



Next-Generation Building-Integrated Wind Power

Patented Cuboid Turbine Technology
for Urban Distributed Energy Generation

Executive Summary: Unlocking Urban Wind Energy

\$800,000 USD Ask: Seed Round (SAFE / Convertible Note / Equity) targeting an 18-month prototype milestone (full-scale prototype fabrication, wind tunnel testing, and empirical power curve validation).

- 1 m/s Cut-In Speed: Operating velocity vs. 3.5 m/s for conventional turbines.
- 51.1% Cost Savings: CAPEX advantage by eliminating towers and heavy structural framing.
- 8 Global Markets: Granted/registered patent protection across USA, EU, and Asia-Pacific.

The Untapped Urban Energy Opportunity

- **Problem:**

Conventional wind systems are unviable for urban centers due to high cut-in speeds (>3.5 m/s), tall support towers, central-axis weight instability, and excessive noise/vibration.

- **Solution:**

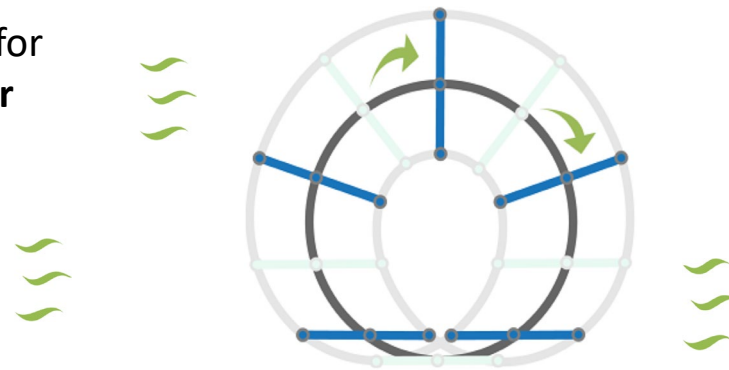
On-site, building-integrated power generation capturing urban wind turbulence directly at the point of consumption (factories, schools, commercial towers, residential complexes). No additional land purchase required.

Re-engineering Wind Capture for Modern Architecture

Feature / Metric	Conventional Wind Turbines	Edona Cuboid Architecture
Cut-In Wind Speed	High (3.5m/s)	Ultra-Low (1m/s)
Structural Frame	Massive Central Shaft & Tower	Towerless Stackable Cuboid Module
Load Distribution	Single Point Load Concentration	Multi-Axis Load Distribution
Component Source	Off-the-Shelf Standard Parts	Custom-Engineered Precision Moat

Maximizing Torque While Eliminating Counter-Rotation Resistance

Advancing blades for
**maximum power
generation**



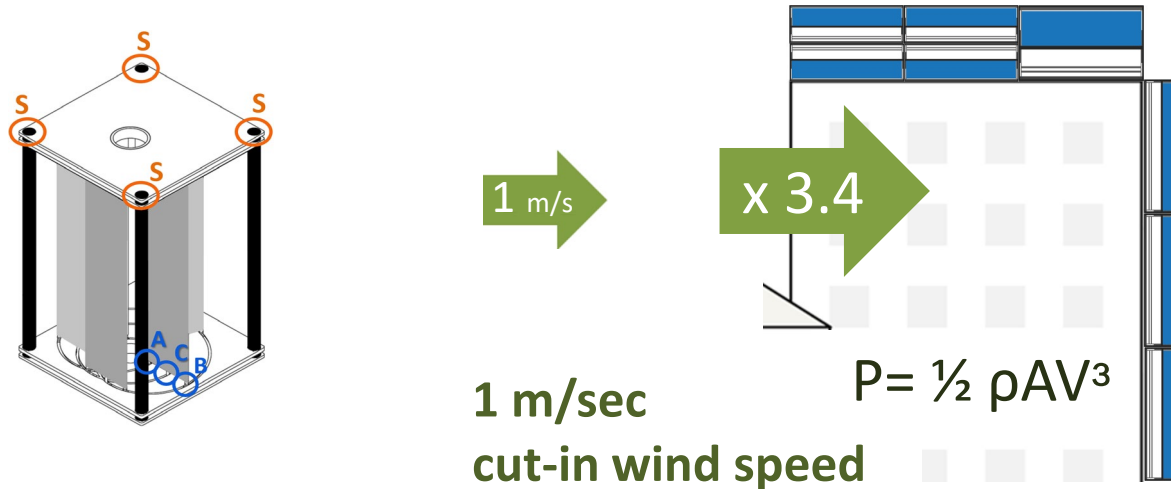
Returning blades
for **minimum
resistance**

Advancing Blades: Follow mathematically optimized guided tracks for maximum torque and wind energy conversion.

Returning Blades: Transition parallel to airflow to minimize drag resistance (outperforming Savonius drag-type designs).

External Wings Effect: Funnels and concentrates localized air currents into the turbine cavity. By increasing effective wind velocity, power output increases exponentially due to the cubic power law ($P = \frac{1}{2} \rho A V^3$)

Utilization of Wind Effect on Buildings



- Multi-Axis Support: Blades and outer shell are secured across multiple stanchions and axis points (A, B, C, S), preventing fatigue and central shaft resonance.
- Modular Scalability: Compact cuboid units can be stacked vertically or horizontally on rooftops without increasing structural building load.

Industry-Leading Capital Efficiency & Lowest Cost per Installed kW

Capital Expense Component	Traditional Wind System	Edona System	Net Savings
Tower Infrastructure	23.30%	0.00%	100% Elimination
Rotor Blades	24.80%	16.53%	33.3% Cost Reduction
Gearbox & Friction System	13.30%	6.65%	50.0% Cost Reduction
Balance of Plant / Others	25.71%	12.86%	50.0% Cost Reduction
Generator, Converter, Transformer	12.89%	12.89%	Parity
TOTAL CAPEX COST	100.00%	48.93%	51.07% Cost Savings

Granted Patents Securing High Barriers to Entry in 8 Key Markets



USA: Patent No. 11,473,557



Germany: Patent No. 60 2017 058 180.1 / EP3643913



United Kingdom: Patent No. EP3643913



Denmark: Patent No. 3643913



Japan: Patent No. 6312284



China: Patent No. 4470323



South Korea: Patent Nos. 10-2126226 & 10-2142243



Vietnam: Patent Nos. 29957 & 34303

Capturing the Distributed On-Site Power Generation Market

1. **Commercial Office Towers:** Reducing peak grid demand charges for real estate portfolios.
2. **Industrial Factories & Logistics Hubs:** Large rooftop footprints offsetting heavy base-load manufacturing power costs.
3. **Public Infrastructure & Schools:** Quiet, vibration-free operation ideal for educational and civic buildings.

Industry Demand Driven by Real Estate Developer Engagement

Pull Marketing Strategy:

Demonstrates commercial traction and strategic dialogues with major Asian real estate and infrastructure developers (e.g., Tokyo Tatemono) to validate market demand prior to commercial rollout.

Milestone Execution Plan (Year I Q1 – Year II Q2)

Year I, Q1–Q2: System Design & Specification Drafting
(\$80,000 USD).

Year I, Q2–Q3: Custom Tooling, Parts Fabrication & Material Procurement
(\$455,000 USD).

Year I, Q4: Assembly, Inspection, & Technical Adjustments
(\$60,000 USD).

Year II, Q1–Q2: Bench Testing, Validity Assessment, & Operational Operations
(\$205,000 USD).

Itemized Capital Allocation to Reach Validated Prototype Milestone

Development Line Item	Budget (USD)
Parts and Materials	\$180,000
Operational & Bench Testing	\$130,000
Custom Parts Manufacturing	\$280,000
System Design & Drafting	\$75,000
Validity & Performance Assessment	\$75,000
Coordination & Inspection	\$28,000
Final Technical Adjustments	\$20,000
Assembly Execution	\$12,000
TOTAL SEED CAPITAL REQUIRED	\$800,000

Seeking \$800,000 USD in Seed Capital to fund 18-month prototype.

Experienced Management Team in Engineering, IT, & Corporate Operations



Daniel Ro

CEO

Ex-CIO Aoba Life Insurance, UBS Project Mgmt (NY/Tokyo),
Pepsi-Cola Bottling Co.; MBA St. John's University.



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Join Edona in Shaping the Future of Distributed Clean Energy



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