GE Renewable Energy

Blade Services
Quality Engineered Blade Solutions

Application Platform: All Platforms

GE’s Blade & Composite Expertise

Blades are the cornerstone to efficient production of sustainable, clean wind energy. GE’s design knowledge and composite expertise shapes our engineered blade solution to ensure this vital component performs in peak condition. With extensive blade service capabilities across multiple platforms, GE has an array of solutions to ensure asset performance. Contact us to see how GE’s technology and service offerings for blade services can help you manage your assets.

BENEFITS

Reduce Lifecycle Cost
Whether catching a small issue early, or enhancing turbine performance, GE’s suite of blade offerings is your lever to protect project economics.

Better Performance, More Production
GE’s blade repair and replacement offerings minimize downtime and reduce performance losses, improving production, and enhancing the value of your asset.

Exceptional Safety and Quality
Safety is an integral part of our services and repairs, built into each process. Our specialist teams are trained to deliver high quality service with integrity and transparency. Safety is especially paramount with crane selection, where GE’s technical rigor ensures the right crane for the job.

TECHNOLOGY

Composite Repair Development
GE’s Repair Technology Center of Excellence (RTCoE) empowers our composite experts to develop repair processes with our field specialists to provide quality repairs with safety and speed.

Minimizing Cranes
With a strong focus mitigating the cost impact of cranes and weather risk, GE’s RTCoE has also developed tooling to enable safe execution of blade and bearing exchanges at higher wind limits, and smaller cranes.

Universal Fleet Solutions
GE’s composite repair and blade service expertise extends beyond the GE fleet, with offerings to support your whole wind portfolio. Let us help you find the best solution to meet your needs.
Blades Service Capabilities

**Monitoring, Inspection and Diagnostics**
With a constant priority and focus on keeping owner’s blades at peak condition, GE offers a variety of blade inspection and monitoring solutions to identify actionable emerging issues before they become a problem.

**Uptower Repair**
GE’s team of experienced professionals bring unsurpassed expertise in composite and fiberglass repair. Our repair solutions have been developed to meet a broad array of damage on virtually any blade type.

**Level 1: Minor Cosmetic**
Light damage to coating. Monitor and repair at earliest convenience

**Level 2: Cosmetic**
Damaged coating. Likely Annual Energy Production (AEP) (plan repair)

**Level 3: Minor Structural**
Small cracks or delamination. Likely AEP losses (plan repair)

**Level 4: Moderate Structural**
Damage to structure beyond 1st layer of laminate. Likely AEP losses (urgent repair)

**Level 5: Severe Structural**
Critical damage to structure or large area. Turbine shutdown and repair to prevent failure

**Leading Edge Protection**
Repair and protect blade performance with GE’s leading edge protection. Our exclusive solution ensures aero profile integrity to maintain performance and component life.

**Major Component Exchange**
Our specialized technicians work to ensure minimal downtime with quality and safe component exchanges. GE methodology and tooling technology enables reduced crane requirements and lower wind risk.

GE’s Engineered Crane Solutions reflect our commitment to safety by providing the right crane for the right job. GE’s Crane Team conducts comprehensive lift plan reviews and wind sail compliance – ensuring efficient and safe execution.

- HD telescopic monitoring
- Internal and ultrasonic inspection
- Thermographic inspection
- Asset performance management (APM)
- Glass and carbon fiber repairs
- Cosmetic and structural repairs
- Leading edge protection
- Nacelle and spinner composite repair
- Pitch motor and drive replacement
- Exclusive paint-on protection
- Enhance reliability and performance
- Single and multi blade replacement, including catastrophic damage
- Blade transportation
- Blade disposal and recycling
- Pitch bearing exchange solutions
- Pitch bearing reindexing
- Blade balancing