

# Breakout Session Report Out



Breakout Session Name

Session Report "Volunteer"

# Objective

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- Identify the challenges and opportunities unique to composite recycling

# Major Challenges

- Composites, especially wind turbines, are already a high-value application so we are limited to ***reuse and redesign***
- Transportation of most composites is already an issue, so thus “local or modular” solutions must be considered
- The highest value component is the fiber (e.g. carbon fiber) and most methods will reduce its size
- The diversity of the materials is large, and continued development will further complicate the stream

# Opportunities

- ***Re-use of current composites*** – Can techniques be applied to breakdown the current epoxy standard
- ***Re-design of future composites*** – Can emergent technologies (e.g. covalent adaptable networks/vitrimers) be used to maximize fiber recovery?
- ***Reduction of components via reworkable chemistries*** – Can product life be extended?
- ***Co-location of other opportunities*** -Can low value or volume streams be used to further enable product creation or co-product value adds?

# Most Important Takeaway Thought(s)

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- ***Redesign and Reuse*** – Redesign long-term, re-use short term
- ***Modular and Integrated Systems*** - A wholistic approach much be taken due to the complex nature of composites, and thus multi-disciplinary efforts must be leveraged