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# **Blade Manufacturing Improvement Project**

## **Final Report**

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### **Abstract**

The Blade Manufacturing Improvement Project explores new, unique and improved materials integrated with innovative manufacturing techniques that promise substantial economic enhancements for the fabrication of wind turbine blades. The primary objectives promote the development of advanced wind turbine blade manufacturing in ways that lower blade costs, cut rotor weight, reduce turbine maintenance costs, improve overall turbine quality and increase ongoing production reliability. Foam Matrix (FMI) has developed a wind turbine blade with an engineered foam core, incorporating advanced composite materials and using Resin Transfer Molding (RTM) processes to form a monolithic blade structure incorporating a single molding tool. Patented techniques are employed to increase blade load bearing capability and insure the uniform quality of the manufactured blade. In production quantities, FMI manufacturing innovations may return a sizable per blade cost reduction when compared to the cost of producing comparable blades with conventional methods.