Wind Harvest

Genius Solutions to Turbulent Wind

Kevin Wolf, CEO
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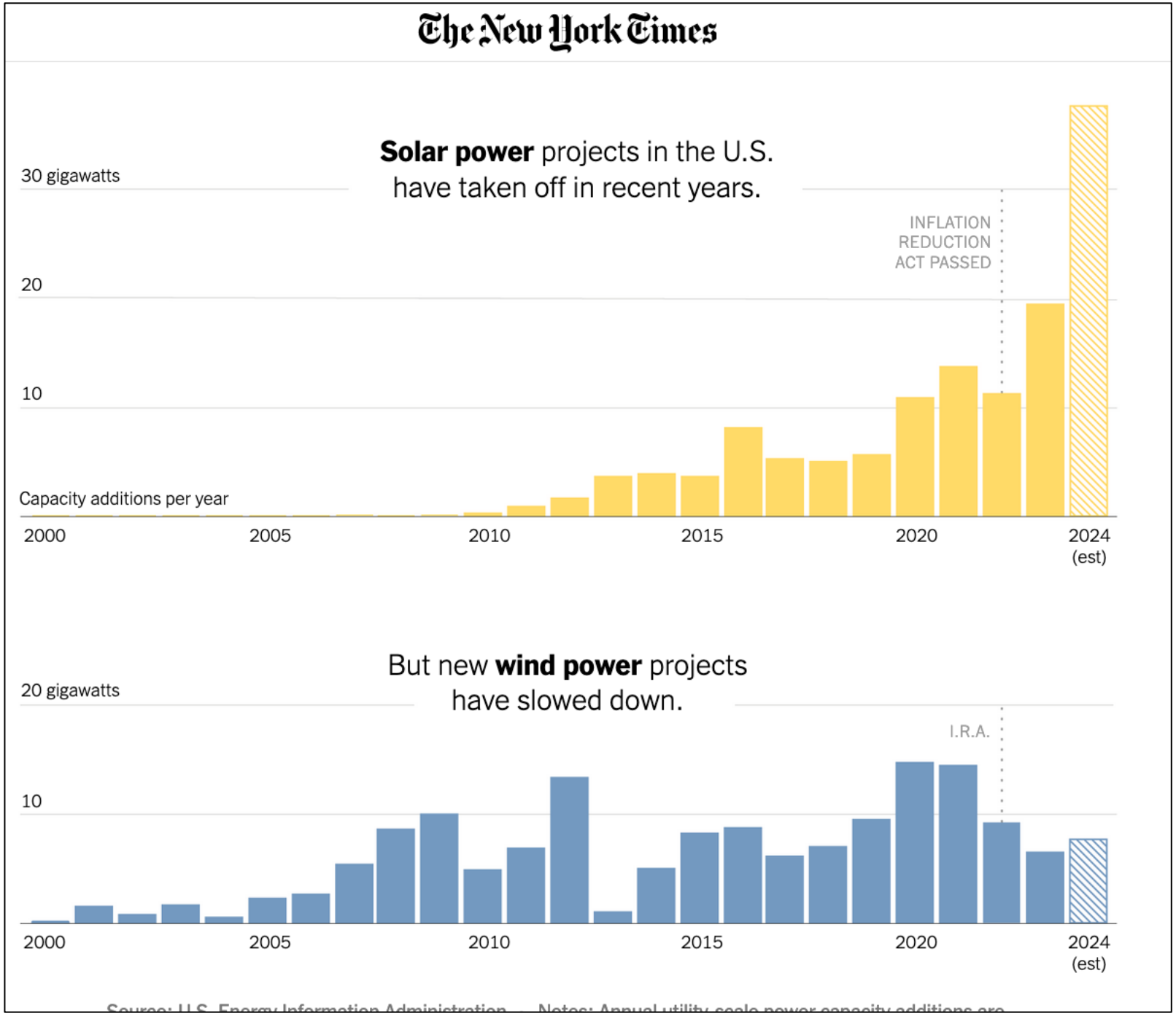
NYT, 6/3/2024:

As Solar Power Surges, U.S. Wind is in Trouble

Why are there fewer wind farms being installed in the U.S. and around the world?



PROBLEM:

Wind Power Faces Barriers to Expansion

- Most on-shore areas with good wind resources already **built out**
- Greenfield and offshore projects are **costly** and **time-consuming**
- Tall turbines **can't be installed** in many locations
- Offshore development faces **opposition**
- Concerns over impacts to **wildlife**
- Rooftop wind offers **limited capacity**

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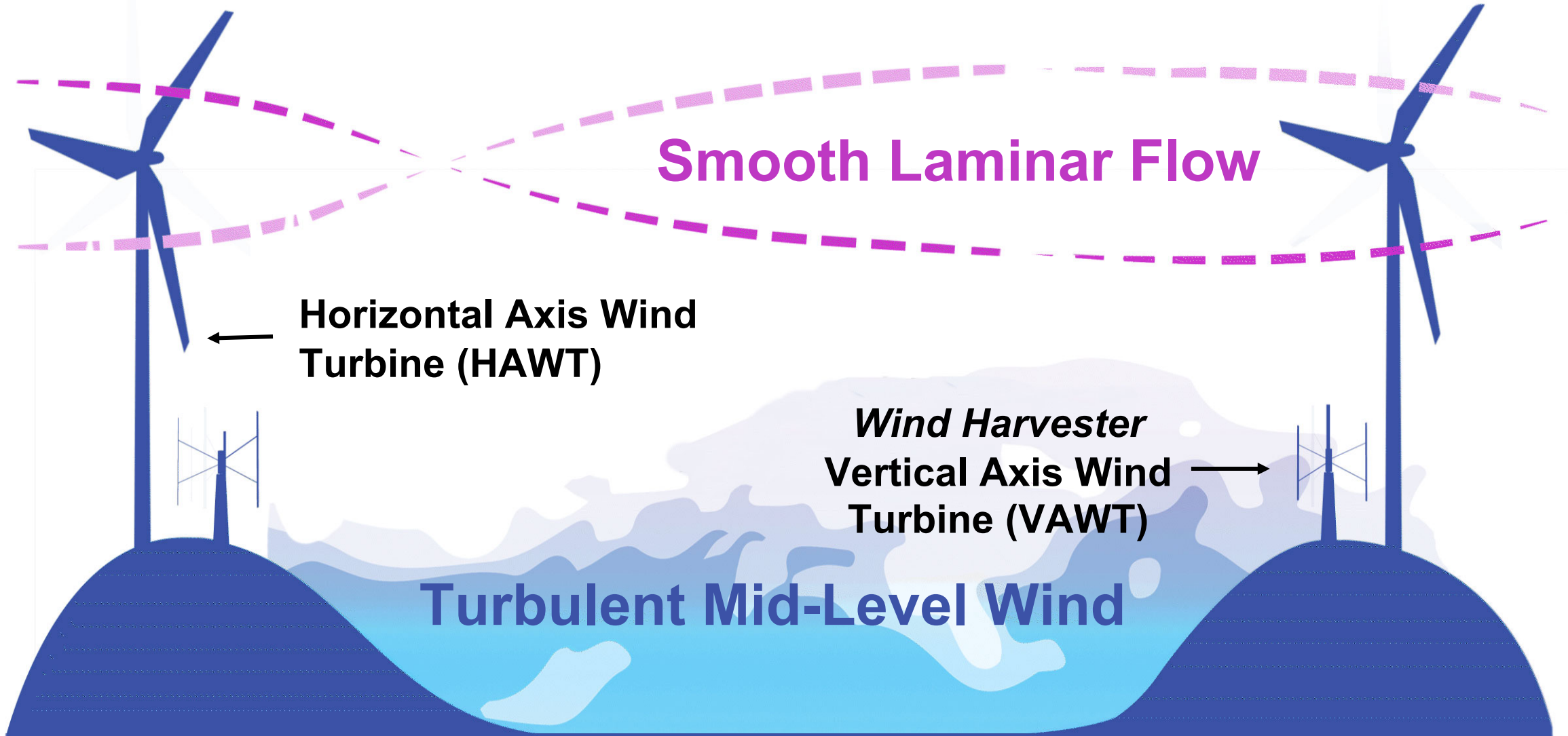
SOLUTION:

Short, Utility-Scale Turbines to Harvest Turbulent Wind



SOLUTION: *Wind Harvesters*

Wind Harvest

- **First-to-Market** with a *compact* turbine that operates in **turbulent wind**
- **Ready for Certification** and *Technology Readiness Level* 8 (of 9)
- **Easy to Make, Assemble, & Install:** 50-80% can be made locally
- 99% recyclable. **Wildlife friendly.** Less raw land converted to wind farms.

Model 2.0, Finland

Model 3.0, Denmark

Model 3.1, Texas

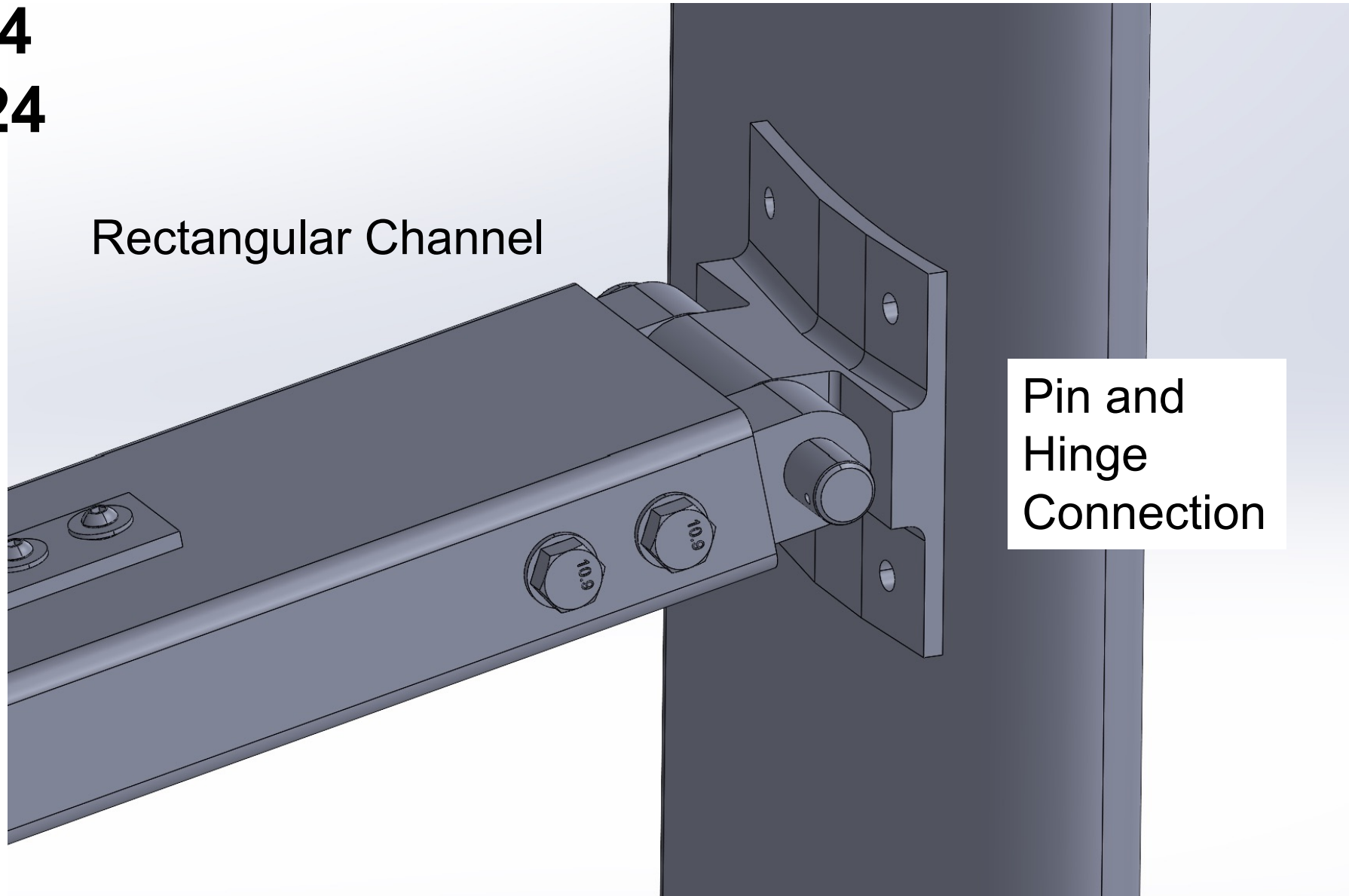
Model 4.0, Texas

Blade-Arm Connection Member:

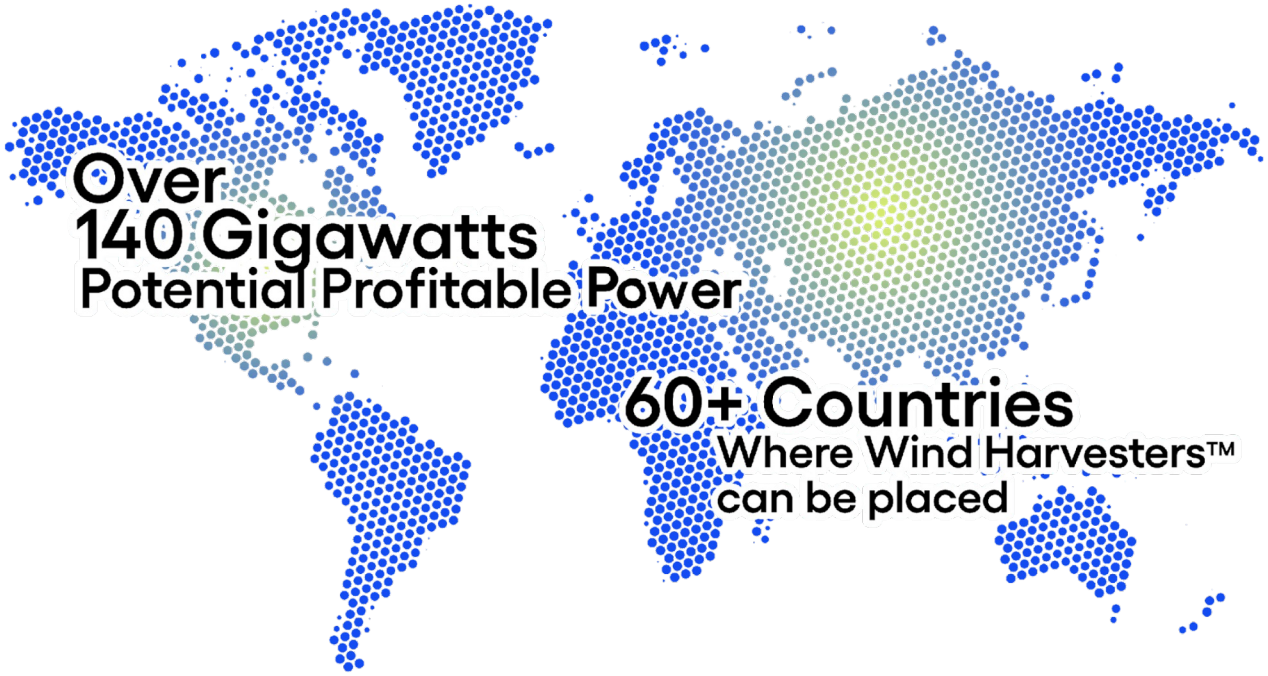
Patent #11927174
Granted 3/12/2024

15M rotations per year

May be impossible for potential competitors to make a VAWT for turbulence without licensing the hinge patents



Market Opportunity:



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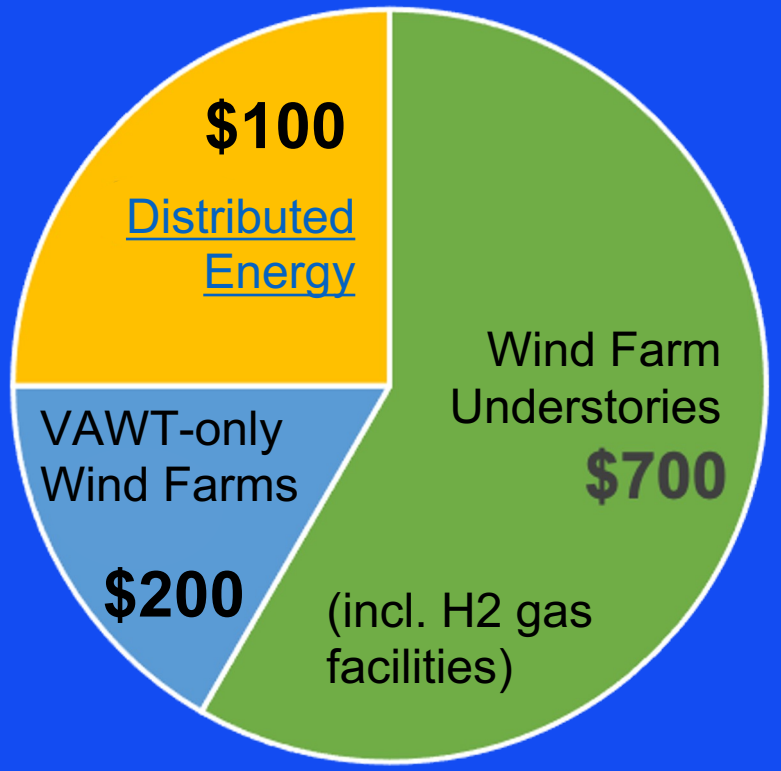
2030 Markets in Billions



Mid-level wind wasted in existing wind farms is worth **$400 billion**. This market should double in 10 years.

Visualization of VAWTs in the understory of Shiloh II wind farm in Solano County, CA

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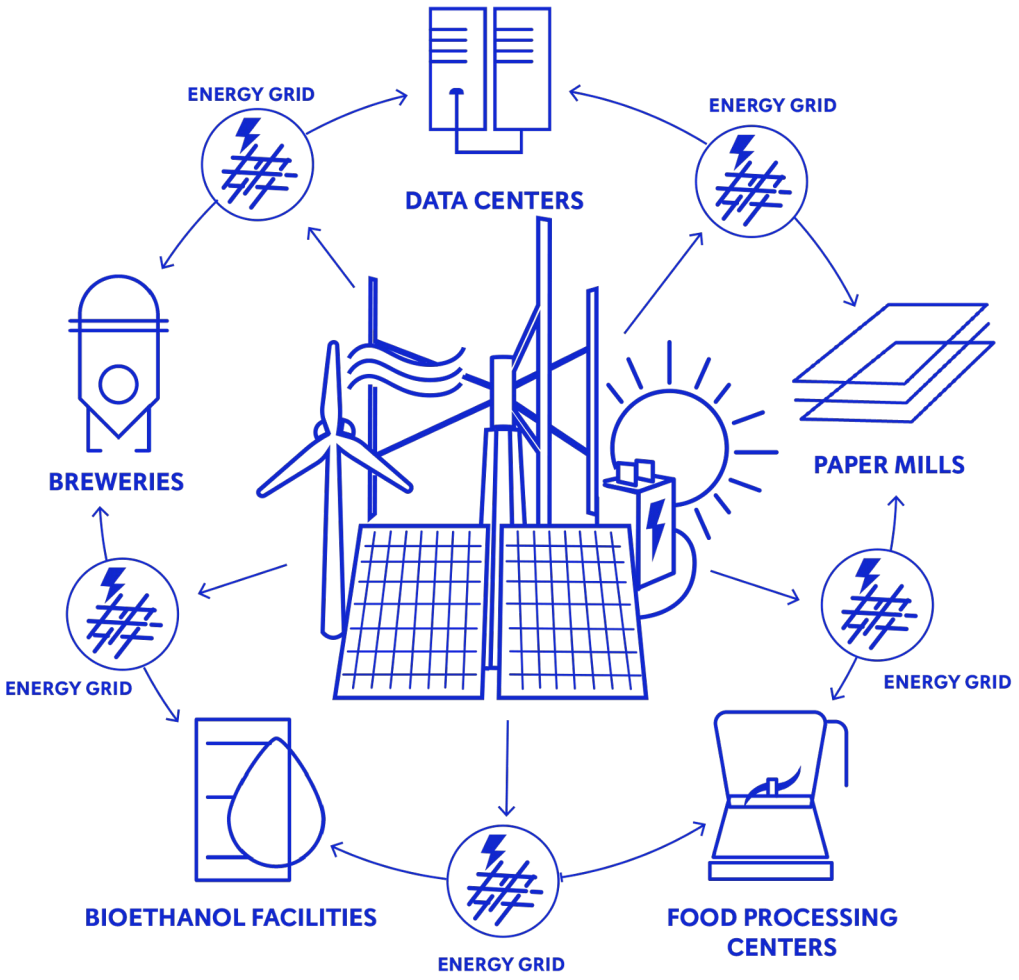

Other Uses of Short *Wind Harvesters*

- 5-10 MW projects that supply the local distribution grid with power
- Properties with tight setback easements
- Airports and Air Force Bases with radar issues
- Islands like Barbados where tourism and problematic roads make tall turbines unusable
- Telecom towers on windy ridgelines
- Places where visual impacts are important
- Bird and bat sensitive properties - VAWTs are safer for animals than HAWTs

Traction

Wind Harvest

- **Completed TRL 7 -** full-scale prototype operating in industry (turbulent) conditions
- Twice field-validated aeroelastic model **– 1st in the industry**
- **$20+ million** invested to date
- **9 new patents pending and granted** – more in development
- **$100+ million** in the project pipeline for 2025-2027

Ahead of the Competition:

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Offshore

SEATWIRL®

WorldWideWind

Not For Turbulence

XFLOW ENERGY

FAIRWIND
Votre énergie pour demain

Early in TRL

AIRLOOM ENERGY

Small & Inefficient

Flower Turbines

First-to-market advantages:

- 1st VAWTs made for turbulence
- Others will need Wind Harvest's patents

Some of the Passion Behind the Product:

Wind Harvest

Kevin Wolf
CEO and
Co-Founder

Dr. Ola Ajala
Principal Engineer
Team Supervisor

Dr. David Malcolm
Senior Engineer
VAWT expert

Christine Nielson
Board Member

Robert Loewer
Fractional CFO

Rob Wheelock
Strategic
Advisor

Cornelius Fitzgerald
Board Member

Dr. Ariana Marshall
Barbados Rep.

Tom Williams
Strategic
Advisor

Note: A CFO, General Manager/COO, VP of Sales and others will be hired after full funding

Sales Projections:

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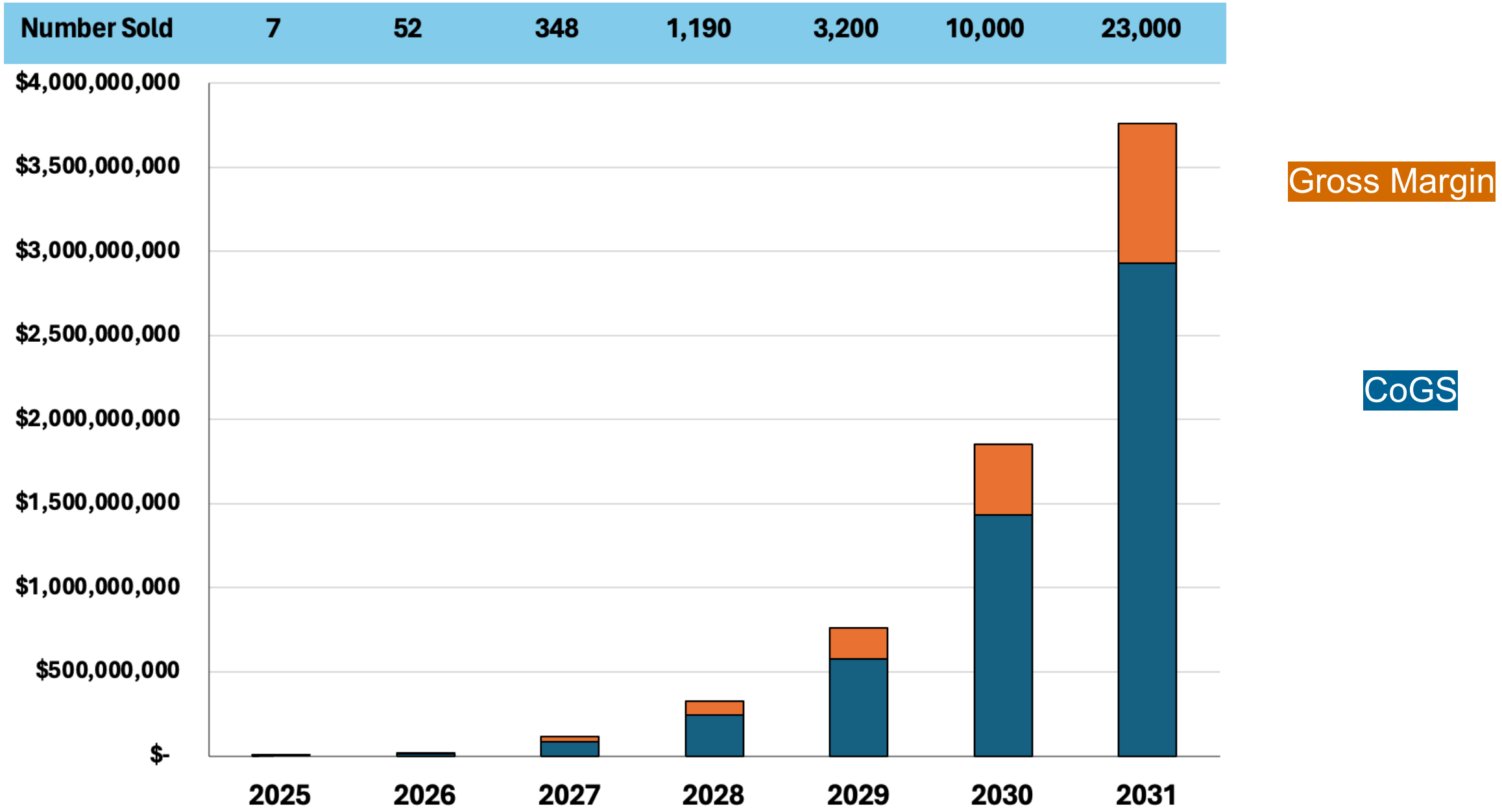


EBITDA Projections: In U.S. $ Millions

Revenues - Turbine Sales	$ 3.2	$ 19	$ 114	$ 328	$ 764	$ 1,852
Gross Margin	0.8	4.9	28.5	82	186	422
Operating Expenses	(3.3)	(7.5)	(12.6)	(23)	(31)	(40)
EBITDA	$ (2.5)	$ (2.6)	$ 15.9	$ 59	$ 155	$ 382

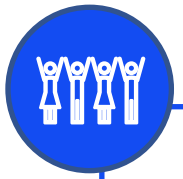
Notes:

- Not finalized. Does not include income and expense from patent licensing royalties, service agreements, project development fees, warranties, or working capital costs.

Current Ask:

Wind Harvest

- Install and test two *Wind Harvester 4.0* VAWTs
- Complete Technology Readiness Level (TRL) 8 – Certification
- File more patents and advance more sales and projects
- Reduce Company debt and build a reserve



Reg D 506c Offering for Accredited Investors

Seeking $3M, $10K minimum

Common shares discounted until July 15

Next Ask:

Wind Harvest

- Finance the installation of 50 *Wind Harvester 4.0* VAWTs
- Complete TRL 9: long-term loans to customer projects
- Build team for an IPO or Sale to Strategic Buyer

Series B offering to VCs and Corporations

Seeking $10+M

Preferred Share offering

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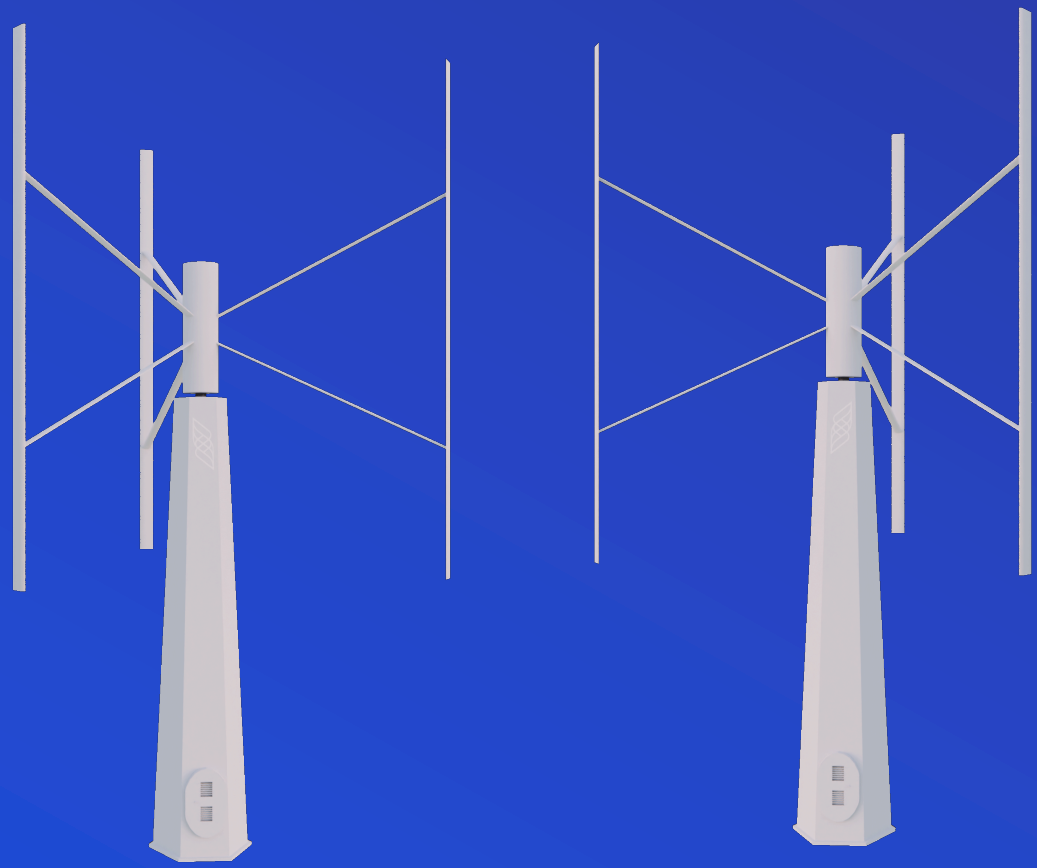
Creating New Markets for Wind Turbines

- First utility-scale turbines to operate in turbulent wind
- Difficult for potential competitors to make a utility-sale VAWT without licensing our patents
- $100+M in sales being developed for 2025- 2027
- Wind farm owners and developers want our turbines
- Near-limitless scalability
- Solid exit strategies with large return possible



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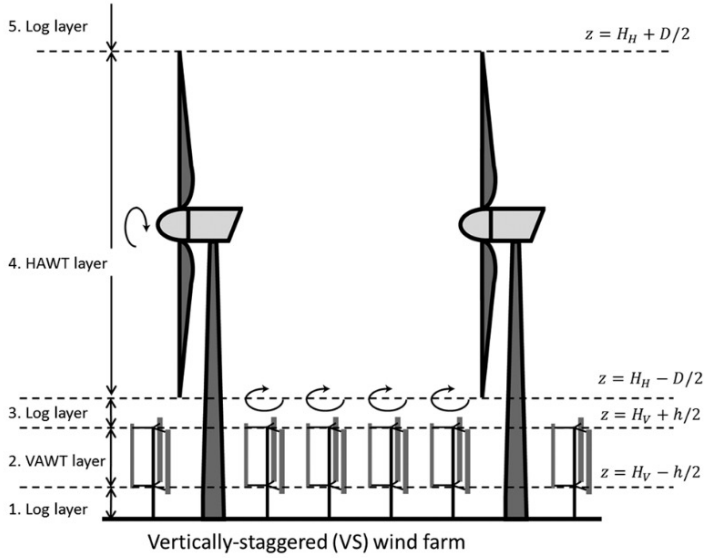
Appendices

- Wind Farm Synergy
- Unused Resources on Wind Farms
- Distributed Energy Projects
- First Pilot Project
- Use Case: Wind Farm Capacity Factor Enhancement
- Use Case: Barbados
- Use Case: High Energy Use Facilities
- Use Case: Behind the Meter
- Use Case: Ellsworth AFB
- Sales & Project Pipeline

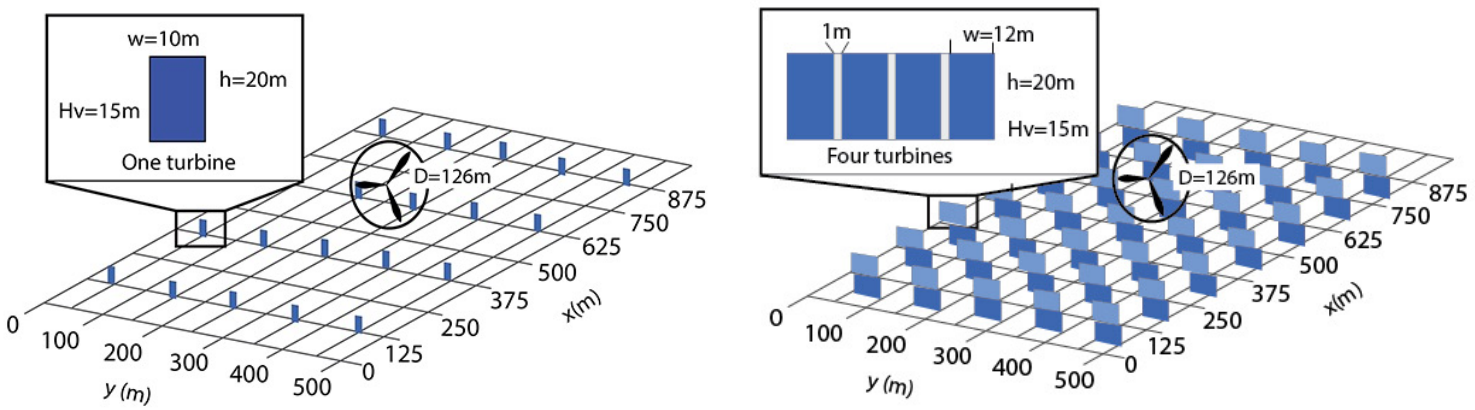
Wind Farm Synergy:

VAWTs help HAWTs and Vice Versa

- VAWTs can create a **10% increase** in output of HAWTs
- VAWTs shed vortices that draw down **faster moving wind**



Sketch of 5 layers in the vertically-staggered mixed wind turbine array boundary layer [1]



Layout of staggered wind farm proposed in 2016 study (left) and by Wind Harvest currently (right) [2]

[1] Shengbail Xie, Cristina Archer et all, 2016, [2] John Dabiri, 2011

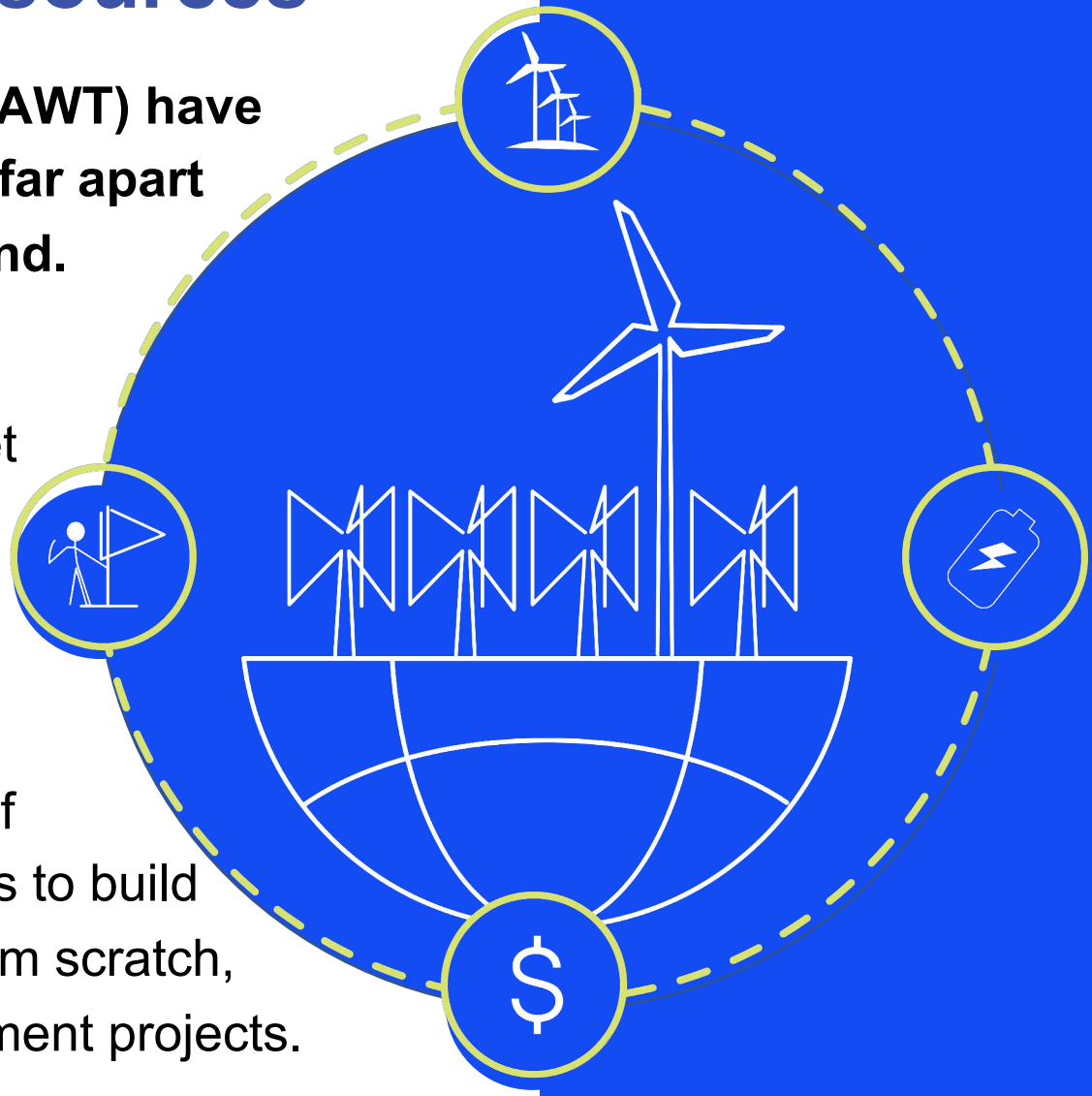
18% of Wind Farms Have Excellent Unused Mid-Level Wind Resources

Because Horizontal Axis Wind Turbines (HAWT) have problems with turbulence, they are placed far apart from one another and high above the ground.

Mid-level wind wasted in existing wind farms is worth **$400 billion**. This market should double in 10 years.

1-3X more MWs added per wind farm with understories of *Wind Harvesters*.

It is much less expensive to add rows of *Wind Harvesters*™ underneath than it is to build new onshore or offshore wind farms from scratch, especially in Capacity Factor Enhancement projects.



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First Pilot Project

The first ***Wind Harvester Pilot Project LLC*** **will:**

- Purchase two *Wind Harvester 4.0* turbines
- Purchase the existing *Wind Harvester 3.1*
- Receive ~ $400,000 in Investment Tax Credits (30% of turbine and development costs)
- Bring in $500,000 from investors who can use the ITC and available accelerated depreciation
- Give full ownership to Wind Harvest after five years
- Provide the data that banks will need for customer loans

Once testing is completed, these turbines will be moved from the UL testing facility in Texas to their permanent homes. Tax benefits will not be affected by the move.

Model 3.1's costs will be recuperated when it is sold.

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USE CASE: Capacity Factor Enhancement

Example: An Existing 100 MW Wind Farm

25 MWs (~350 *Wind Harvesters* = $60M*)

125 MWs combined. Uses only the existing 100 MW substation and transmission line

20-25% ↑ project Capacity Factor

~5% ↑ Energy Output for HAWTs

10-year HAWT life extension because they can pitch blades earlier in high wind events

No new land, main roads, or fencing

8-15+% Project IRRs

* Wind farms sales are at lower margins and start in 2028.

USE CASE: Islands

Barbados Has Great Unused Mid-Level Trade Winds

The country is struggling to meet its renewable energy goals.

- HAWTs are **too large** for views, roads and setback easement
- Solar takes up **too much land**
- Feed In Tariff PPA at US**$ 0.17/kWh**
- **100s of MWs** of 6-7m/s (13-16 mph) mid-level winds are unused
- Windy government **land is available**
- **50% of each *Wind Harvester*** can be made and assembled on the island


Beautiful St. Lucy Parish, Barbados

USE CASE: High Energy Using Facilities

e.g. Data centers, distribution warehouses, large breweries

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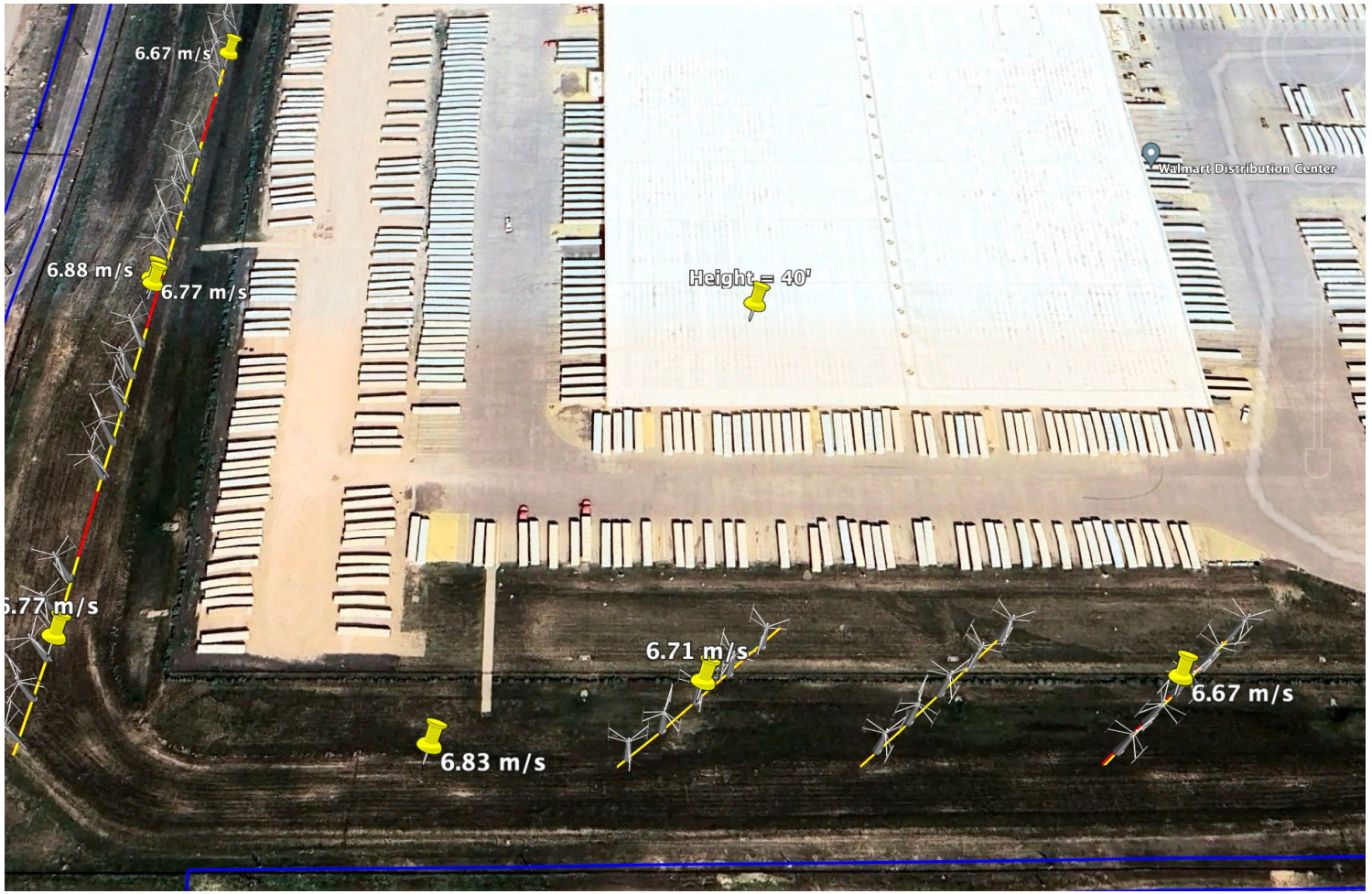
- Tall turbines don't fit on these properties
- EVs will increase energy demand
- High-value PPAs
- Complements solar *(wind blows at night)*
- 30-50% Investment Tax Credits
- Easy to permit, build and maintain

Use Case: ”Behind the Meter”

Walmart Distribution Center- Cheyenne WY

- **Possible buildout**: 8 MW
- **Ave Wind Speed** at 20m agl – 6.7m/s
- An**nual Production** per MW – 3200 MWh
- Project Total – 25,600 MWh/year
- **Gross Turbine Sale -** $32M
- **Margin** – 25% – $8M



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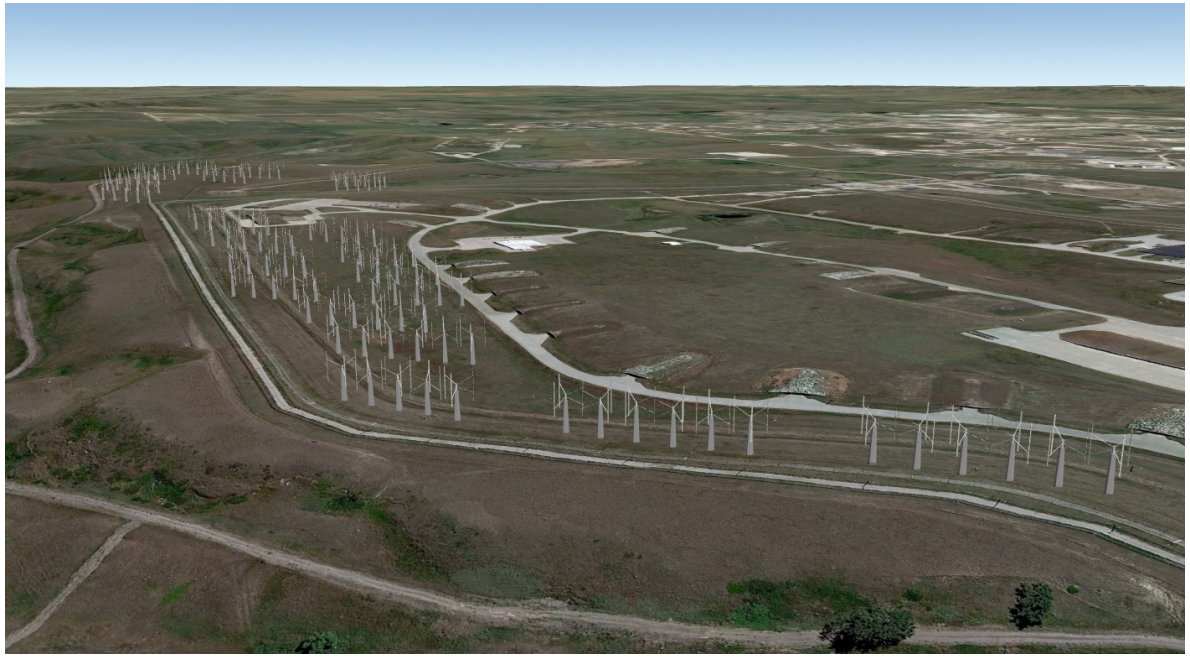
USE CASE: Ellsworth AFB, South Dakota

Pilot Project to Open Airports and Military Bases

- A two-turbine pilot project
- Research impacts on radar and flight patterns
- Potential for 5+ MWs on Base
  - 96 turbines
- Pilot project opens *Wind Harvester* for sales to Anderson AFB in Guam and Travis AFB in Solano County, California



A build out of Wind Harvesters envisioned for the north side of the AFB.

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Sales & Project Pipeline

Projects and Customers (Capacity of Turbine Generators)	Location	Wind Harvesters Sold			
		2025`	2026`	2027	2028
St. Lucy 1 and 2 (50kW)	Barbados	2	20	100	400
Anza Hills Projects (60kW)	Riverside County, CA		16		50
Wind Harvest First LLC (70kW)	UL Test Facility, TX	3			
High-Energy User (60kW)	USA		16	50	200
Solano County Projects (60kW)	Solano, CA			16	
Other WH projects (e.g AFBs)	US & International	2		12	200
Direct Customer Sales (70kW)	US & International			50	100
Distributors (60 kW)	US & International			50	200
Wind Farm Owners	US & International			20	40
Turbines Sold		**7**	**52**	**348**	**1,190**
MWs Sold		**0.4**	**3.1**	**20.9**	**71.4**
Turbine Sales ($ Millions)		**$ 3.2**	**$ 19.2**	**$ 114**	**$ 328**
Gross Margin ($ Millions)		**$ 0.8**	**$ 4.9**	**$ 29**	**$ 82**