

# THE FUTURE OF WIND ENERGY IS NOW:

## SOLUTIONS FOR PROCESS ADVANCEMENT IN WIND MANUFACTURING AND REPAIR

**FEBRUARY 7-8 • BOULDER, CO**

### DETAILED AGENDA

#### LOCATION / HOURS

NREL Flatirons Campus  
19001 W 119<sup>th</sup> Ave  
Arvada, CO 80007

Wednesday, February 7: 8:00 a.m. - 5:00 p.m.

Thursday, February 8: 8:30 a.m. - 1:00 p.m.

#### HOST HOTEL

Omni Interlocken Hotel  
500 Interlocken Blvd Broomfield, CO 80021  
(303) 438-6600

Please contact the Omni Interlocken Hotel  
to book your stay.

#### PARKING / SHUTTLE SERVICE:

Parking is limited at NREL. Please plan to take the shuttles provided, which will pick up at the Omni Interlocken main entrance and transport to NREL Flatirons Campus at the following times:

Day 1: Wednesday, February 7

Morning Shuttles: 7:30 a.m. and 7:45 a.m.

Return Shuttles: 5:15 p.m. and 5:30 p.m.

Day 2: Thursday, February 8

Morning Shuttles: 7:45 a.m. and 8:00 a.m.

Return Shuttles: 1:15 p.m. and 2:15 p.m.

#### NETWORKING RECEPTION

Join us for a networking reception at the Omni Interlocken Hotel from 6:00 p.m. - 7:30 p.m.  
Network with presenters and attendees and continue conversations from the workshop.

**[CLICK HERE TO REGISTER](https://cvent.me/mQAKNZ) or visit: <https://cvent.me/mQAKNZ>**

PRESENTED BY:



OUR PARTNERS:



### SHUTTLE SCHEDULE

**Day 1: Wednesday, February 7**  
**Morning Shuttle Service: 7:30 a.m. and 7:45 a.m.**  
**Return Shuttle Service: 5:15 p.m. and 5:30 p.m.**

TO REGISTER: <https://cvent.me/mQAKNZ>

- 7:30 a.m. First Shuttles Depart Omni Interlocken, 500 Interlocken Blvd, Broomfield, CO 80021**
- 7:45 a.m. Second Shuttles Depart Omni Interlocken, 500 Interlocken Blvd, Broomfield, CO 80021**
- 8:00 a.m. Registration, Coffee & Pastries, and Networking**
- 8:45 a.m. Safety Brief - NREL**
- 8:50 a.m. Welcome Address**  
Mark Kirk, Wind Energy & Process Consumables Markets Manager, Composites One  
Tyler Blevins, Workforce & Community Development Mgr, IACMI-The Composites Institute
- 9:15 a.m. KEYNOTE – The Evolving Landscape of Wind Energy: Trends and Innovations**  
Discover the latest innovations in wind turbine technology, renewable energy policies, and sustainable practices that are propelling the industry forward. Gain valuable insights into how emerging technologies, advancements in materials, and novel manufacturing processes are revolutionizing the way we harness the power of the wind.  
**Presented By:** Derek Berry, Sr. Wind Technology Engineer, NREL
- 9:45 a.m. LIVE DEMO - Gurit Blade Repair Materials for In-field Blade Repair Operations**  
Introduction to Gurit blade repair product range, including new more efficient laminating systems. In addition to the already well-established Ampreg laminating systems sold in work packs, a novel cartridge dispenser system A3X CDS and the enhanced UV Curing system RENUVO, will be introduced. Both systems were developed for time saving and to improve work processes and quality of repair in up tower operations.  
**Presented By:** Klavs Weis-Fogh, Gurit Sales Manager Wind and Composites Repair

**10:15 a.m. Break and Vendor Networking**

**10:45 a.m. FEATURE - Regulatory Updates for the Wind Energy Industry**

Learn about recent updates to regulatory policy affecting the Wind Energy industry. Discover how to leverage these updates to improve your business.

**Presented By:** Patrick Gilman, Program Manager, US DOE – WETO

**11:15 a.m. LIVE DEMO - Sealant and Adhesive Solutions for Wind Blade Manufacturing and Repair**

From "Blade to Base," Sika offers a full range of products for both blade manufacturing and Wind Turbine Generator (WTG) erection, operation, and maintenance. Sika's products include sealants, adhesives, structural bond paste, grout, admixture, and coatings, as well as multiple Tooling products for blade manufacturers. Sika will showcase multiple product lines including SikaForce, SikaFlex, SikaBiresin and more, all of which have been engineered to suit critical Wind applications with some in service for decades already.

**Presented By:** Yalcin Kaya, Key Account Manager – Wind Energy, Sika  
Jason Cilio, Bus. Dev Manager – Composite Technologies, Sika

**11:45 a.m. Lunch**

**12:45 p.m. LIVE DEMO - Mastering Wind Turbine Blade Repair: A Comprehensive Demonstration of Two Different Techniques**

This demonstration will showcase proven methods of composite wind turbine blade repair: Hand Lay Up - Wet Vacuum Bagging, and Vacuum Infusion. Hand Lay Up Vacuum Bagging – the traditional yet highly effective method where skilled technicians manually apply layers of reinforcement and resin combined with Vacuum Bagging utilizes advantages of vacuum pressure. Vacuum Infusion – reinforcements are applied dry and resin is drawn in under vacuum.

**Presented By:** Neil Smith, Technical Support Manager, Composites One  
Alfred Crabtree, CEO and Founder, Blade Repair Academy  
Zachary Cunningham, Operations Administrator and Founder, Blade Repair Academy

**1:45 p.m. LIVE DEMO - ALEXIT® BladeRep Top Coats and Leading Edge Protection**

When the rotor blade repair market demanded a durable high-quality product, Mankiewicz launched ALEXIT® BladeRep. The product line consists of a four-piece repair paint system containing molding surfacer, wiping filler, leading edge protection, and topcoat for the efficient repair to typical wear and tear damages on rotor blade surfaces.

**Presented By:** Jeff Grandgenett, Sales Manager, Mankiewicz

**2:15 p.m. FEATURE - Tackling Wind Turbine Blade Recycling Issues**

Discover innovative ways to recycle decommissioned wind turbine blades into high-quality input for concrete, asphalt, composites, and bulk molding applications. Learn how their proprietary technology and 100% mechanical processes deliver truly eco-friendly solutions to a major supply chain challenge faced by the Wind Energy industry – material waste management.

**Presented By:** David Morgan, Chief Strategy Officer, Carbon Rivers

John Espeland, Co-Owner, Recon Fiberglass

Mike Olson, Business Development, Recon Fiberglass

Jason Nielsen, Senior Manager - Business Development, REGEN Fiber

Mark Kirk, Wind Energy & Process Consumables Markets Manager, Composites One

**2:45 p.m. Break and Vendor Networking**

**3:00 p.m. Supplier Tech Tips**

Mold Release Fundamentals – ChemTrend

Why the Right Equipment Matters – MVP

Advanced Fiberglass Reinforcements – Owens Corning

**3:30 p.m. LIVE DEMO - Vacuum Infusion Processing**

Learn the details of the vacuum infusion process as we showcase the precision and efficiency of this manufacturing technique. This step-by-step demonstration of the vacuum infusion process will compare permeability and flow rates of laminates and process materials.

**Presented By:** Doug Perry-Hunter, Process Materials Application Manager, Composites One and James Jones, Lead Technical Support Manager, Composites One

**4:30 p.m. Supplier Tech Tips**

High Performance Resins – Polynt

Controlling Cure with Catalyst – United Initiators

**5:00 p.m. Closing Remarks**

**5:15 p.m. First Shuttle Departs**

**5:30 p.m. Last Shuttle Departs**

**6:00 p.m. Networking Reception**

Join us for a networking reception at the Omni Interlocken, 500 Interlocken Blvd, Broomfield, CO 80021, from 6:00 p.m. – 7:30 p.m. Network with presenters and attendees and continue conversations from the workshop.

### SHUTTLE SCHEDULE

Day 2: Thursday, February 8

Morning Shuttle Service: 7:45 a.m. and 8:00 a.m.

Return Shuttle Service: 1:15 p.m. and 2:15 p.m.

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- 8:30 a.m. Registration, Coffee & Pastries, and Vendor Networking**
- 9:00 a.m. Opening Remarks**  
James Jones, Lead Technical Support Manager, Composites One
- 9:10 a.m. KEYNOTE – Empowering Manufacturers to Reach Their Full Potential**  
Manufacturer's Edge is impact focused. We take a collaborative approach to learn about your business and identify areas of improvement that will have the greatest impact on your bottom line, future growth, and long-term success. As Colorado's official Manufacturing Extension Partnership (MEP) Center, we leverage local and national resources to provide on-site support, strategy and planning, and technical assistance to manufacturers of all sizes across our state.  
**Presented By:** Jennifer Hagan-Dier, Vice President & COO, Manufacturer's Edge
- 9:30 a.m. FEATURE - Bridging the Gap: Collaborative Synergies Between Industry and Research Institutes**  
In this insightful session, we explore the pivotal role of collaboration between industry and research institutes in driving innovation and advancing the frontiers of knowledge. Topics covered in this session will show how industry and research collaboration fosters innovation through knowledge exchange and skill enhancement and how these alliances will shape the future of the industry.  
**Presented By:** Tyler Blevins, Workforce and Community Development Manager, IACMI-The Composites Institute and Derek Berry, Sr. Technology Wind Engineer, NREL
- 10:15 a.m. Break and Vendor Networking**

**10:30 a.m. PANEL - Addressing Pain Points in Wind Turbine Blade Repair**

This session brings together industry experts for a candid discussion on the pain points of wind turbine blade repair. We will cover the complexities, common issues, and solutions surrounding the repair process.

**Moderated By:** Gentry Cox-Gutierrez, Marketing Specialist – Power Generation & Industrial Process Materials, Composites One and Bret Anderson, Market Manager – Power Generation, Composites One

**11:15 a.m. LIVE DEMO - Leading Edge Protection, Quality Application and Long-Term Performance**

Quality materials and quality applications are key to long term performance of Leading Edge Protection (LEP). We will discuss key elements of quality LEP applications to improve long term performance.

**Presented By:** Tom Henry, Key Account Manager, North America Electrical Markets Division – Renewable Energy Solutions, 3M  
Joe Eaton, Application Engineer, Electrical Markets Division, 3M

**11:45 a.m. DEMO - Precision Beyond Human Touch: Robotic Trimming and Grinding in Composite Manufacturing**

NREL is bringing together artificial intelligence and robotic precision in the world of composite manufacturing. Witness the convergence of cutting-edge technology development as we explore the transformative impact of automated composite finishing methods.

**Presented By:** David Snowberg, Researcher V - Mechanical Engineering, NREL and Hunter Huth, Program Manager VI – Research, NREL

**12:15 p.m. Questions & Closing Remarks**

**12:30 p.m. Lunch**

**1:00 p.m. Tour of NREL Facility**

**1:15 p.m. First Shuttle Departs**

**2:15 p.m. Last Shuttle Departs**

**\* Agenda is subject to change.**