

Wind Turbine Technicians

SOC: 49-9081 • Career Profile Report

■ Key Facts

\$62,580

Median Salary

13,600

Employment

+50.0%

Growth Rate

■ Requirements & Salary Range

Education: Postsecondary

■ Automation Risk Assessment

Low Risk - 25.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■■ Work-Life Balance

4.8/10 - Fair work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	8.8/10	Investigative	7.4/10
Artistic	4.4/10	Social	5.6/10
Enterprising	4.6/10	Conventional	6.4/10

■ Top Skills Required

Ability to work at heights, Communication skills, Detail oriented, Mechanical skills, Physical stamina, Physical strength, Problem-solving skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Wind Turbine Technicians install, maintain, and repair **wind turbines that generate electricity**. They inspect mechanical and electrical components, troubleshoot issues, and ensure turbines operate efficiently and safely. Their work is critical in renewable energy, sustainability, and power generation.

This career is well suited for individuals who enjoy hands-on technical work, problem-solving, and working with renewable energy systems.

What Do Wind Turbine Technicians Do?

These professionals monitor, maintain, and repair wind turbines, ensuring continuous and safe energy production.

Common responsibilities include:

- Inspecting and testing mechanical and electrical components of wind turbines
- Performing routine maintenance, repairs, and system upgrades
- Troubleshooting malfunctions and diagnosing issues
- Climbing and working at heights to access turbine components
- Monitoring turbine performance using diagnostic tools and software
- Following safety protocols and environmental regulations
- Documenting maintenance, repairs, and operational data

Key Areas of Wind Turbine Technology

Technicians may focus on specific turbine systems, maintenance procedures, or energy monitoring:

- Mechanical Systems: Maintaining gears, rotors, and moving parts
- Electrical Systems: Repairing wiring, generators, and control systems
- Preventive Maintenance: Conducting regular inspections to prevent downtime
- Troubleshooting and Diagnostics: Identifying and correcting operational issues
- Safety and Compliance: Adhering to safety standards and environmental regulations

Skills and Abilities Needed

Wind turbine technicians combine technical, mechanical, and safety skills.

Core Professional Skills

Personal Qualities That Matter

Education and Career Pathway

This role typically requires specialized technical training and hands-on experience:

- High School Diploma or GED (minimum): Basic math, science, and technical skills
- Technical or Vocational Training: Wind turbine or renewable energy programs
- Apprenticeship or On-the-Job Training: Hands-on experience with turbines and electrical systems
- Certification (optional but recommended): Safety, electrical, or technical credentials
- Continuing Education: Staying current with turbine technology, safety protocols, and renewable energy developments

Where Do Wind Turbine Technicians Work?

They are employed in organizations that generate and maintain wind energy:

- Wind Farms and Energy Production Facilities
- Renewable Energy Companies

- Equipment Manufacturers and Service Providers
- Utility Companies
- Maintenance and Consulting Firms

Work environments include wind turbine sites, outdoor locations, and industrial facilities.

Is This Career Difficult?

This career requires technical expertise, physical fitness, and attention to safety. Technicians work at heights and in various weather conditions while maintaining critical energy systems.

Who Should Consider This Career?

This career may be a strong fit if you:

- Enjoy hands-on technical work with mechanical and electrical systems
- Are physically fit and comfortable working at heights
- Have strong problem-solving and analytical skills
- Can follow strict safety protocols
- Want a career in renewable energy and sustainable technology

How to Prepare Early

- Take courses in mathematics, physics, and electrical or mechanical technology
- Participate in vocational programs or technical schools focused on wind energy
- Gain experience with tools, machinery, and electrical systems
- Learn about renewable energy systems and turbine operations
- Develop safety awareness, problem-solving skills, and teamwork abilities

Wind turbine technicians ensure efficient and safe operation of wind energy systems, supporting renewable energy generation and sustainability.

*Generated by StartRight • Data from U.S. Bureau of Labor Statistics & O*NET*
Source: <https://www.bls.gov/ooh/installation-maintenance-and-repair/wind-turbine-technicians.htm>