$285,615	\$295,575	\$274,755	\$274,755
Total Annual Wage Costs	<u>\$1,220,393</u>	<u>\$1,424,838</u>	<u>\$1,419,921</u>	<u>\$1,480,296</u>	<u>\$1,356,799</u>	<u>\$1,359,101</u>
<b>Fringe Benefits</b>						
	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
Medical @ 15 %	\$183,059	\$213,726	\$212,988	\$222,044	\$203,520	\$203,865
Disability @ .133 %	\$1,623	\$1,895	\$1,888	\$1,969	\$1,805	\$1,808
FICA @ 7.5 %	\$91,529	\$106,863	\$106,494	\$111,022	\$101,760	\$101,933
Life @ .5 %	\$6,102	\$7,124	\$7,100	\$7,401	\$6,784	\$6,796
Unemployment Ins. Rate	3.75%	3.10%	2.13%	2.70%	2.70%	4.00%
UI Cost	\$24,013	\$19,840	\$13,600	\$17,280	\$17,280	\$25,600
Workers Comp Rate-Plant (per \$100)	\$2.90	\$4.36	\$1.30	\$6.14	\$5.50	\$7.01
Worker Comp Rate-Office (per \$100)	\$0.47	\$0.30	\$0.17	\$0.23	\$0.50	\$0.40
Workers Compensation Cost	\$42,225	\$71,932	\$21,912	\$105,111	\$87,605	\$110,547
Fringe Benefit Load Factor	28.56%	29.57%	25.63%	31.40%	40.00%	32.52%
Total Annual Fringe Benefits	<u>\$348,552</u>	<u>\$421,380</u>	<u>\$363,983</u>	<u>\$464,828</u>	<u>\$542,720</u>	<u>\$441,945</u>
<u>Costs</u>						

Northwest Pennsylvania as a Location for the Industrial Machinery Industry

**IND MACH PROJECT (CONT)**

<b>Build to Suit Costs</b>	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
Square Feet Office	10,000	10,000	10,000	10,000	10,000	10,000
Square Feet Manufacturing	65,000	65,000	65,000	65,000	65,000	65,000
Cost per Square Foot of Office	\$80.00	\$75.00	\$95.00	\$100.00	\$85.00	\$75.00
Cost per Square Foot of Mfg.	\$45.00	\$37.00	\$57.00	\$60.00	\$35.00	\$40.00
<b>Total Building Cost</b>	<b>\$3,275,000</b>	<b>\$2,785,000</b>	<b>\$4,085,000</b>	<b>\$4,300,000</b>	<b>\$2,775,000</b>	<b>\$2,950,000</b>
<b>Land Costs</b>	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
Cost per Acre	\$15,000	\$135,907	\$119,790	\$120,000	\$84,942	\$65,000
Acres Required	20	20	20	20	20	20
Total Land Cost	\$300,000	\$2,718,140	\$2,395,800	\$2,400,000	\$1,698,840	\$1,300,000
Total Building & Land Cost	\$3,575,000	\$5,503,140	\$6,480,800	\$6,700,000	\$4,473,840	\$4,250,000
<u>Annual Payment (@ 6%, 15 yrs)</u>	<u>\$368,092</u>	<u>\$566,619</u>	<u>\$667,281</u>	<u>\$689,851</u>	<u>\$460,639</u>	<u>\$437,592</u>
<b>Property Tax Costs</b>	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
Value of Real Estate	\$3,575,000	\$5,503,140	\$6,480,800	\$6,700,000	\$4,473,840	\$4,250,000
Assessment Ratio	100%	33%	100%	100%	35%	100%
Property Tax Rate	41.84	2.19	29.17	3.552	91.90	50.00
Real Estate Taxes	\$149,578	\$40,169	\$189,045	\$237,984	\$143,901	\$212,500
Machinery & Equipment Value	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000
Personal Property Tax Rate	\$0	\$0	\$29.17	\$0	91.90	\$0
Personal Property Tax	\$0	\$0	\$38,504	\$0	\$77,196	\$0
Value of Inventory	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Inventory Tax Rate	\$0	\$0	\$0	\$0	91.90	\$0
Inventory Tax	\$0	\$0	\$0	\$0	\$55,140	\$0
<u>Total Annual Property Taxes</u>	<u>\$149,578</u>	<u>\$40,169</u>	<u>\$227,549</u>	<u>\$237,984</u>	<u>\$276,237</u>	<u>\$212,500</u>
<b>Corporate Income Taxes</b>	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
Adjusted State Taxable Income	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000
State Tax Rate	9.90%	9.00%	9.50%	9.90%	8.00%	7.50%
Federal Tax Rate	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
<b>Total Corporate Income Taxes</b>	<b>\$2,245,000</b>	<b>\$2,200,000</b>	<b>\$2,225,000</b>	<b>\$2,245,000</b>	<b>\$2,150,000</b>	<b>\$2,125,000</b>
<b>Electric Power Costs</b>	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
KW Demand	500	500	500	500	500	500
KwH/Month Usage	500000	500000	500000	500000	500000	500000
Cost/KwH	\$0.0358	\$0.069	\$0.0569	\$0.0847	\$0.0842	\$0.1136
<u>Total Annual Electric Power Cost</u>	<u>\$214,620</u>	<u>\$414,000</u>	<u>\$341,400</u>	<u>\$508,200</u>	<u>\$505,200</u>	<u>\$681,600</u>
<b>Potential Incentives</b>	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
Tax Credits/Tax Abatements	\$645,000	\$150,000	\$227,000	\$87,000	\$200,000	\$230,000
Training	\$495,000	\$160,000	\$200,000	\$100,000	\$180,000	\$216,000
<u>Total Incentives</u>	<u>\$1,140,000</u>	<u>\$310,000</u>	<u>\$427,000</u>	<u>\$187,000</u>	<u>\$380,000</u>	<u>\$446,000</u>

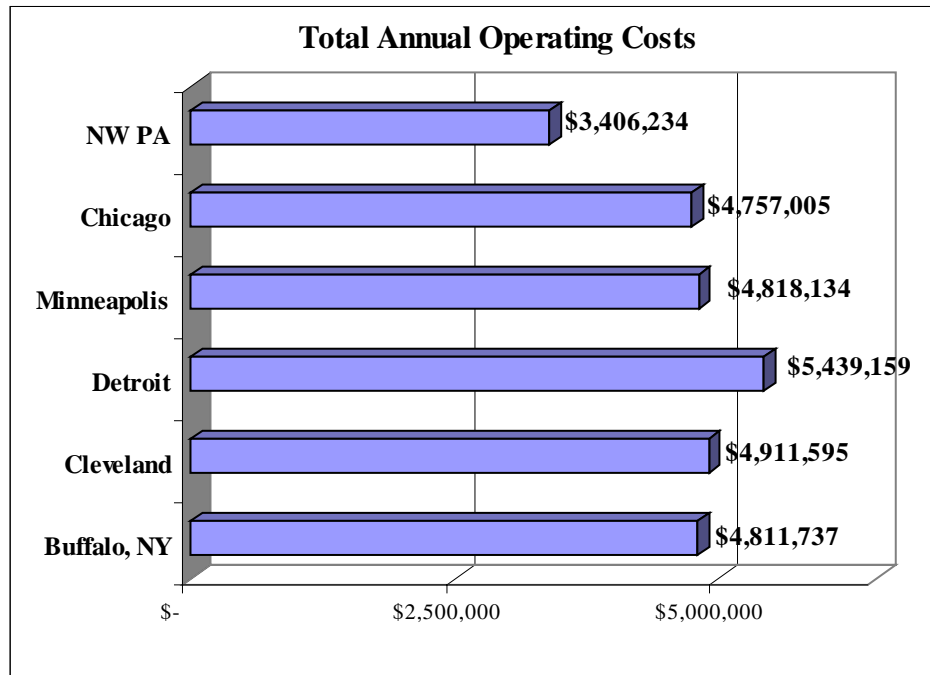
Northwest Pennsylvania as a Location for the Industrial Machinery Industry

**IND MACH PROJECT (CONT)**  
**TOTALS**

	<b>NW PA</b>	<b>Chicago</b>	<b>Minneapolis</b>	<b>Detroit</b>	<b>Cleveland</b>	<b>Buffalo, NY</b>
<b>Annual Operating Costs</b>	<b>\$3,406,234</b>	<b>\$4,757,005</b>	<b>\$4,818,134</b>	<b>\$5,439,159</b>	<b>\$4,911,595</b>	<b>\$4,811,737</b>
<i>\$ greater than NW PA</i>		\$1,350,771	\$1,411,899	\$2,032,924	\$1,505,360	\$1,405,503
<i>% greater than NW PA</i>		39.7%	41.5%	59.7%	44.2%	41.3%

## Total Project Operating Costs

**Northwest Pennsylvania is the low cost locale for the machining firm.** Over \$2 million per year could be saved by locating this project in Northwest Pennsylvania versus the highest cost area, Detroit.



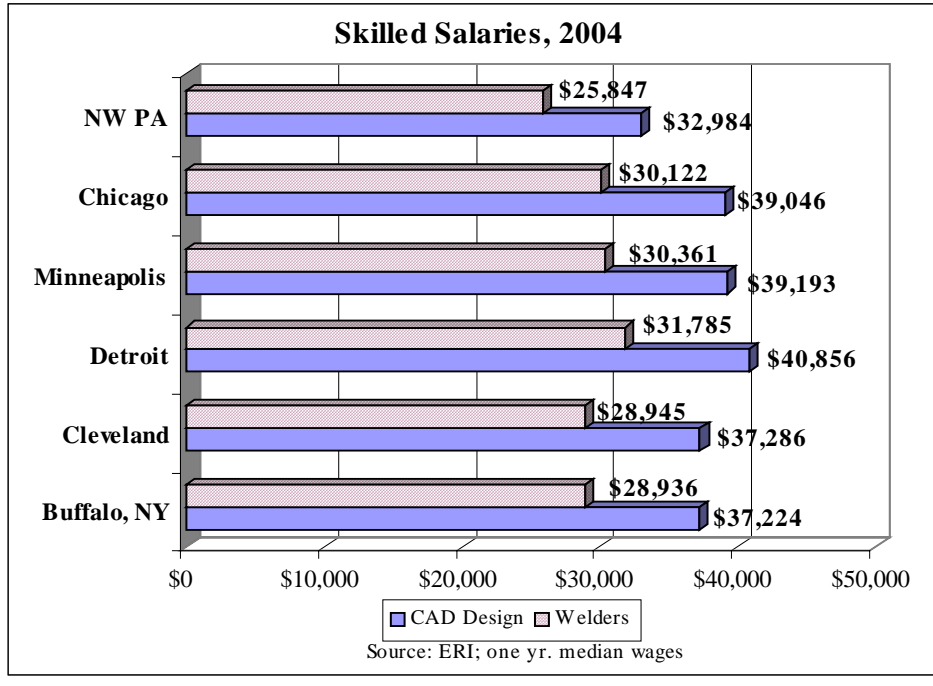
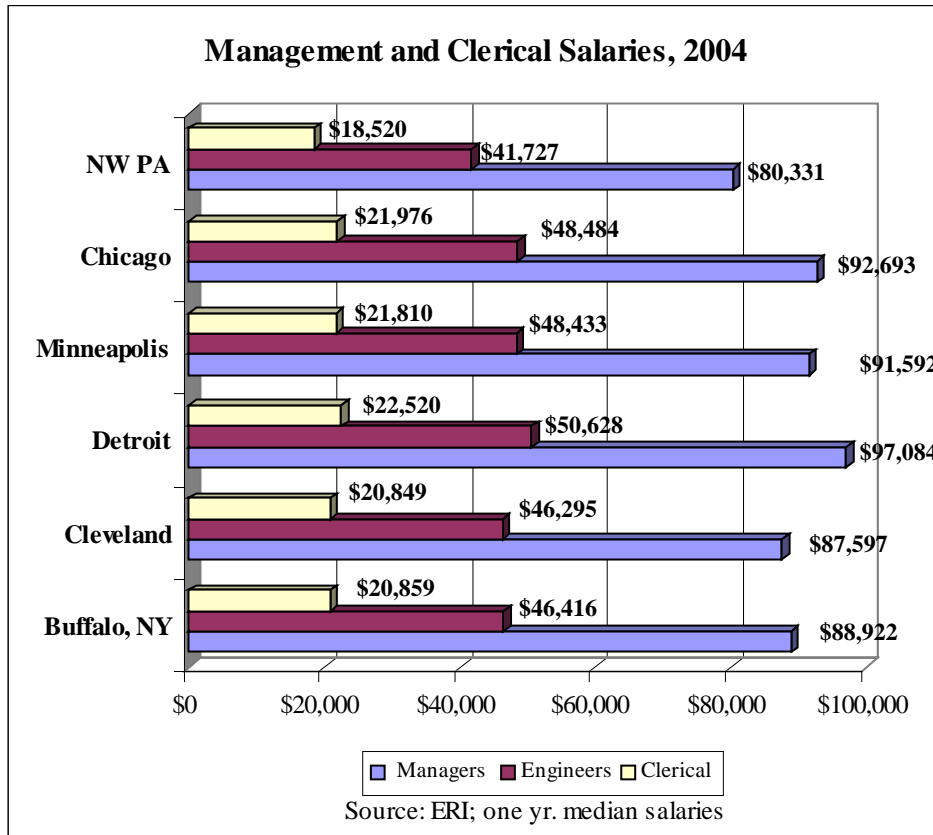
## Labor

### Wages/Salaries and Fringe Benefits

Wage/salary and fringe benefit costs represent up to 60% of the total operating costs for this project (before incentives), depending on the location. This is the largest single cost factor.

Wages and salaries are used in the model are for median salary range positions with one year experience. All wages come from our national data resource (Economic Research Institute (ERI) and actual on-site fieldwork.

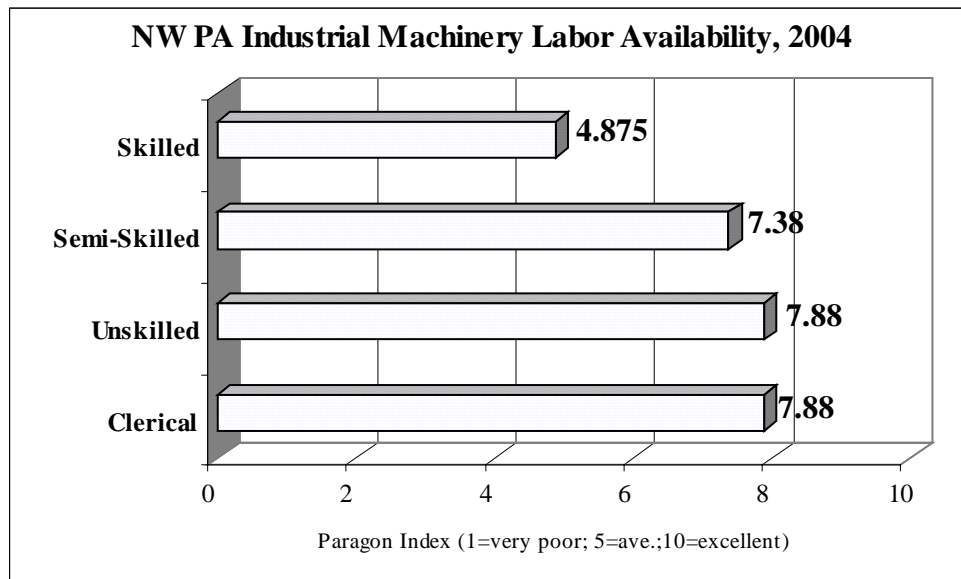
Northwest Pennsylvania has the lowest overall labor costs of the five competing areas. Over \$250,000 would be saved in wage costs annually alone by locating this project in Northwest Pennsylvania instead of Detroit, the highest wage locale.



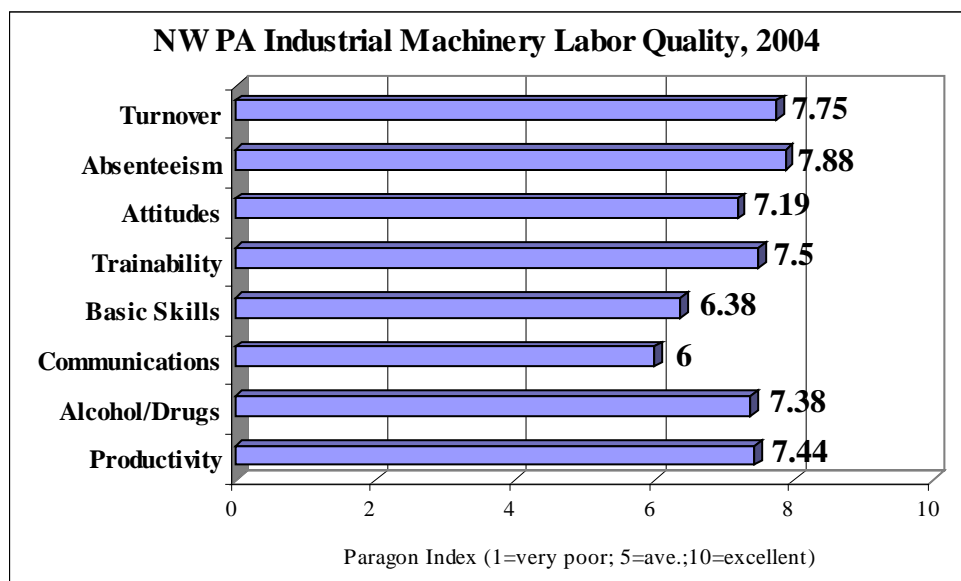
### Labor Availability & Quality in NW Pennsylvania

Good labor availability and quality are critically important to the success of a project. We have compared both availability and quality in the region using our unique *Paragon Index*. The index factors on a 1 (very poor) to 10 (excellent) point scale (5 is average). The index takes our results of our fieldwork interviews 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.

Semi-skilled, unskilled and clerical availability is good.



Most labor quality factors are rated good.



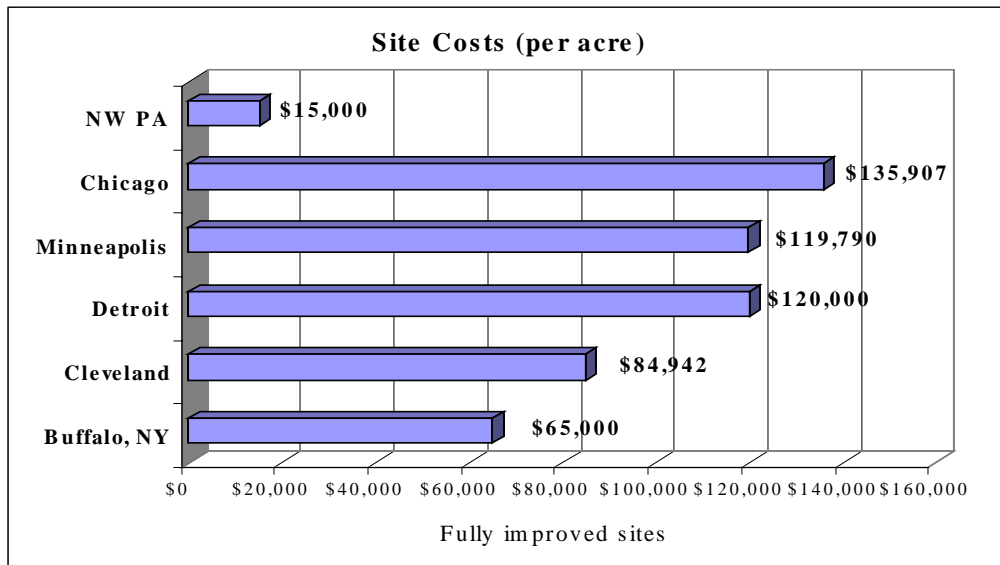
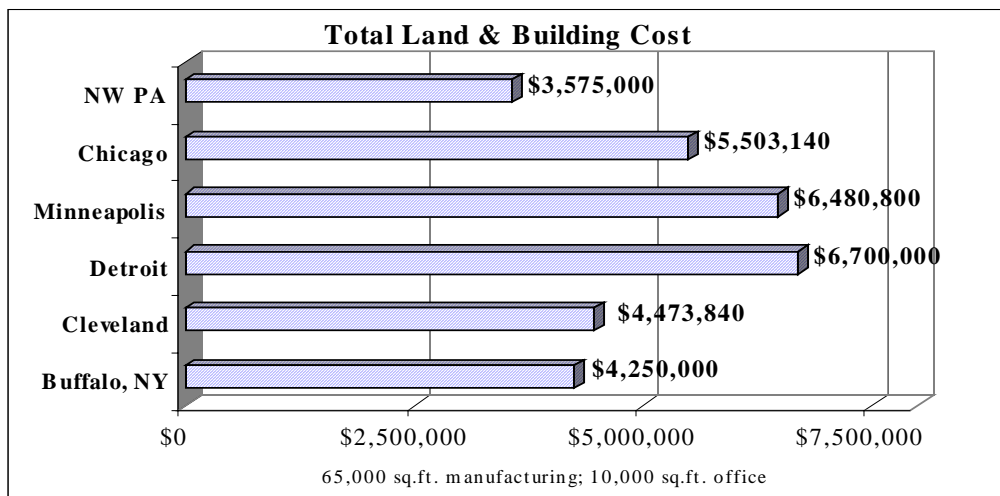
Here is what regional plastics employers had to say about quality:

- *The workforce has good attitudes.*
- *The people are very trainable with terrific attitudes.*
- *They are hard working and will work as long as needed...*

### Build-to-Suit Costs

Annual building and site costs represent approximately 10% of total annual operating costs in the model (this cost is amortized).

Northwest Pennsylvania building related costs are lowest primarily due to the low cost of prime industrial sites and lower construction costs.



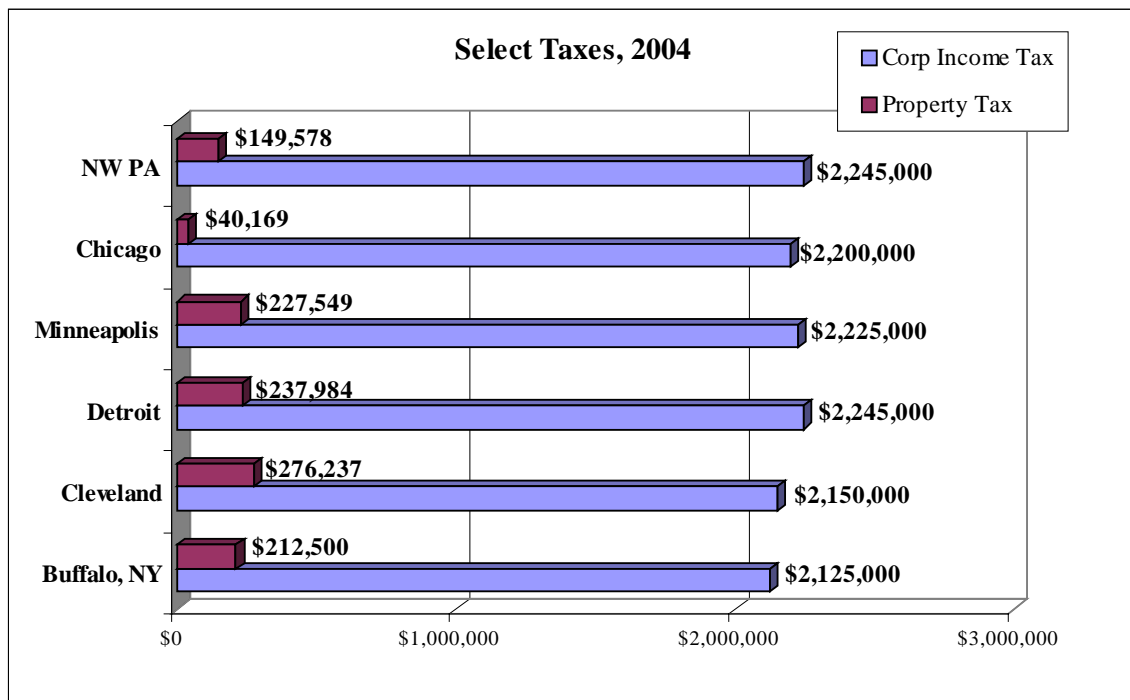
## Taxes

### Property Taxes

Property taxes consist of real estate and personal property taxes, which may include taxes on machinery and equipment. Northwest Pennsylvania property taxes are modest compared to Boston and the European cities and will be zeroed out since this project will be located in a Keystone Opportunity Zone (KOZ).

### Corporate Income Taxes

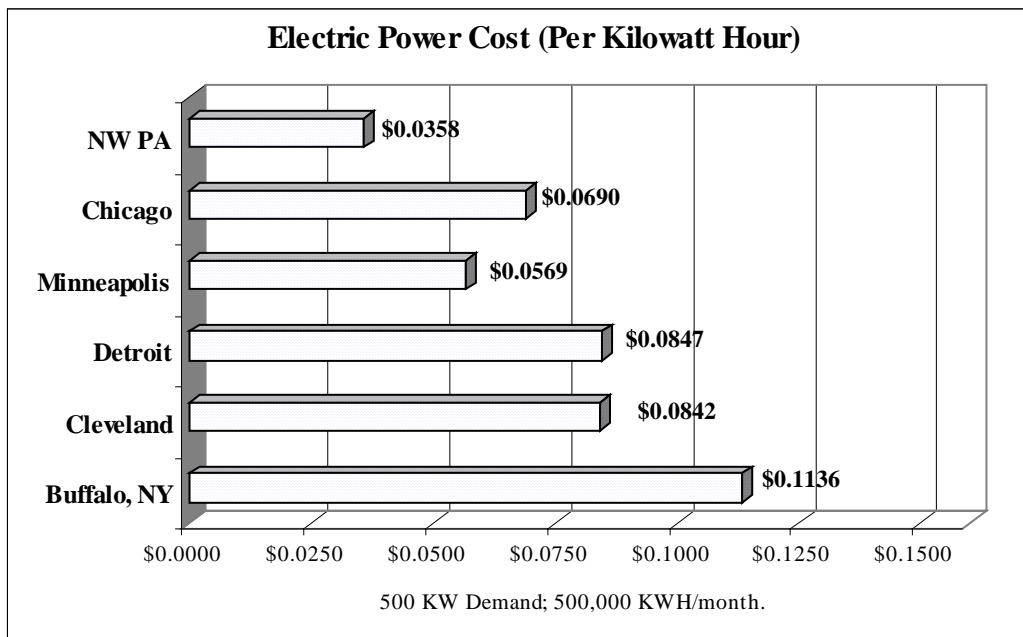
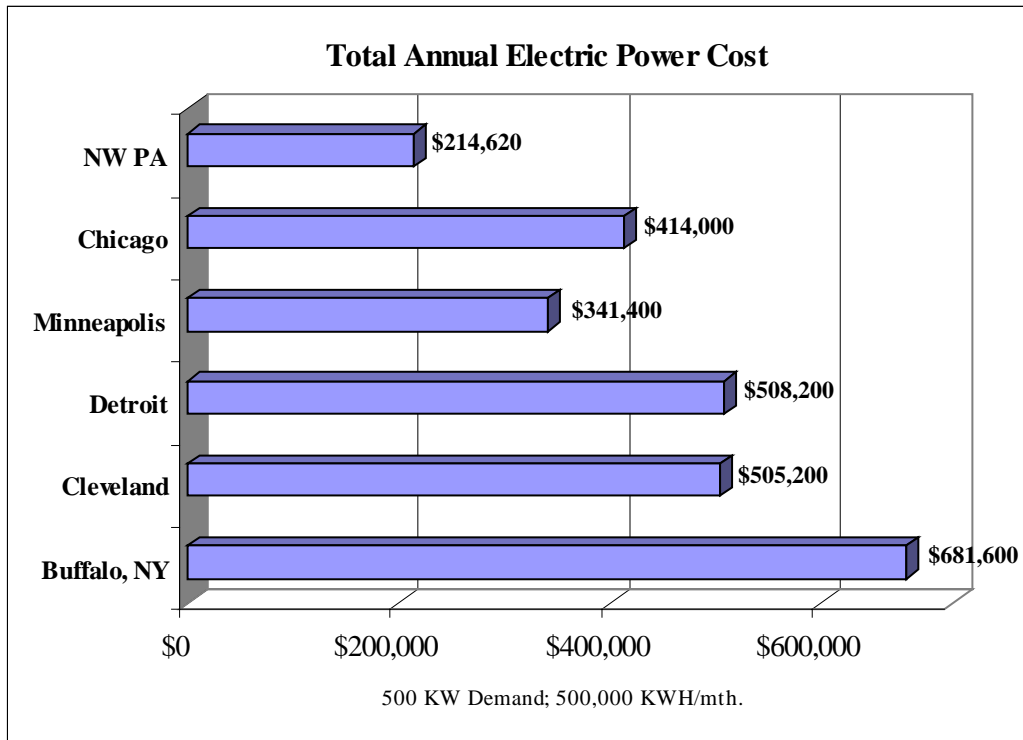
Pennsylvania's state income tax rate is 9.90%, the highest of the comparison cities. However, the NW PA rate will be zeroed out since this project will be located in a Keystone Opportunity Zone (KOZ).



## Utilities

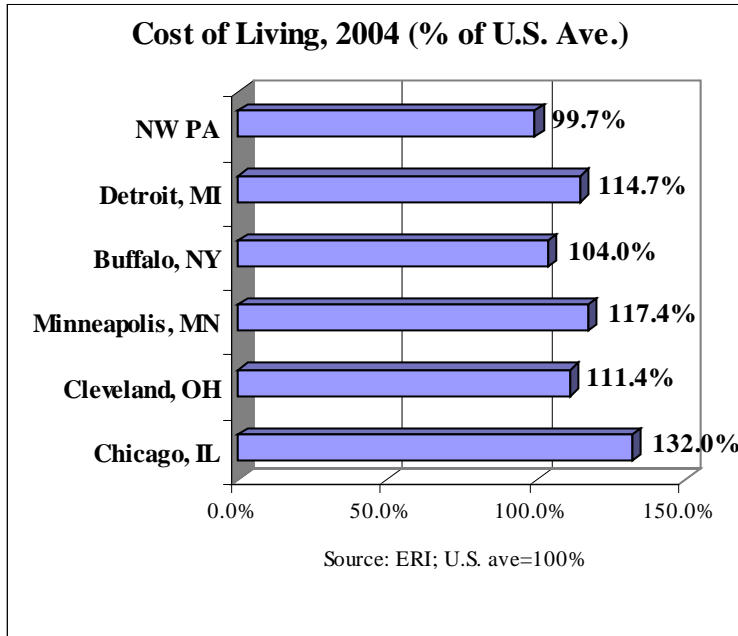
### Electric Power

Power costs are a relatively minor cost in this model, anywhere from 2-5% of total operating costs. NW PA has the lowest electric power rates due to attractive incentive rates.



## Cost of Living

The cost of living will influence relocation of key personal to the project city. It should be relatively easy to sell employees on NW PA's lower costs, the only comparison area under the U.S. average.



## **The Industrial Machinery Industry in Northwest Pennsylvania**

### **Employment**

Nearly 7,300 people currently work in the Industrial Machinery Sector (NAICS 333) in NW Pennsylvania.

<b>NW Pennsylvania Industrial Machinery Employment, 2002</b>	
<b>County</b>	<b>Jobs</b>
Erie	2,751
Mercer	547
Venango	1,370
Warren	195
Crawford	2,080
Lawrence	325
Clarion	0
Forest	0
Total	7,268

Source: Bureau of Labor Statistics, Local Area Industry Employment data, 2002.

### **Northwest Pennsylvania Resources Supporting Industrial Machinery Manufacturing Development**

1. The area's strong manufacturing history and work ethic are pluses.
2. A central location to major industrial markets in the East and Midwest is a plus.
3. Local manufacturers' experience in building tools and dies for machinery manufacturing is a plus.
4. Interstate highway access afforded by I-80, I-90, and I-79 is a plus for worker commuting and travel time to both suppliers and customers.
5. The general training strengths found at PMI, Penn State, Erie, Edinboro University of Pennsylvania, and Clarion University are advantages for developing the businesses in this sector.

## Incentives Offered in NW PA

**The Northwest Commission can facilitate excellent incentive packages to qualified industrial machinery businesses.** Major programs include:

- **Keystone Opportunity Zones (KOZ):** Keystone Opportunity Zones represent the boldest, most forward-thinking economic development program in the nation. Through credits, waivers, and comprehensive deductions, total taxes on economic activity in Keystone Opportunity Zones are reduced to almost zero. And these tax abatements remain in effect through 2013. The Northwest Pennsylvania region has numerous designated zones.
- **Customized Training Programs:** The third largest program in the nation, the Customized Job Training program is responsive to employer needs by providing grant funds for specialized job training to existing or newly hired employers.
- **Guaranteed Free Training Program:** Through the Workforce and Economic Development Network of Pennsylvania (WEDnetPA), qualified companies may receive free job training for basic entry-level skills and advanced information technology skills for their employees. Pennsylvania is the first state to offer advanced technology and business training online.
- **R&D Tax Credits** – Corporate income tax reductions for firms investing in research and development.

## **Northwest Pennsylvania's Strengths for Industrial Machinery Firms**

- **The low cost area versus all comparison cities.**
- Excellent proximity to regional markets.
- Good presence of industrial machinery operations.
- Outstanding educational and training resources.
- Good site and build-to-suit opportunities
- Great financial and training incentives to help firms with startup and expansion.
- Outstanding professional resources that are ready, willing and able to assist firms.
- Reasonable cost of living.

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