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Harmony Turbines Pitch Deck

Industry	Clean Technology and Industrial / Energy
IP	Patents **US 10,724,502** and **US 11,149,715**
Stage	In Development - Seed Funding Round
Founded	August 2020
Staff	4

Visit our FAQ for answers to our most common questions

Executive Summary

Harmony Turbines is developing leading-edge residential and small-scale wind turbine systems for a better tomorrow! It's clear that the products currently on the market are failing to meet the needs of customers, evidenced by the fact that so few small-scale and residential wind turbines are actually in use today.

We have raised $2.4M in Equity Crowdfunding Investments between August 2020 - March 2023, comprising of $404K from 730 investors on WeFunder and $1.99M from 1,850 investors on Startengine. In exchange for these investments we have given away about 26% of the equity in our company, a reasonable trade-off to launch our business.

We have 3 fully funded project partnerships, 2 through the Manufacturing PA Innovation Program, with Penn State University (Dr. Azar Eslam Panah) and Bucknell University (Dr. Nathan Siegel), and 1 through Northumbria University (Dr. Mohammad Rahmati). These universities will assist us with testing, efficiency validation and data analysis of our technology.

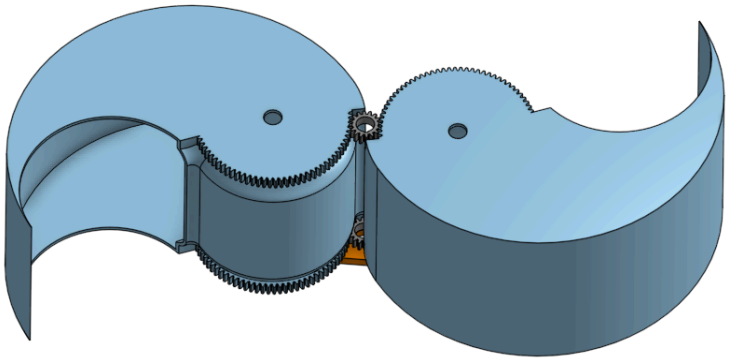
We anticipate our initial units will be rated at 400w or better in a 25mph wind, with a target cost of about $5,500 USD each, but that is subject to change as we move into production due to fluctuating prices for raw materials. Our goal is to have an affordable price that covers our costs without gouging our customers, providing a reasonable ROI.

Our products are designed around 4 key points, convenience, ease of use, features and cost. Because of these 4 key design points, we firmly believe that Harmony Turbines will become the next global standard in residential and small scale wind power generation. Our units are beautiful, silent in operation and they pose no danger to people or wildlife.

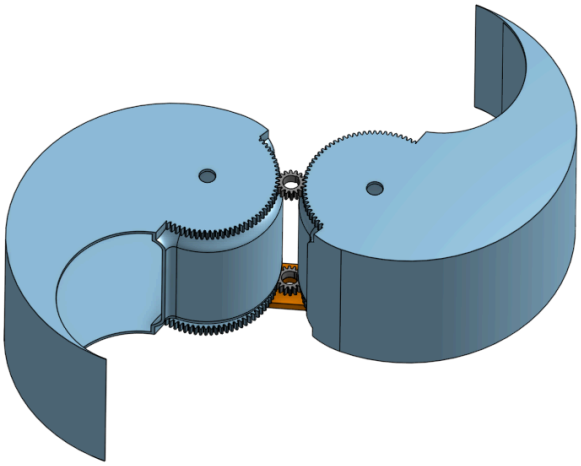
The two main ways in which Harmony Turbines will be different from the rest of the turbines on the market today is through the use of our two proprietary patented technologies. Our generator design will handle low wind startup speeds of 1 - 2 mph and eliminate cogging issues allowing Harmony to scavenge winds that other turbines ignore; while our furling technology will handle high wind situations allowing Harmony to produce full power right on through events that can disable or even destroy other turbines on the market today.

Harmony Turbines Patented Furling Technology

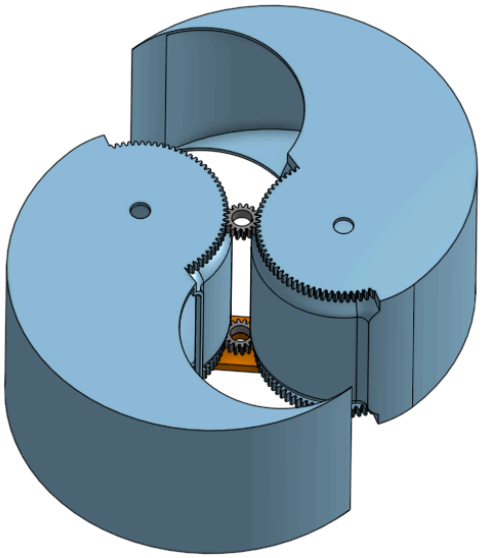
Details: Savonius rotor with a full helix twist and ribbed segments with **variable** cross-sectional exposure



Turbine Scoops Fully Open



Turbine Scoops Partially Closed



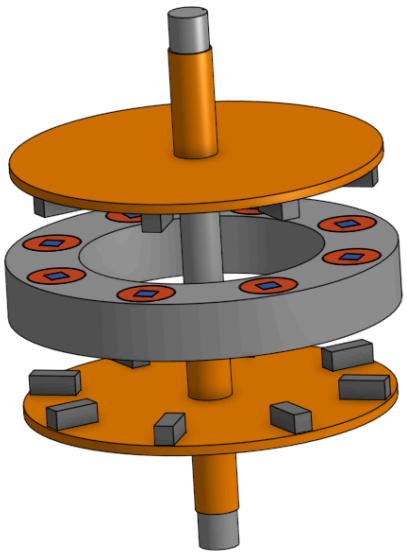
Turbine Scoops Almost Closed

**Image is of the prototype of the product. Product is still currently under development*

Harmony Turbines Patented Axial Flux Generator

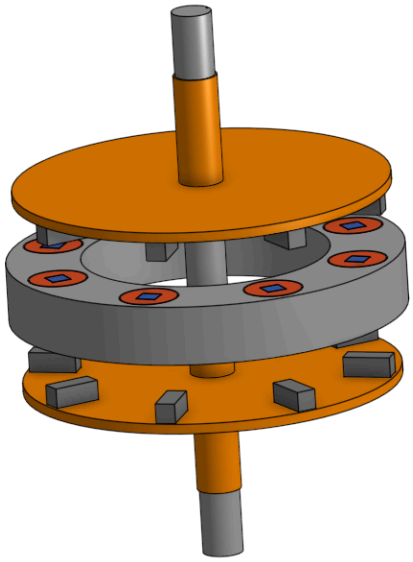
Details: Axial flux solid core dual pole permanent magnet generator with a **variable** air-gap

Maximum Air-Gap



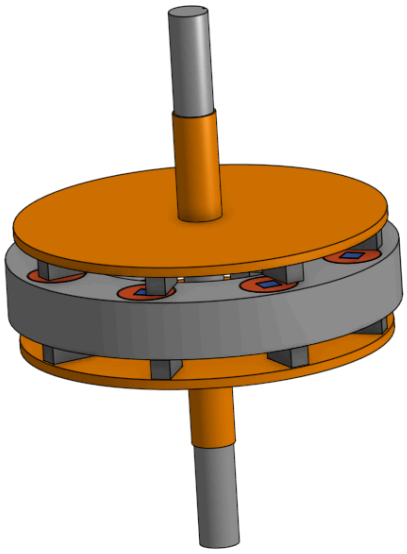
Generator starts with maximum air-gap to avoid startup cogging and electromagnetic lockup

Medium Air-Gap



As RPMs increase air-gap is decreased and power production increases

Minimum Air-Gap



As RPMs reach desired level air-gap is reduced to minimum level for maximum power production

400w prototype fully open

400w prototype partly open

**Images are of the prototype of the product. Product is still currently under development*

The main challenges still ahead of us are:

- Prototyping our patented generator design so that we can introduce our package as one complete system
- Finalizing the furling and generator algorithms to allow intelligent electronic control of our key systems

The main risks we face are:

- Not finding partnerships in the manufacturing space to transition our products into full production
- Cost of production being higher than we anticipate which could increase our retail prices and discourage widespread adoption of our products

We and thousands of other investors, followers and supporters, believe that Harmony Turbines has a bright future ahead if we can overcome these last few remaining challenges.

Financials (as of Mar. 31, 2024)

Funds on-hand : $651,294 USD **Current Monthly Burn Rate:** $39,745 USD

	2022	**2023**	***2024**	***2025**
Carryover	$2,655	$474,599	$893,261	$437,224
Funding Received	$849,964	$1,360,954	$0	$0
Revenue	$7,000	$24,274	$275,000	$1,100,000
Expenditure	-$385,021	-$966,566	-$731,037	-$1,104,000
Gain or Loss	$474,599	$893,261	$437,224	$433,224

2024 & 2025 Revenue Driver: Orders for our beta 400w units @ $5,500ea (50 units in 2024 & 200 units in 2025)

***Financials are projected**

Market Size - Addressability and Adoption Metrics for the U.S. **Estimated: $3.46 Billion***

- Addressability
  - Residential homes in place as of 2015 = 22.6 million
  - Boating vessels in place as of 2022 = 11.8 million
  - Recreational Vehicles in place as of 2020 = 11.0 million
- Adoption Rates — Sales Potential
  - Residential Homes - 3% of 22.6M units — $ 1.70B*
  - Boating – 5% of 11.8M vessels — $ 1.48B*
  - RV's – 1% of 11M vehicles — $ 275M*
  - **NOTE**: * Based on an estimated $5,500 per VAWT kit price

Existing Investors

- Equity Crowdfunding through StartEngine: https://www.startengine.com/harmony-turbines
  - $1,998,100 Raised from 1,850 investors (Oct 2022 - March 2023)
- Equity Crowdfunding through WeFunder: https://WeFunder.com/harmony.turbines
  - $404,357 Raised from 730 investors (Aug 2020 - March 2022)

Growth Since Incorporating

- Serious investor backing, $2.4M raised intermittently from August 2020 - March 2023
- Two fully granted patents US 10,724,502 and US 11,149,715
- Built and equipped HTHQ (Harmony Turbines Headquarters) a 9,000 square foot, research, development and early production facility
- Three prestigious engineering universities working on fully funded research projects with Harmony Turbines to test and validate our technology
    - Penn State University
    - Bucknell University
    - Northumbria University
- Two 400w turbine prototypes completed; one installed at Bucknell University and second used for our own testing
- Fourth generator prototype in progress
- Partnership with Steel Design Manufacturing for prototyping and early production needs
- Formal Internship program established with local universities
- Arduino programming to control scoop furling has begun

Team

Christopher Moore

President/CEO (W2 Employee)
https://www.linkedin.com/in/creatingmoore/
Entrepreneur, inventor, tinkerer working with Clean Energy technologies for over 20 years doing everything that I can to make the world and our lives better than they are today. Challenges never scare me; closed-minded people scare me!

Cheryl Moore

Secretary & Treasurer/COO (W2 Employee)
https://www.linkedin.com/in/cheryl-m-8b273b1b/
20+ years office, Human Resources and IT and analytics experience. Masters Degree in Information Systems, with a Bachelor's Degree in Human Resources Management.

Robert Hadfield (Business Mentor)

Strategic & Business Development Advocate
https://www.linkedin.com/in/robertwhadfield/
Executive Management, Global and Domestic Strategic Planning, Product Development, New Business Development, International Sales and Marketing, and Forming Strategic Alliances.

Nate Mueller

Design Engineer (W2 Employee)

https://www.linkedin.com/in/nathaniel-mueller-365ba22b/

Nate is a design engineer who brings with him 12 years of experience in product development for industrial manufacturing companies. Nate has brought several products to market and has experience leading projects through a variety of phases including: design, testing, production, and commercialization. In his spare time, he is a sports enthusiast and enjoys spending time with his family and friends.

Dallas Heblow

Shop Assistant (W2 Employee)

Dallas has a wide variety of knowledge and experience, both in and out of the shop, ranging from metalworking to digital media. Dallas brings an open minded mentality and a drive to find a solution to any problem. Outside of work he enjoys spending time with friends and family, playing strategy games, and traveling to new places and seeing new things.