

20 kW Provider™ 6.50 m Diameter Rotor Assembly

Our Paradigm-Changing Banded Wind Turbine Technology Can be Improved Further, Via Fundamental Redefinition & Application of Airfoil Design Principles

1 Eliminates the Need for
• **Thermoforming Blades;**

Employs Standard
2 Sections w/ "Zero"
• **Material Waste;**

Uses Lightweight
3 Materials
• **(Polycarbonate, &/or Wood) to Eliminate Sourcing Issues;**

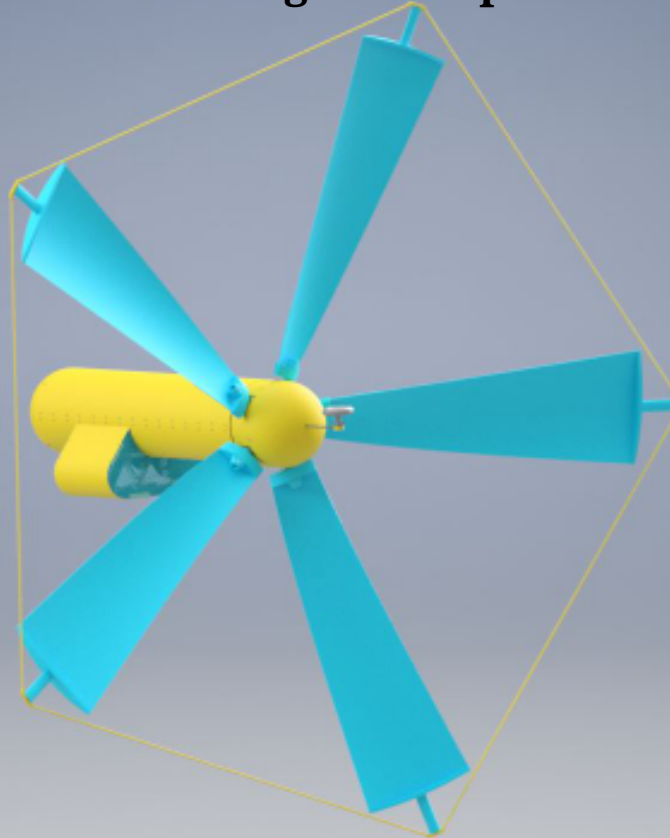
4 Fully-Balanced Pitch
• **Control (Very Low Actuation Forces);**

5 Offers Exceptionally Fast
• **Step Response @ < 0.50**
Sec.;

6 Provides Greatly



Simplified The Multi-Planer Airfoil Config. Offers MAJOR Performance /
Operational Benefits



7. Provides a $C_1 / C_d @ > 16$
w/ $> 2X C_p$ (i.e., $> 53.3\%$);

8.
Mitigates Vortex Flow
Generation
9. (Separation);

Yields $> 4X$ Power
Density @ ~ 0.25 kW/
10 kg; ref. 9.2 m ϕ
• **Bergey Excel 15;**

Provides $\sim 1/3^{rd}$ ICC Vs.
11 Bergey; (incl. 1.50X
• **MSRP)**

Provides $< 20\%$ Rotor
12 Inertia, (ref. ~ 80 kg/m²);

Yields Bending Stresses
@ 1 MPa; w/ 0.1 cm