



## Butler County, the Cincinnati – Dayton Region



Butler County, the Cincinnati – Dayton region is well suited for a wind turbine manufacturing operation because of its established aeronautics, auto, and auto parts industries and the deep pool of experienced employees in those industries.

### EXPERIENCED WORKFORCE

- A stable and productive workforce of 1.5 million in the Cincinnati – Dayton region.
- More than 180,000 workers employed as engineers, mechanics and engine specialists; aircraft structure assemblers; and specialists in precision production, craft, and repair occupations.
- 50,000 scientists and engineers within a 50-mile radius of Butler County.
- The 10,000 engineers and scientists at Wright- Patterson Air Force Base give the region one of the nation's greatest concentrations of aerospace engineering expertise.

### CINCINNATI – DAYTON AEROSPACE CORRIDOR

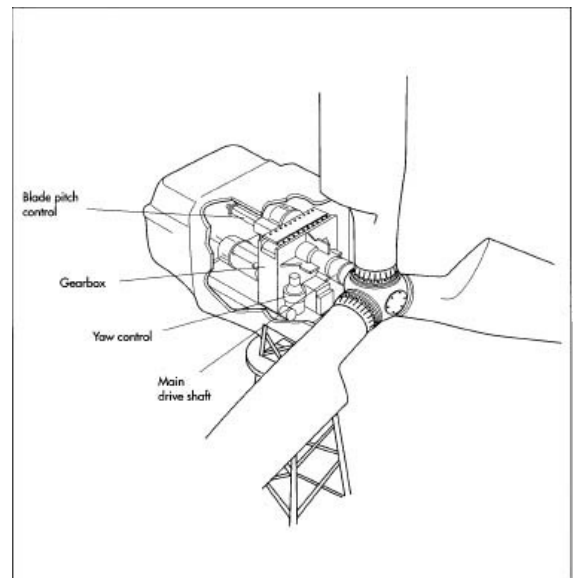
From the earliest days of commercial aviation 100 years ago, the Cincinnati – Dayton region has been a center for aerospace firms because of our workforce of experienced professionals and significant technology strengths including world-class research, development, and commercialization talent. The region is integrally linked to the highest levels of the industry—from parts critical to the NASA space missions to the world's leading manufacturer of large jet engines.

## AEROSPACE AND AERONAUTICS SUPPLY CHAIN SUPPORT

The Cincinnati-Dayton corridor ranks in the top 15 areas nationally for the number of establishments directly involved with aerospace products and parts manufacturing.

Wright-Patterson Air Force Base leads the world in transferring new military technologies to the private sector through commercial development licensing. With a workforce of 24,000, Wright-Patterson is one of the largest, most diverse, and organizationally complex Air Force installations and the largest single site employer in Ohio. Missions for the base's more than 60 units vary from acquisition and logistics management, to research and development, advanced education, flight operations, and a vast array of other activities.

The Cincinnati-Dayton corridor has more than 400 aerospace and related support businesses, including aircraft and parts, aircraft engines, and engine parts; fabricated metal products; instruments; and related products. Specifically there are engineers, fabricators, and technicians here experienced in the design, technology, and manufacturing of turbines, nacelles, rotor and blade components, generators, turbine control electronics, and gearboxes.



## REPRESENTATIVE MANUFACTURERS

Aeronca Inc.: a major aerospace subcontractor for engine/nacelle components, space structures, and missile control surfaces.

Cincinnati Lamb: machining and advanced composite processing systems.

Fame Tool: turbine engine support tooling.

GE Aviation: the world's leading supplier of commercial and military jet engines.

Hartzell Propeller: composite propellers.

HI TEK Manufacturing: machining and precision components for aerospace.

L-3 Communications, KDI Precision Products Inc.: electromechanical technology.

McCauley Propeller Systems: high performance propeller systems.

Meyer Tool Inc.: precision parts for the aerospace industry.

Smiths Aerospace, Electronic Systems Division: custom design electrical power generation.

## EDUCATION

The region's highly regarded educational system supports lifetime learning. With five of the nation's top 50 universities for Aerospace Engineering within 200 miles of Cincinnati, the region is a hotbed for aerospace educational opportunities. Some of the area's top aerospace programs include:

The University of Cincinnati's Aerospace Engineering and Engineering Mechanics program is ranked in the top 10 of all U.S. aerospace graduate programs by the National Research Council. UC also boasts the nation's first cooperative education program and continues to graduate 300 engineers each year.

The University of Dayton, No. 1 in the state for conducting research and development sponsored by the Department of Defense, offers degrees in mechanical and aerospace engineering. The school's Research Institute is No. 2 in the nation for funding in materials research and is Ohio's leader among nonprofit institutions receiving research contracts and grants from the Department of Defense. It received \$65 million in total sponsored research dollars in 2004 for research in structures, fuels and energy, aerospace mechanics, information technology, and materials nanotechnology.

## CINCINNATI – DAYTON AUTOMOTIVE CORRIDOR

From the design studio to the production line, Cincinnati USA has become a driving force at all levels of automotive manufacturing. The three-state region surrounding Cincinnati is a leader in light vehicle production with Ohio ranked second nationally (1.9 million vehicles annually) while Kentucky ranked fourth and Indiana fifth in 2004.

## EXTENSIVE AUTOMOTIVE INVESTMENT



Approximately 80% of North American light vehicle production takes place in Ohio or within 500 miles of its borders. Ohio has tripled its share of U.S. car production in the last decade growing from 7.3 percent of U.S. output in 1993 to almost 21 percent in 2003 accounting for one-fifth of the country's output.

Ohio was also second in the nation with value-added to motor vehicles and parts during the most recently measured period reflecting the continued investment in the state's motor vehicle industry—\$3.64 billion by 115 companies from 2001 to 2003.

In addition to being a major force in vehicle production, Ohio is also a leader in the number of Tier I auto parts suppliers. The state ranks second in the nation with 221 suppliers. Combined with 102 Tier II suppliers in Indiana and 51 in Kentucky, the Tri-state area surrounding the Cincinnati – Dayton region accounts for more than 25 percent of the Tier I suppliers in the United States.

The Cincinnati – Dayton region is integral to the supply chain of many auto related firms, with more than 108 out of 614 of Ohio's motor vehicle industry companies located in the Cincinnati-Dayton corridor.

## EDUCATION

- The University of Cincinnati is a leading resource for the automotive industry with the College of Design, Art, Architecture, and Planning (DAAP), which was named No. 1 public design school in the world by International Design Magazine in October 2002. DAAP is the only college in the nation where industrial design students can create “to size” auto parts in a Rapid Prototyping Center.
- UC students co-op at General Motors, Honda of America, EDS, Delphi, and firms abroad, such as Audi, Volkswagen and BMW.
- An Engineering Mechanics curriculum prepares students to design better automobiles. A research initiative on fuel cells and advanced fuel cell membranes is being conducted by the UC Chemical and Mechanical Engineering Departments.

- Engineering, research and workforce development is provided by the region's 25 universities and colleges as well as its community colleges and vocational technical schools.
- Miami University's School of Business offers a degree program in Supply Chain Management while Wright State University's School of Business offers a Master's program in Supply Chain Management.

Other local colleges and universities serving the automotive industry include:

University of Dayton  
Northern Kentucky University  
Cincinnati State Community and Technical College  
Gateway Community and Technical College  
Sinclair Community College

#### REPRESENTATIVE MANUFACTURERS

Balluff Inc.: ductive sensors, switches, and rotary transducers.

Batavia Transmissions, LLC: CVT transmissions.

Johnson Controls: battery covers and containers.

Pacific Manufacturing of Ohio: metal stamping.

Sumitomo Electric Wiring: electric wiring harnesses.

Sun Manufacturing & Coatings, LLC: custom coatings.

Sunnex: adhesives.

Takumi Stamping: metal stampings.

ThyssenKrupp Bilstein: shock absorbers.

Toyota Motor Manufacturing of North America: headquarters.

Usui International: fan drives.

Waltex: automated welding equipment.

ZF Steering Systems NACAM Corp.: universal joints and steering columns.

## BUTLER COUNTY

**Butler County** has business-oriented government officials from the private sector; an excellent availability of reasonably priced office, commercial, and industrial space; a productive, knowledge-based workforce; close proximity to four major interstate highways; and world-class air service from two international airports making it an unsurpassed community in which to conduct business.

**Interstate Highways** – Butler County has 11 interchanges on or adjacent to major interstate highways including I-75, I-71, and I-74 and is only 30 miles south of I-70. A total of 54% of the nation's population and 53% of the country's manufacturing plants are within 600 miles -- a one - day drive -- from Butler County.

**Knowledge-based Workforce** – 56% of the population 25 and older has some college, an associate's degree, a bachelor's degree, or graduate or professional degrees. More than 2,000 area firms are currently engaged in high technology. Because of its location in the center of a region with a workforce of 1.5 million, Butler County has a distinct advantage in labor resources. Businesses in the County can draw employees with specialized skills locally as well as from the Cincinnati and Dayton metropolitan areas.

**Universities and Colleges** – Twenty-five institutions of higher learning are located within a 90-mile radius of Butler County and are easily accessible via interstate highway. These colleges and universities generate well-prepared workers, create vibrant communities, and contribute to advanced-technology development through their curricula and research in areas such as: science, engineering, manufacturing, information systems, supply chain logistics, business administration, environmental sciences, aerospace, biomedicine, electro-optics, economics, and management development.

They include the University of Cincinnati, the Air Force Institute of Technology, Miami University, the University of Dayton, Xavier University, Northern Kentucky University, and two of the largest career technical education schools in the State of Ohio: Great Oaks Institute of Technology and Butler Tech.

In addition to the twenty-five colleges and universities, there are six branch campuses and seven community colleges with career and technical curriculums located in the Cincinnati – Dayton region. Additionally, there are 840,000 students enrolled at more than 250 colleges and universities within a 200-mile radius of Butler County that add more than 140,000 young professionals to the workforce each year.

**Corporate Headquarters** – A total of 10 *Fortune 500* companies and nine *Fortune 1000* companies are headquartered in the Cincinnati – Dayton region ranking it #4 nationwide in *Fortune 1000* companies per million residents and #6 in *Fortune 500* companies per million residents. In addition, businesses' share of Ohio state and local taxes paid ranks as the 16th lowest in the nation and is well below the national average. *Fortune* magazine ranked Cincinnati 7th among the top 15 U.S. cities rated as great places to live and work.

Cincinnati is one of the least expensive cities in the U.S. in which to operate a corporate headquarters according to a new national study when considering the cost of administrative support, labor, construction, utilities, corporate travel, and other operating expenses. The region ranked 7th best among the 30 major markets in the survey which was conducted by the Boyd Company, a Princeton, N.J.-based corporate site selection consulting firm.

**International Businesses** – The Cincinnati – Dayton region is also home to 362 foreign owned companies: Japan (150); Germany (81); France (32); United Kingdom (31); Canada (18); Switzerland (12); Netherlands (8); Italy (7); Belgium (5); Ireland (4); Sweden (4); Taiwan (2); Luxembourg (1); Poland (1); Spain (1); Portugal (1); South Africa (1); Brazil (1); South Korea (1); and Hong Kong (1). Some of the world's most highly regarded foreign companies have a presence in the region including: Aeronca, Bayer, Cable & Wireless, Degussa, Denso, Faurecia, Fujitec, Honda, Krupp-Hoesch, La Farge, Mitsubishi Electric, NEC, Pioneer, Rolls Royce, Siemens, Snecma, Sumitomo Electric, Sun Chemical, Toyota Motor Mfg. - North American Headquarters, Valeo, and ZF Group.

**Air Transportation** – Butler County is equidistant, about 30 miles, from both Cincinnati Northern Kentucky (CVG) and Dayton International (DAY) airports giving customers and employees the option of flying into CVG with 400 nonstop flights to 120 destinations or lower cost, lower airfare Dayton International.

**Lower Midwest Climate** – In Butler County, the average July high temperature is 87 degrees while the average low January temperature is 23 degrees – much milder weather conditions when compared with the rest of the Midwest.

**Quality of Life/Cost of Living** – The Cincinnati – Dayton region is known for its rolling hills, wooded suburbs, dynamic workforce, and an environment where businesses grow and people thrive. *Fortune* calls it one of the Top 10 places in the country to live and work. With existing home selling prices more than 36% below the national median; great job opportunities; excellent K through 12 schools and colleges; first class shopping; major league football and baseball; outstanding parks, arts, entertainment, and recreational opportunities all in an affordable metro-region, Butler County Ohio is also a great place to raise a family.