

Offering Memorandum: Part II of Offering Document (Exhibit A to Form C)

Harmony Turbines Inc.
201 N 5th Avenue, Building 6
Lebanon, PA 17046
<https://HarmonyTurbines.com>

Up to \$2,499,999.00 in Preferred Stock at \$1.50
Minimum Target Amount: \$15,000.00

A crowdfunding investment involves risk. You should not invest any funds in this offering unless you can afford to lose your entire investment.

In making an investment decision, investors must rely on their own examination of the issuer and the terms of the offering, including the merits and risks involved. These securities have not been recommended or approved by any federal or state securities commission or regulatory authority. Furthermore, these authorities have not passed upon the accuracy or adequacy of this document.

The U.S. Securities and Exchange Commission does not pass upon the merits of any securities offered or the terms of the offering, nor does it pass upon the accuracy or completeness of any offering document or literature.

These securities are offered under an exemption from registration; however, the U.S. Securities and Exchange Commission has not made an independent determination that these securities are exempt from registration.

In the event that we become a reporting company under the Securities Exchange Act of 1934, we intend to take advantage of the provisions that relate to "Emerging Growth Companies" under the JOBS Act of 2012, including electing to delay compliance with certain new and revised accounting standards under the Sarbanes-Oxley Act of 2002.

Company:

Company: Harmony Turbines Inc.
Address: 201 N 5th Avenue, Building 6, Lebanon, PA 17046
State of Incorporation: PA
Date Incorporated: August 11, 2020

Terms:

Equity

Offering Minimum: \$15,000.00 | 10,000 shares of Preferred Stock
Offering Maximum: \$2,499,999.00 | 1,666,666 shares of Preferred Stock
Type of Security Offered: Preferred Stock
Purchase Price of Security Offered: \$1.50
Minimum Investment Amount (per investor): \$199.50

*Maximum number of shares offered subject to adjustment for bonus shares. See Bonus info below.

Investment Incentives and Bonuses*

Time-Based Perks

Early Bird 1: Invest \$20,000+ within the first week | 12% bonus shares

Early Bird 2: Invest within the first 2 weeks | 5% bonus shares

Early Bird 3: Invest within the first 3 weeks | 3% bonus shares

Mid-Campaign Perks (Flash Perks)

Flash Perk 1: Invest \$5,000+ between [day 35 - 40] and receive additional +2% bonus shares

Flash Perk 2: Invest \$5,000+ between [day 60 - 65] and receive additional +2% bonus shares

Amount-Based Perks

Tier 1 Perk: Invest \$1,000+ and receive 2% bonus shares

Tier 2 Perk: Invest \$2,500+ and receive 4% bonus shares

Tier 3 Perk: Invest \$5,000+ and receive [recognition in a youtube update video] + 6% bonus shares

Tier 4 Perk: Invest \$10,000+ and receive [recognition in a youtube update video and have a tree planted in your name] + 8% bonus shares

Tier 5 Perk: Invest \$20,000+ and receive [recognition in a youtube update video, have a tree planted in your name and receive a special edition laser engraved keychain] + 10% bonus shares

Tier 6 Perk: Invest \$100,000+ and receive [recognition in a youtube update video, have a tree planted in your name, receive a special edition laser engraved keychain and enjoy a 30-minute zoom call with the founders] + 10% bonus shares

Loyalty Bonus

As you are a previous investor in Harmony Turbines, you are eligible for additional bonus shares. (3%)”

*Perks will be fulfilled after the close of the campaign

*In order to receive perks from an investment, one must submit a single investment in the same offering that meets the minimum perk requirement. Bonus shares from perks will not be granted if an investor submits multiple investments that, when combined, meet the perk requirement. All perks occur when the offering is completed.

Crowdfunding investments made through a self-directed IRA cannot receive non-bonus share perks due to tax laws. The Internal Revenue Service (IRS) prohibits self-dealing transactions in which the investor receives an immediate, personal financial gain on investments owned by their retirement account. As a result, an investor must refuse those non-bonus share perks because they would be receiving a benefit from their IRA account.

The 10% StartEngine Venture Club Bonus

Harmony Turbines Inc. will offer 10% additional bonus shares for all investments that are committed by investors that are eligible for the StartEngine Venture Club. This means eligible StartEngine shareholders will receive a 10% bonus for any

shares they purchase in this offering. For example, if you buy 100 shares of Preferred Stock at \$1.50 / share, you will receive 110 shares of Preferred Stock, meaning you'll own 110 shares for \$150.00. Fractional shares will not be distributed and share bonuses will be determined by rounding down to the nearest whole share. This 10% Bonus is only valid during the investor's eligibility period. Investors eligible for this bonus will also have priority if they are on a waitlist to invest and the company surpasses its maximum funding goal. They will have the first opportunity to invest should room in the offering become available if prior investments are canceled or fail. Investors will receive the highest single bonus they are eligible for among the bonuses based on the amount invested and the time of offering elapsed (if any). Eligible investors will also receive the Venture Club bonus and the Loyalty Bonus in addition to the aforementioned bonus.

The Company and its Business

Company Overview

Harmony Turbines ("The Company") was incorporated in Pennsylvania as "Harmony Turbines Inc." on August 12, 2020. The Company filed Articles of Amendment on July 9, 2021, which changed the name of the Company to "Harmony Turbines, Inc." The Company's principal business is developing small-scale wind turbine systems for use in residential, business, and recreational settings. The Company is an early-stage startup with the goal of bringing its turbine technology to market.

The Company holds two patents with the United States Patent and Trademark Office covering the proprietary vertical axis wind turbine furling systems and proprietary generator technology: (i) U.S. Patent No. 10,724,502; and (ii) U.S. Patent No. 11,149,715

Competitors and Industry

Industry

The Company intends to market its wind turbine products for use in small-scale settings, such as rural residences, boats, and recreational vehicles. According to the United States Census Bureau, there were over 22,000,000 rural housing units in 2015. As of 2020, according to Statista.com, there were nearly 12,000,000 registered recreational boats in the United States alone. The RV Industry Association estimated that there were over 11,000,000 recreational vehicles in the United States in 2020.

Competitors

The closest competitor to Harmony Turbines right now appears to be Flower Turbines who began low-volume production of their various sizes of VAWT's. The only statistical data we found was for their small wind turbine, which appears to be 10 - 20% efficient when calculating efficiency using data extrapolated from their website. Harmony is expected to perform at least in the 30% or higher efficiency range as per historical Savonius turbines testing.

<https://www.turbinesinfo.com/innovative-wind-turbines/>

<https://tinyurl.com/22r6jkdp>

<https://flowerturbines.com/product/small-wind-turbine-survival-unit/>

Flower Turbines' claim to fame includes low-wind start-up ability and also their turbines' ability to be clustered together for increased efficiency. While we expect Harmony Turbines to be equally quiet and to also be able to start-up in equally low-wind speeds (we can also cluster our turbines), Harmony turbines has a few extra features that we believe no other wind turbines out there have thanks to our two uniquely patented technologies.

Harmony's design is based on the Savonius turbine. These types of turbines are well known for very good performance in low wind conditions but they are vulnerable to high wind situations. This is where our patented upgrades give us a large advantage over the competition. We've believe we've solved the problem of high wind vulnerability for Savonius turbines and in so doing, Harmony gets to enjoy the benefits of good power production in both low and high wind speeds!

All wind turbines have a maximum safe RPM they can handle before they are destroyed or run into problems. Usually storms will bring about the high winds and high RPM's. Many turbines must use a brake to slow-down and come to a full-stop during dangerous winds in an effort to protect themselves, which means they are not producing any power during those dangerous winds. In effect, the strong winds are wasted! As noted above, Harmony Turbines already has this well in hand with our patented furling system and generator, which allow our turbine to retract it's scoops as much as needed to stay in a safe RPM range while still producing FULL Power. As the dangerous winds subside Harmony returns to its fully open default state. There is no braking needed and no need to be stopped during high winds.

Current Stage and Roadmap

Current Stage

The Company is currently developing its VAWT and generator technologies, including conducting research on the performance of these technologies. The Company intends to continue conducting research and development activities until

the Company can establish that these products are viable for beta testing and pre-orders. The Company will use data collected from real-world use of its technologies to determine whether the Company's products are ready for beta testing and pre-orders.

Our patented technology project has made progress. Wind tunnel testing has led to optimized scoop geometries and a completed Arduino programming algorithm for furling control, ready for beta testing. We have developed a new turbine kit with improved furling design, magnetic thrust bearings, and weatherproof stability, currently in its third iteration with active testing. Our new facility enhances our manufacturing capabilities and prototype development, providing space, equipment, and a controlled environment. Additionally, we have expanded our team and implemented succession planning, creating a new revenue stream through contract machining. Looking ahead, we plan to establish partnerships with local machine shops and Lawrence Livermore National Laboratories for future DOE research projects.

Future Roadmap

Once the VAWT and generator technologies are ready for beta testing and pre-orders, the Company will begin low-volume production of these products, including planning to partner with third-party manufacturers for production. The Company intends these aims to facilitate further research and, eventually, mass production of variations of its technologies. The Company believes that its products may be adapted for other energy-production purposes not currently contemplated.

The Company anticipates that multiple versions of its VAWT technology will eventually be produced, such as smaller and/or larger sizes, as well as variations in materials used and in capabilities to handle environmental challenges such as snow, ice, and coastal sea waters.

The Team

Officers and Directors

Name: Christopher Moore

Christopher Moore's current primary role is with the Issuer.

Positions and offices currently held with the issuer:

- Position: Chief Executive Officer & President
Dates of Service: August, 2020 - Present
Responsibilities: Overseeing the Company's operations and product development. Salary: \$104,000

Other business experience in the past three years:

- Employer: Penn State Health
Title: Lead Programmer Analyst/Consultant
Dates of Service: August, 2007 - May, 2022
Responsibilities: Multi-hospital system serving patients in Central Pennsylvania; responsibilities included programming/applications support and analyst services and systems consulting for the Infor and Kronos software systems.

Other business experience in the past three years:

- Employer: Creating Moore, LLC
Title: Owner
Dates of Service: February, 2017 - Present
Responsibilities: Research and development activities along with contract parts machining for third parties; responsibilities include overall management and operations of the company and for generating leads for contract machining jobs

Name: Cheryl Moore

Cheryl Moore's current primary role is with the Issuer.

Positions and offices currently held with the issuer:

- Position: Secretary and Treasurer of the Board and Chief Operations Officer
Dates of Service: August, 2020 - Present
Responsibilities: Administrative tasks within the Company, including customer and investor relations, bookkeeping, working with legal counsel, insurances, human resources, payroll, benefits administration, website administration,

creating promotional and update videos and social media posts, and handling of all merchandise orders, and occasionally assisting in the shop by machining parts for the Company's research and development efforts. Salary: 72,800

Other business experience in the past three years:

- Employer: Penn State Health
Title: I.T. Systems Analyst/Consultant
Dates of Service: June, 2014 - October, 2022
Responsibilities: Multi-hospital system serving patients in Central Pennsylvania; responsibilities included providing information technology hardware and software support for the Department of Radiology and fulfilled requests for data and analytics throughout the department.

Other business experience in the past three years:

- Employer: Somehow Healthy, LLC
Title: Owner
Dates of Service: January, 2019 - May, 2021
Responsibilities: Truck-based food service specializing in whole-food smoothies and snacks; responsibilities included overseeing the operations of a food truck, including inventing recipes, providing scheduled food services, managing food truck team, and handling all administrative aspects such as payroll, accounting, taxes, human resources, safety, and social media.

Risk Factors

The SEC requires the company to identify risks that are specific to its business and its financial condition. The company is still subject to all the same risks that all companies in its business, and all companies in the economy, are exposed to. These include risks relating to economic downturns, political and economic events and technological developments (such as hacking and the ability to prevent hacking). Additionally, early-stage companies are inherently more risky than more developed companies. You should consider general risks as well as specific risks when deciding whether to invest.

These are the risks that relate to the Company:

Uncertain Risk

An investment in the Company (also referred to as "we", "us", "our", or the "Company") involves a high degree of risk and should only be considered by those who can afford the loss of their entire investment. Furthermore, the purchase of any securities should only be undertaken by persons whose financial resources are sufficient to enable them to indefinitely retain an illiquid investment. Each investor in the Company should research thoroughly any offering before making an investment decision and consider all of the information provided regarding the Company as well as the following risk factors, in addition to the other information in the Company's Form C. The following risk factors are not intended, and shall not be deemed to be, a complete description of the commercial, financial, and other risks inherent in the investment in the Company.

Our business projections are only projections

There can be no assurance that the Company will meet its projections. There can be no assurance that the Company will be able to find sufficient demand for its product or service, that people think it's a better option than a competing product or service, or that we will be able to provide a product or service at a level that allows the Company to generate revenue, make a profit, or grow the business.

Any valuation is difficult to assess

The valuation for the offering was established by the Company. Unlike listed companies that are independently valued through market-driven stock prices, the valuation of private companies, especially startups, is difficult to assess, may not be exact, and you may risk overpaying for your investment.

The transferability of the Securities you are buying is limited

You should be prepared to hold this investment for several years or longer. For the 12 months following your investment, there will be restrictions on the securities you purchase. More importantly, there are a limited number of established markets for the resale of these securities. As a result, if you decide to sell these securities in the future, you may not be able to find, or may have difficulty finding, a buyer, and you may have to locate an interested buyer when you do seek to resell your investment. The Company may be acquired by an existing player in the industry. However, that may never happen or it may happen at a price that results in you losing money on this investment.

Your investment could be illiquid for a long time

You should be prepared to hold this investment for several years or longer. For the 12 months following your investment,

there will be restrictions on how you can resell the securities you receive. More importantly, there are limited established markets for these securities. As a result, if you decide to sell these securities in the future, you may not be able to find a buyer. The Company may be acquired by an existing player in the same or a similar industry. However, that may never happen or it may happen at a price that results in you losing money on this investment.

The Company may undergo a future change that could affect your investment

The Company may change its business, management or advisory team, IP portfolio, location of its principal place of business or production facilities, or other change which may result in adverse effects on your investment. Additionally, the Company may alter its corporate structure through a merger, acquisition, consolidation, or other restructuring of its current corporate entity structure. Should such a future change occur, it would be based on management's review and determination that it is in the best interests of the Company.

Your information rights are limited with limited post-closing disclosures

The Company is required to disclose certain information about the Company, its business plan, and its anticipated use of proceeds, among other things, in this offering. Early-stage companies may be able to provide only limited information about their business plan and operations because it does not have fully developed operations or a long history to provide more disclosure. The Company is also only obligated to file information annually regarding its business, including financial statements. In contrast to publicly listed companies, investors will be entitled only to that post-offering information that is required to be disclosed to them pursuant to applicable law or regulation, including Regulation CF. Such disclosure generally requires only that the Company issue an annual report via a Form C-AR. Investors are generally not entitled to interim updates or financial information.

Some early-stage companies may lack professional guidance

Some companies attribute their success, in part, to the guidance of professional early-stage advisors, consultants, or investors (e.g., angel investors or venture capital firms). advisors, consultants, or investors may play an important role in a company through their resources, contacts, and experience in assisting early-stage companies in executing their business plans. An early-stage company primarily financed through Regulation Crowdfunding may not have the benefit of such professional investors, which may pose a risk to your investment.

If the Company cannot raise sufficient funds it will not succeed

The Company is offering Preferred Stock in the amount of up to 2,000,000 in this offering, and may close on any investments that are made. Even if the maximum amount is raised, the Company is likely to need additional funds in the future in order to grow, and if it cannot raise those funds for whatever reason, including reasons relating to the Company itself or the broader economy, it may not survive. If the Company manages to raise only the minimum amount of funds sought, it will have to find other sources of funding for some of the plans outlined in "Use of Proceeds."

We may not have enough capital as needed and may be required to raise more capital.

We anticipate needing access to credit in order to support our working capital requirements as we grow. It is a difficult environment for obtaining credit on favorable terms. If we cannot obtain credit when we need it, we could be forced to raise additional equity capital, modify our growth plans, or take some other action. Issuing more equity may require bringing on additional investors. Securing these additional investors could require pricing our equity below its current price. If so, your investment could lose value as a result of this additional dilution. In addition, even if the equity is not priced lower, your ownership percentage would be decreased with the addition of more investors. If we are unable to find additional investors willing to provide capital, then it is possible that we will choose to cease our sales activity. In that case, the only asset remaining to generate a return on your investment could be our intellectual property. Even if we are not forced to cease our sales activity, the unavailability of credit could result in the Company performing below expectations, which could adversely impact the value of your investment.

Terms of subsequent financings may adversely impact your investment

We will likely need to engage in common equity, debt, or preferred stock financings in the future, which may reduce the value of your investment in the Company. Interest on debt securities could increase costs and negatively impact operating results. Preferred stock could be issued in series from time to time with such designation, rights, preferences, and limitations as needed to raise capital. The terms of preferred stock could be more advantageous to those investors than to the holders of common stock or other securities. In addition, if we need to raise more equity capital from the sale of Common Stock, institutional or other investors may negotiate terms that are likely to be more favorable than the terms of your investment, and possibly a lower purchase price per security.

Management's Discretion as to Use of Proceeds

Our success will be substantially dependent upon the discretion and judgment of our management team with respect to the application and allocation of the proceeds of this offering. The Use of Proceeds described below is an estimate based on our current business plan. We, however, may find it necessary or advisable to re-allocate portions of the net proceeds reserved for one category to another, and we will have broad discretion in doing so.

Projections: Forward Looking Information

Any projections or forward-looking statements regarding our anticipated financial or operational performance are hypothetical and are based on management's best estimate of the probable results of our operations and may not have been reviewed by our independent accountants. These projections are based on assumptions that management believes are

reasonable. Some assumptions invariably will not materialize due to unanticipated events and circumstances beyond management's control. Therefore, actual results of operations will vary from such projections, and such variances may be material. Any projected results cannot be guaranteed.

The amount raised in this offering may include investments from company insiders or immediate family members. Officers, directors, executives, and existing owners with a controlling stake in the Company (or their immediate family members) may make investments in this offering. Any such investments will be included in the raised amount reflected on the campaign page.

Reliance on a single service or product

All of our current services are variants of one type of service and/or product. Relying heavily on a single service or product can be risky, as changes in market conditions, technological advances, shifts in consumer preferences, or other changes can adversely impact the demand for the product or service, potentially leading to revenue declines or even business failure.

Some of our products are still in the prototype phase and might never be operational products

Developing new products and technologies can be a complex process that involves significant risks and uncertainties. Technical challenges, design flaws, manufacturing defects, and regulatory hurdles can all impact the success of a product or service. It is possible that there may never be an operational product or that the product may never be used to engage in transactions. It is possible that the failure to release the product is the result of a change in business model upon the Company's making a determination that the business model, or some other factor, will not be in the best interest of the Company and its stockholders.

Developing new products and technologies entails significant risks and uncertainties

Competition can be intense in many markets, and a failure to keep up with competitors or anticipate shifts in market dynamics can lead to revenue declines or market share losses. We are currently in the research and development stage and have only manufactured a prototype for our product. Delays or cost overruns in the development of our product and failure of the product to meet our performance estimates may be caused by, among other things, unanticipated technological hurdles, difficulties in manufacturing, changes to design, and regulatory hurdles. Any of these events could materially and adversely affect our operating performance and results of operations.

Supply Chain and Logistics Risks

The availability of raw materials, transportation costs, and supply chain disruptions can all impact the ability to manufacture and distribute products or services, leading to lost revenue or increased costs. Products and services that are not available when customers need them can lead to lost sales and damage to the brand's reputation.

Quality and Safety of our Product and Service

The quality of a product or service can vary depending on the manufacturer or provider. Poor quality can result in customer dissatisfaction, returns, and lost revenue. Furthermore, products or services that are not safe can cause harm to customers and result in liability for the manufacturer or provider. Safety issues can arise from design flaws, manufacturing defects, or improper use.

Minority Holder; Securities with No Voting Rights

The Preferred Stock that an investor is buying has no voting rights attached to them. This means that you will have no rights in dictating how the Company will be run. You are trusting in management's discretion in making good business decisions that will grow your investments. Furthermore, in the event of a liquidation of our company, you will only be paid out if there is any cash remaining after all of the creditors of our company have been paid out.

You are trusting that management will make the best decision for the company

You are trusting in management's discretion. You are buying securities as a minority holder, and therefore must trust the management of the Company to make good business decisions that grow your investment.

Insufficient Funds

The Company might not sell enough securities in this offering to meet its operating needs and fulfill its plans, in which case it may cease operating and result in a loss on your investment. Even if we sell all the Preferred Stock we are offering now, the Company may need to raise more funds in the future, and if unsuccessful in doing so, the Company will fail. Even if we do make a successful offering in the future, the terms of that offering might result in your investment in the Company being worth less, if later investors have better terms than those in this offering.

This offering involves "rolling closings," which may mean that earlier investors may not have the benefit of information that later investors have.

Once we meet our target amount for this offering, we may request that StartEngine instruct the escrow agent to disburse offering funds to us. At that point, investors whose subscription agreements have been accepted will become our investors. All early-stage companies are subject to a number of risks and uncertainties, and it is not uncommon for material changes to be made to the offering terms, or to companies' businesses, plans, or prospects, sometimes with little or no notice. When such changes happen during the course of an offering, we must file an amendment to our Form C with the SEC, and investors whose subscriptions have not yet been accepted will have the right to withdraw their subscriptions and get their money back. Investors whose subscriptions have already been accepted, however, will already be our investors and will have

no such right.

Non-accredited investors may not be eligible to participate in a future merger or acquisition of the Company and may lose a portion of their investment

Investors should be aware that under Rule 145 under the Securities Act of 1933 if they invest in a company through Regulation Crowdfunding and that company becomes involved in a merger or acquisition, there may be significant regulatory implications. Under Rule 145, when a company plans to acquire another and offers its shares as part of the deal, the transaction may be deemed an offer of securities to the target company's investors, because investors who can vote (or for whom a proxy is voting on their behalf) are making an investment decision regarding the securities they would receive. All investors, even those with non-voting shares, may have rights with respect to the merger depending on relevant state laws. This means the acquirer's "offer" to the target's investors would require registration or an exemption from registration (such as Reg. D or Reg. CF), the burden of which can be substantial. As a result, non-accredited investors may have their shares repurchased rather than receiving shares in the acquiring company or participating in the acquisition. This may result in investors' shares being repurchased at a value determined by a third party, which may be at a lesser value than the original purchase price. Investors should consider the possibility of a cash buyout in such circumstances, which may not be commensurate with the long-term investment they anticipate.

Our new product could fail to achieve the sales projections we expect

Our growth projections are based on the assumption that with an increased advertising and marketing budget, our products will be able to gain traction in the marketplace at a faster rate than our current products have. It is possible that our new products will fail to gain market acceptance for any number of reasons. If the new products fail to achieve significant sales and acceptance in the marketplace, this could materially and adversely impact the value of your investment.

We face significant market competition

We will compete with larger, established companies that currently have products on the market and/or various respective product development programs. They may have much better financial means and marketing/sales and human resources than us. They may succeed in developing and marketing competing equivalent products earlier than us, or superior products than those developed by us. There can be no assurance that competitors will not render our technology or products obsolete or that the products developed by us will be preferred to any existing or newly developed technologies. It should further be assumed that competition will intensify.

We are competing against other recreational activities

Although we are a unique company that caters to a select market, we do compete against other recreational activities. Our business growth depends on the market interest in the Company over other activities.

We are an early stage company and have limited revenue and operating history

The Company has a short history, few customers, and effectively no revenue. If you are investing in our company, it's because you think that our product is a good idea, that the team will be able to successfully market, and sell the product or service, that we can price them right and sell them to enough people so that the Company will succeed. Further, we have never turned a profit and there is no assurance that we will ever be profitable.

We are an early stage company operating in a new and highly competitive industry

The Company operates in a relatively new industry with a lot of competition from both startups and established companies. As other companies flood the market and reduce potential market share, Investors may be less willing to invest in a company with a declining market share, which could make it more challenging to fund operations or pursue growth opportunities in the future.

Intense Market Competition

The market in which the company operates may be highly competitive, with established players, emerging startups, and potential future entrants. The presence of competitors can impact the company's ability to attract and retain customers, gain market share, and generate sustainable revenue. Competitors with greater financial resources, brand recognition, or established customer bases may have a competitive advantage, making it challenging for the company to differentiate itself and achieve long-term success.

Vulnerability to Economic Conditions

Economic conditions, both globally and within specific markets, can significantly influence the success of early-stage startups. Downturns or recessions may lead to reduced consumer spending, limited access to capital, and decreased demand for the company's products or services. Additionally, factors such as inflation, interest rates, and exchange rate fluctuations can affect the cost of raw materials, operational expenses, and profitability, potentially impacting the company's ability to operate.

Uncertain Regulatory Landscape

Due to the unestablished nature of the market the business operates within, the potential introduction of new laws or industry-specific standards can impose additional costs and operational burdens on the company. Non-compliance or legal disputes may result in fines, penalties, reputational damage, or even litigation, adversely affecting the company's financial condition and ability to operate effectively.

We have existing patents that we might not be able to protect properly

One of the Company's most valuable assets is its intellectual property. The Company's owns trademarks, copyrights, Internet domain names, and trade secrets. We believe one of the most valuable components of the Company is our intellectual property portfolio. Due to the value, competitors may misappropriate or violate the rights owned by the Company. The Company intends to continue to protect its intellectual property portfolio from such violations. It is important to note that unforeseeable costs associated with such practices may invade the capital of the Company.

We have pending patent approval's that might be vulnerable

One of the Company's most valuable assets is its intellectual property. The Company's intellectual property such as patents, trademarks, copyrights, Internet domain names, and trade secrets may not be registered with the proper authorities. We believe one of the most valuable components of the Company is our intellectual property portfolio. Due to the value, competitors may misappropriate or violate the rights owned by the Company. The Company intends to continue to protect its intellectual property portfolio from such violations. It is important to note that unforeseeable costs associated with such practices may invade the capital of the Company due to its unregistered intellectual property.

Our trademarks, copyrights and other intellectual property could be unenforceable or ineffective

Intellectual property is a complex field of law in which few things are certain. It is possible that competitors will be able to design around our intellectual property, find prior art to invalidate it, or render the patents unenforceable through some other mechanism. If competitors are able to bypass our trademark and copyright protection without obtaining a sublicense, it is likely that the Company's value will be materially and adversely impacted. This could also impair the Company's ability to compete in the marketplace. Moreover, if our trademarks and copyrights are deemed unenforceable, the Company will almost certainly lose any potential revenue it might be able to raise by entering into sublicenses. This would cut off a significant potential revenue stream for the Company.

The cost of enforcing our trademarks and copyrights could prevent us from enforcing them

Trademark and copyright litigation has become extremely expensive. Even if we believe that a competitor is infringing on one or more of our trademarks or copyrights, we might choose not to file suit because we lack the cash to successfully prosecute a multi-year litigation with an uncertain outcome; or because we believe that the cost of enforcing our trademark(s) or copyright(s) outweighs the value of winning the suit in light of the risks and consequences of losing it; or for some other reason. Choosing not to enforce our trademark(s) or copyright(s) could have adverse consequences for the Company, including undermining the credibility of our intellectual property, reducing our ability to enter into sublicenses, and weakening our attempts to prevent competitors from entering the market. As a result, if we are unable to enforce our trademark(s) or copyright(s) because of the cost of enforcement, your investment in the Company could be significantly and adversely affected.

The loss of one or more of our key personnel, or our failure to attract and retain other highly qualified personnel in the future, could harm our business

Our business depends on our ability to attract, retain, and develop highly skilled and qualified employees. As we grow, we will need to continue to attract and hire additional employees in various areas, including sales, marketing, design, development, operations, finance, legal, and human resources. However, we may face competition for qualified candidates, and we cannot guarantee that we will be successful in recruiting or retaining suitable employees. Additionally, if we make hiring mistakes or fail to develop and train our employees adequately, it could have a negative impact on our business, financial condition, or operating results. We may also need to compete with other companies in our industry for highly skilled and qualified employees. If we are unable to attract and retain the right talent, it may impact our ability to execute our business plan successfully, which could adversely affect the value of your investment. Furthermore, the economic environment may affect our ability to hire qualified candidates, and we cannot predict whether we will be able to find the right employees when we need them. This would likely adversely impact the value of your investment.

Our ability to sell our product or service is dependent on outside government regulation which can be subject to change at any time

Our ability to sell our products is subject to various government regulations, including but not limited to, regulations related to the manufacturing, labeling, distribution, and sale of our products. Changes in these regulations, or the enactment of new regulations, could impact our ability to sell our products or increase our compliance costs. Furthermore, the regulatory landscape is subject to regular change, and we may face challenges in adapting to such changes, which could adversely affect our business, financial condition, or operating results. In addition to government regulations, we may also be subject to other laws and regulations related to our products, including intellectual property laws, data privacy laws, and consumer protection laws. Non-compliance with these laws and regulations could result in legal and financial liabilities, reputational damage, and regulatory fines and penalties. It is also possible that changes in public perception or cultural norms regarding our products may impact demand for our products, which could adversely affect our business and financial performance, which may adversely affect your investment.

We rely on third parties to provide services essential to the success of our business

Our business relies on a variety of third-party vendors and service providers, including but not limited to manufacturers, shippers, accountants, lawyers, public relations firms, advertisers, retailers, and distributors. Our ability to maintain high-quality operations and services depends on these third-party vendors and service providers, and any failure or delay in their performance could have a material adverse effect on our business, financial condition, and operating results. We may have

limited control over the actions of these third-party vendors and service providers, and they may be subject to their own operational, financial, and reputational risks. We may also be subject to contractual or legal limitations in our ability to terminate relationships with these vendors or service providers or seek legal recourse for their actions. Additionally, we may face challenges in finding suitable replacements for these vendors and service providers, which could cause delays or disruptions to our operations. The loss of key or other critical vendors and service providers could materially and adversely affect our business, financial condition, and operating results, and as a result, your investment could be adversely impacted by our reliance on these third-party vendors and service providers.

The Company is vulnerable to hackers and cyber-attacks

As an internet-based business, we may face risks related to cybersecurity and data protection. We rely on technology systems to operate our business and store and process sensitive data, including the personal information of our investors. Any significant disruption or breach of our technology systems, or those of our third-party service providers, could result in unauthorized access to our systems and data, and compromise the security and privacy of our investors. Moreover, we may be subject to cyber-attacks or other malicious activities, such as hacking, phishing, or malware attacks, that could result in theft, loss, or destruction of our data, disruption of our operations, or damage to our reputation. We may also face legal and regulatory consequences, including fines, penalties, or litigation, in the event of a data breach or cyber-attack. Any significant disruption or downtime of our platform, whether caused by cyber-attacks, system failures, or other factors, could harm our reputation, reduce the attractiveness of our platform, and result in a loss of investors and issuer companies. Moreover, disruptions in the services of our technology provider or other third-party service providers could adversely impact our business operations and financial condition. This would likely adversely impact the value of your investment.

Economic and market conditions

The Company's business may be affected by economic and market conditions, including changes in interest rates, inflation, consumer demand, and competition, which could adversely affect the Company's business, financial condition, and operating results.

Force majeure events

The Company's operations may be affected by force majeure events, such as natural disasters, pandemics, acts of terrorism, war, or other unforeseeable events, which could disrupt the Company's business and operations and adversely affect its financial condition and operating results.

Adverse publicity

The Company's business may be negatively impacted by adverse publicity, negative reviews, or social media campaigns that could harm the Company's reputation, business, financial condition, and operating results.

FAILURE TO STAY COMPETITIVE

The markets in which the Company participates are competitive, and if the Company does not compete effectively, the Company's operating results could be harmed. The Company believes that the market for its products will continue to grow and that the growth of the market could prompt other companies to develop and market products such as those offered by the Company. The Company expects that its competitors may range from startup organizations to larger, incumbent institutions that internally develop products that compete with the Company's products directly or that could be superior to those of the Company in certain respects. The Company expects that many of its potential competitors will have greater name recognition, longer operating histories, more established customer relationships, larger marketing budgets, and greater resources than the Company. These competitors may be able to respond more quickly and effectively than the Company can to new or changing opportunities, technologies, standards, and customer requirements. For these reasons, the Company may not be able to compete successfully against the Company's future competitors, which may harm the Company's business, operating results, and financial condition.

RISK OF EVENTS SUCH AS PRODUCT RECALLS

The Company's products could be subject to recalls or adverse litigation as a result of alleged or real injury caused by the products of the Company. Even if the products of the Company were not found to have been the source of any alleged injury, harm to the brand image and reputation could result. Such an event would negatively impact the financial performance of the Company.

RISK OF DELAYED DELIVERY OF PRODUCTS

If the Company were unable to deliver its products in a timely manner, the brand image and reputation of the Company could suffer negative consequences, and the Company's financial performance could be harmed. As the Company is currently generating new markets for its products, it is difficult to schedule production accurately and achieve maximum efficiency of the Company's manufacturing capacity. This uncertainty may require the Company to incur additional expenses to meet unexpected increases in customer demand for the Company's products. Additionally, an inability to respond to such increases may cause customer dissatisfaction, which may negatively affect the relationships between the Company and its customers.

KEY PERSONNEL & EMPLOYEES

The Company is dependent on its key personnel. If anything catastrophic were to happen to the Company's key personnel, the future of the Company may be negatively impacted. The Company's success depends on the experience and skill of the Board of Directors, its executive Officers, and key employees. To be successful, the Company needs people to run its day-to-

day operations. As the Company grows, it may on occasion need to attract and hire key personnel or contract for additional services like marketing, sales, development, finance, legal, and other areas. The Company may not be able to locate these personnel when needed. Furthermore, the Company may make hiring mistakes. Not attracting the right personnel or making hiring mistakes could adversely affect the business, financial condition, and operating results. The Company expects to face intense competition for highly skilled personnel. As with any new company, sourcing qualified personnel could be challenging. While the Company can rely upon its management, the Company's development depends on successful recruitment of dedicated personnel. Recruitment and retention of top talent in the neuroscience medical device space can be challenging, as it is in other key technology sectors, such as software, hardware engineering, and machine learning.

THE COMPANY'S KEY PERSONNEL ARE NOT OBLIGATED TO COMMIT FULL TIME TO THE BUSINESS OF THE COMPANY
Management of the Company are not required to devote their individual, full-time capacities to the Company's affairs, but only such time as sufficient to fulfill the fiduciary duties held by the management of the Company, as reasonably judged by the management of the Company

COMPETITION

There is the threat of competition, as it is possible that other companies may target the same markets and customers that the Company intends to. Competition may lead to a decrease in expected sales and increase in costs to acquire customers if such competitors are able to achieve similar pricing and performance measures.

LEGAL

The Company may be subject to lawsuits and litigation in the future. Even if the Company is successful in defending any claims made against it, the costs of defending against such claims would drain the Company's resources. This could delay or prevent the Company from achieving profitability and impact its ability to obtain financing to fund its operations in the future or to attract an acquiring Company.

VALUATION DIFFICULT TO ASSESS

The valuation for the Offering was established by the Company. Unlike listed companies that are valued publicly through market-driven stock prices, the valuation of private companies, especially startups, is difficult to assess and you may risk overpaying for your investment. The Company has priced its Shares based on its internal assessments and financial projections.

ILLIQUID INVESTMENT

You should be prepared to hold this investment for several years or longer. For the twelve (12) months following your investment there will be restrictions on how you can resell the securities you receive. More importantly, there is no established market for these securities, and there may never be one. As a result, if you decide to sell these securities in the future, you may not be able to find a buyer.

FUTURE FINANCING

The Company may raise additional capital through sales of its securities in the future. Issuing additional equity may require bringing on more investors and securing more investors could require pricing the Company's equity below its current price. In addition, your overall ownership percentage may decrease with the addition of more investors. If so, your investment could lose value as a result of such dilution.

NO TAX ADVICE

No assurance or warranty of any kind is made with respect to any tax consequences relating to an investment in the Company. Each prospective investor should consult with and rely solely upon the advice of his, her or its own tax advisers.

UNDERCAPITALIZATION

In order to achieve the Company's near and long-term goals, the Company may need to procure funds in addition to the amount raised in the Offering. There is no guarantee the Company will be able to raise such funds on acceptable terms or at all. If the Company is not able to raise sufficient capital in the future, the Company may not be able to execute the Company's business plan, and the Company's continued operations could be in jeopardy, and the Company may be forced to cease operations and sell or otherwise transfer all or substantially all of the Company's remaining assets, which could cause an investor to lose all or a portion of his or her investment. As a result, precisely planning the Company's expected financial results is difficult and may impact its forecasted need for capital.

POSSIBLE DILUTION

Additional Shares may be issued without an associated capital contribution, which would dilute the ownership of the Company and the value of the Shares.

RISKS RELATED TO CERTAIN CORPORATE ACTIONS

Events such as corporate reorganization, merger, acquisition, asset-based borrowing, additional issuances of securities, and stock repurchases may disproportionately affect minority shareholders. The effects may include the dilution of the value of Shares, and the loss of certain rights. Furthermore, there is a risk that future financing activities may result in pricing the Shares below the price at which they were originally purchased.

CONFLICT OF INTEREST: THE COMPANY HAS TRANSACTED WITH A RELATED PARTY

The Company has entered into an arrangement whereby an Affiliate will pay the Company for use of its machines and facilities to manufacture parts on behalf of third parties. This relationship has not been entered into at an arm's-length basis, and the Company may or may not have achieved more favorable terms than if the Company engaged an unrelated machining operator for this service. Such conflicts could result in control persons of the Company advancing their economic interests or the economic interests of the Affiliate above those of the Company, which could adversely impact the value of the Company's stock.

The Company plans to use funds from this offering to cover salaries for employees (related parties).

The Company intends to use up to approximately 34% of the Proceeds to pay salaries. The Company intends to hire additional staff to support its operations, including hiring engineers, leads, and other assistants.

Ownership and Capital Structure; Rights of the Securities

Ownership

The following table sets forth information regarding beneficial ownership of the company's holders of 20% or more of any class of voting securities as of the date of this Offering Statement filing.

Stockholder Name	Number of Securities Owned	Type of Security Owned	Percentage
Christopher Moore	10,000,000	Common Stock	74.8%

The Company's Securities

The Company has authorized Common Stock, and Preferred Stock. As part of the Regulation Crowdfunding raise, the Company will be offering up to 1,666,666 of Preferred Stock.

Common Stock

The amount of security authorized is 19,000,000 with a total of 10,000,000 outstanding.

Voting Rights

One vote per share.

Material Rights

The holders of Common Stock shall have and possess exclusively all voting rights of any kind or nature, which shall include the exclusive voting rights for the election of directors and for each and every other corporate matter, except as otherwise may be required by law.

Preferred Stock

The amount of security authorized is 10,000,000 with a total of 3,372,055 outstanding.

Voting Rights

There are no voting rights associated with Preferred Stock.

Material Rights

Dividend Rights. The Shares of preferred stock are entitled to receive payment of dividends prior to any payment of dividends to holders of shares of common stock. However, the Shares of preferred stock do not carry voting rights, while shares of common stock carry with them the right to elect Directors and to vote on each and every other corporate matter, except as otherwise may be required by law.

Drag Along Rights. The Company's Bylaws contain Drag Along Rights in which the holders of a majority of the issued and outstanding shares of voting capital stock shall at all times be free to solicit good faith written offers made by any individual, corporation, partnership, limited liability company, business trust, association or any other entity to purchase all of the shares of capital stock of the Corporation owned by them (an "Acquisition Offer"). The Controlling Shareholders will provide to other shareholders a copy of the Acquisition Offer and a written notice of their intention to accept it and will have the right to require the other shareholders to sell of their shares of capital stock to the proposed purchaser.

What it means to be a minority holder

As a minority holder of Preferred Stock of the Company, you will have limited rights in regard to the corporate actions of the Company, including additional issuances of securities, company repurchases of securities, a sale of the Company or its significant assets, or company transactions with related parties. Further, investors in this offering may have rights less than those of other investors and will have limited influence on the corporate actions of the Company.

Dilution

Investors should understand the potential for dilution. The investor's stake in a company could be diluted due to the Company issuing additional shares. In other words, when the Company issues more shares, the percentage of the Company that you own will go down, even though the value of the Company may go up. You will own a smaller piece of a larger company. This increase in the number of shares outstanding could result from a stock offering (such as an initial public offering, another crowdfunding round, a venture capital round, or angel investment), employees exercising stock options, or by conversion of certain instruments (e.g. convertible bonds, preferred shares or warrants) into stock. If the Company decides to issue more shares, an investor could experience value dilution, with each share being worth less than before, and control dilution, with the total percentage an investor owns being less than before. There may also be earnings dilution, with a reduction in the amount earned per share (though this typically occurs only if the Company offers dividends, and

most early-stage companies are unlikely to offer dividends, preferring to invest any earnings into the Company).

Transferability of securities

For a year, the securities can only be resold:

- In an IPO;
- To the company;
- To an accredited investor; and
- To a member of the family of the purchaser or the equivalent, to a trust controlled by the purchaser, to a trust created for the benefit of a member of the family of the purchaser or the equivalent, or in connection with the death or divorce of the purchaser or other similar circumstance.

Recent Offerings of Securities

We have made the following issuances of securities within the last three years:

- Type of security sold: SAFE
Final amount sold: \$218,700.00
Use of proceeds: Startup funds
Date: August 06, 2021
Offering exemption relied upon: Regulation CF
- Name: Preferred Stock
Type of security sold: Equity
Final amount sold: \$1,930,624.54
Number of Securities Sold: 1,986,627
Use of proceeds: The funds raised have been used for hiring additional personnel, for moving to a larger facility conducive to future low-volume production, and for finalizing development and testing of both the VAWT unit and accompanying generator design.
Date: October 13, 2022
Offering exemption relied upon: Regulation CF
- Name: Preferred Stock
Type of security sold: Equity
Final amount sold: \$0.00
Number of Securities Sold: 20,000
Use of proceeds: The Company did not raise proceeds from this offering and instead awarded these shares of preferred stock in exchange for services rendered to the Company, including computer-aided design ("CAD") engineering work.
Date: September 26, 2023
Offering exemption relied upon: Section 4(a)(2)
- Name: Preferred Stock
Type of security sold: Equity
Final amount sold: \$0.00
Number of Securities Sold: 54,129
Use of proceeds: Shares issued to StartEngine as a part of compensation for Regulation Crowdfunding offering.
Date: October 13, 2023
Offering exemption relied upon: 506(b)

Financial Condition and Results of Operations

Financial Condition

You should read the following discussion and analysis of our financial condition and results of our operations together with our financial statements and related notes appearing at the end of this Offering Memorandum. This discussion contains forward-looking statements reflecting our current expectations that involve risks and uncertainties. Actual results and the timing of events may differ materially from those contained in these forward-looking statements due to a number of factors, including those discussed in the section entitled "Risk Factors" and elsewhere in this Offering Memorandum.

Results of Operations

Circumstances which led to the performance of financial statements:

Revenue

Revenue for fiscal year 2022 was \$0 compared to \$21,440 in fiscal year 2023. The increase in revenue from 2022 to 2023 is attributed to our company beginning to generate sales from our small-scale wind turbine systems, marking the initial commercial traction for our products.

Cost of Sales

Cost of Sales for fiscal year 2022 was \$0 compared to \$5,805 in fiscal year 2023. The increase in the cost of sales from 2022 to 2023 is due to our commencement of product sales in 2023, which incurred costs associated with the production and delivery of the sold turbines.

Gross Margins

Gross margins for fiscal year 2022 were \$0 compared to \$15,635 in 2023. The improvement in gross margins in 2023 is a result of us starting to generate revenue from our product sales, while the cost of sales remained relatively low compared to the generated revenue.

Expenses

Total operational expenses for fiscal year 2022 were \$362,324 compared to \$690,822 in fiscal year 2023. The increase in expenses from 2022 to 2023 can be attributed to our scaling operations, including research and development activities, hiring additional staff, and expanding marketing

Historical results and cash flows:

The Company is currently in the research and development stage and is revenue-generating. We are of the opinion that the historical cash flows will not be indicative of the revenue and cash flows expected for the future because our initial revenue was generated during the early commercialization phase of our products, and we anticipate significant growth as we scale production and expand our market reach. Past cash was primarily generated through equity investments and initial product sales. Our goal is to achieve sustained growth in revenue by scaling up production, enhancing our marketing efforts, and expanding our product line to meet diverse customer needs. Given that we have only recently started generating revenue, the historical cash flows primarily reflect early-stage investments and limited initial sales. As we move forward, we expect our revenue to increase significantly as our products gain market acceptance and our production capacity expands.

Liquidity and Capital Resources

What capital resources are currently available to the Company? (Cash on hand, existing lines of credit, shareholder loans, etc...)

As of July 20, 2024, the Company has capital resources available in the form of \$450,000 cash on hand. There are no shareholder loans or existing lines of credit.

How do the funds of this campaign factor into your financial resources? (Are these funds critical to your company operations? Or do you have other funds or capital resources available?)

We believe the funds from this campaign are necessary to the viability of the Company. Of the total funds that our Company has, 80% will be made up of funds raised from the crowdfunding campaign, if it raises its maximum funding goal. The Company is pursuing additional revenue which consists of contract machining jobs for third parties when the company isn't using its CNC machines for R&D Purposes. This source of revenue will be helpful but inconsistent and cannot yet be budgeted or predicted.

Are the funds from this campaign necessary to the viability of the company? (Of the total funds that your company has, how much of that will be made up of funds raised from the crowdfunding campaign?)

We believe the funds from this campaign are necessary to the viability of the Company. Of the total funds that our Company has, 80% will be made up of funds raised from the crowdfunding campaign, if it raises its maximum funding goal. The Company is pursuing additional revenue which consists of contract machining jobs for third parties when the company isn't using its CNC machines for R&D Purposes. This source of revenue will be helpful but inconsistent and cannot yet be budgeted or predicted.

How long will you be able to operate the company if you raise your minimum? What expenses is this estimate based on?

If the Company raises the minimum offering amount, we anticipate the Company will be able to operate for 8 months. This

is based on a current monthly burn rate of \$55,000 for expenses related to salaries, inventory, and R&D.

How long will you be able to operate the company if you raise your maximum funding goal?

If the Company raises the maximum offering amount, we anticipate the Company will be able to operate for 3 years. This is based on a predicted monthly burn rate of \$65,000 for increased expenses related to salaries, inventory, and R&D.

Are there any additional future sources of capital available to your company? (Required capital contributions, lines of credit, contemplated future capital raises, etc...)

Currently, the Company has not contemplated additional future sources of capital beyond the current fundraising campaign. If we conduct any concurrent offerings or contemplate this, we will disclose the terms here. The Company is pursuing additional revenue which consists of contract machining jobs for third parties when the company isn't using its CNC machines for R&D Purposes. This source of revenue will be helpful but inconsistent and cannot yet be budgeted or predicted.

Indebtedness

The Company does not have any material terms of indebtedness.

Related Party Transactions

The Company has not conducted any related party transactions

Valuation

Pre-Money Valuation: \$20,058,082.50

Valuation Details:

This pre-money valuation was calculated internally by the Company without the use of any formal third-party evaluation.

The pre-money valuation has been calculated on a fully diluted basis. In making this calculation, we have assumed: (i) all preferred stock is converted to common stock; (ii) all outstanding options, warrants, and other securities with a right to acquire shares are exercised; and (iii) any shares reserved for issuance under a stock plan are issued.

Use of Proceeds

If we raise the Target Offering Amount of \$15,000.00 we plan to use these proceeds as follows:

- StartEngine Platform Fees
5.5%
- StartEngine Service Fees
94.5%
StartEngine Service Fees

If we raise the over allotment amount of \$2,499,999.00, we plan to use these proceeds as follows:

- StartEngine Platform Fees
5.5%
- StartEngine Service Fees
1.0%
StartEngine Service Fees
- Research & Development
24.0%
The Company intends to use up to approximately 24% of the Proceeds for research and development costs, including purchasing equipment, purchasing materials, and other fabrication costs.
- Salaries
34.0%
The Company intends to use up to approximately 34% of the Proceeds to pay salaries. The Company intends to hire additional staff to support its operations, including hiring engineers, leads, and other assistants.

- Operations

9.0%

The Company intends to use up to approximately 9% of the Proceeds for rent, utilities, maintenance fees, insurance, supplies, repairs, and other general expenses.

- Working Capital

26.5%

The Company intends to use up to approximately 28% of the Proceeds for working capital costs. The Company anticipates that there may be necessary expenditures for future growth currently unknown to the Company.

The Company may change the intended use of proceeds if our officers believe it is in the best interests of the company.

Regulatory Information

Disqualification

No disqualifying event has been recorded in respect to the company or its officers or directors.

Compliance Failure

The company has not previously failed to comply with the requirements of Regulation Crowdfunding.

Ongoing Reporting

The Company will file a report electronically with the SEC annually and post the report on its website no later than April 30 (120 days after Fiscal Year End). Once posted, the annual report may be found on the Company's website at <https://HarmonyTurbines.com> (<https://harmonyturbines.com> (Annual Reports & SEC Filings Link)).

The Company must continue to comply with the ongoing reporting requirements until:

- (1) it is required to file reports under Section 13(a) or Section 15(d) of the Exchange Act;
- (2) it has filed at least one (1) annual report pursuant to Regulation Crowdfunding and has fewer than three hundred (300) holders of record and has total assets that do not exceed \$10,000,000;
- (3) it has filed at least three (3) annual reports pursuant to Regulation Crowdfunding;
- (4) it or another party repurchases all of the securities issued in reliance on Section 4(a)(6) of the Securities Act, including any payment in full of debt securities or any complete redemption of redeemable securities; or
- (5) it liquidates or dissolves its business in accordance with state law.

Updates

Updates on the status of this Offering may be found at: www.startengine.com/harmony-turbines

Investing Process

See Exhibit E to the Offering Statement of which this Offering Memorandum forms a part.

EXHIBIT B TO FORM C

FINANCIAL STATEMENTS AND INDEPENDENT ACCOUNTANT'S REVIEW OR AUDIT (AS APPLICABLE) FOR Harmony Turbines Inc.

[See attached]



HARMONY TURBINES, INC

FINANCIAL STATEMENTS

FOR THE PERIOD ENDED
DECEMBER 31, 2022

TOGETHER WITH
INDEPENDENT AUDITOR'S REPORT

Mar 6, 2024

Haroon Imtiaz, CPA
Mountain House, CA 95391

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E: haroonimtiazcpa@gmail.com

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haroon imtiaz cpa

INDEPENDENT AUDITOR'S REPORT

To Owner of Harmony Turbines, Inc.:

We have audited the accompanying financial statements of Harmony Turbines, Inc., which comprise the Statement of Assets & Liabilities as of December 31, 2022, and the related Statement of Operations, Statement of Changes in Owner's Capital and Statements of Cash Flows for the twelve months ended December 31, 2022, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Auditor's Conclusion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Harmony Turbines, Inc. as of December 31, 2022, and the results of their operations and their cash flows for the twelve months ended December 31, 2022, in accordance with accounting principles generally accepted in the United States of America.

Going Concern

As discussed in Note 12 to the financial statements, Harmony Turbines, Inc. has suffered recurring losses from operations and has a net capital deficiency. Management's evaluation of the events and



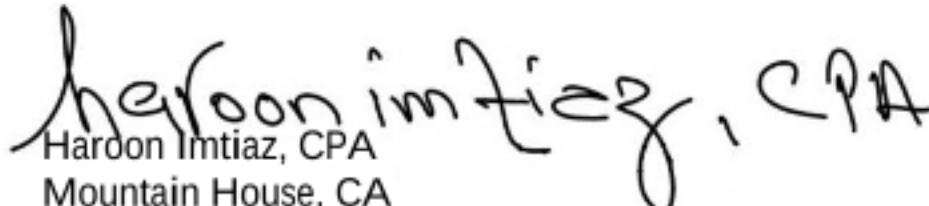
haroon imtiaz cpa

Going Concern (Continued)

conditions and management's plans to mitigate these matters are also described in Note 12. Our opinion is not modified with respect to this matter.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying supplementary information shown on page 14 is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the accompanying supplementary information is fairly stated in all material respects in relation to the financial statements as a whole.


Haroon Imtiaz, CPA
Mountain House, CA
Dated: Mar 6, 2024

HARMONY TURBINES, INC
Statement of Assets and Liabilities
As of December 31, 2022

	Dec. 31, 2022
ASSETS:	
Current Assets	
Cash and Cash Equivalents	\$ 474,356
Accounts receivable	-
Inventory	16,479
Total Current Assets	491,077
Deposit Paid	885
Fixed Assets, net	18,605
Other Asset	-
Total Assets	510,568
LIABILITIES AND EQUITY	
Current Liabilities	
Accounts payable and accrued expenses	1,982
Other current liabilities	-
Total Current Liabilities	1,982
Long-term Liabilities	-
Total Liabilities	1,982
Share Holders Equity	
Retained Earnings/(Loss)	(175,535)
Net Income/(Loss)	(355,324)
Net owner's inflow/(outflow)	1,039,446
Total Share Holders Equity	508,586
TOTAL LIABILITIES AND EQUITY	\$ 510,568

HARMONY TURBINES, INC
Statement of Operations
For the Twelve Months Ended Dec. 31, 2022

	Twelve Months Ended 2022
REVENUE, Net	\$ -
Cost of Sales	-
Gross Profit	-
General and administrative expenses	(362,324)
OPERATING INCOME (LOSS)	(362,324)
Non-operative gain and losses	
Other Income (Loss)	7,000
Miscellaneous Expense	-
Interest Expense	-
Interest Income	-
Total Non-Operative Gain (Loss)	-
Net Income (Loss) before Taxes	\$ (355,324)

HARMONY TURBINES, INC
Statement of Changes in Partners' Capital
For the Twelve Months Ended Dec. 31, 2022

Partners' capital, Jan 1, 2022	\$	14,991
Capital contributions		
Christopher Moore		-
Private Investments		-
StartEnginge Investments		631,264
WeFunder Investments		218,700
Capital distributions		-
Net income (Loss)		(355,352)
Partners' capital, Dec. 31, 2022	\$	14,991

HARMONY TURBINES, INC
Statements of Cash Flows
For the Twelve Months Ended Dec. 31, 2022

	2022
CASH FLOWS FROM OPERATING ACTIVITIES	
Net Income	\$ (128,593)
Adjustments to reconcile Change in Net Assets to Net cash	
Provided By (Used For) operating activities:	
Depreciation	70
Increase in Inventory	(7,802)
Increase in Tax Liabilities	629
Increase in Tax Liabilities	-
Total adjustments	(7,103)
Net cash provided (used) by operating activities	(135,696)
 CASH FLOWS FROM INVESTING ACTIVITIES	
Purchase of Fixed Asset	(412)
Net cash provided (used) by financing activities	(412)
 CASH FLOWS FROM FINANCING ACTIVITIES	
Capital distributions	-
Capital contributions	92,391
Net cash provided (used) by financing activities	92,391
 Net increase (decrease) in cash and equivalent	(43,717)
 CASH & CASH EQUIVALENTS: Jan. 1, 2022	46,373
 CASH & CASH EQUIVALENTS: Dec. 31 2022	\$ 2,655

HARMONY TURBINES, INC
Notes to Financial Statements
For the Twelve Months Ended Dec. 31, 2022

NOTE 1. GENERAL

Harmony Turbines, Inc. is organized under the laws of the state of Pennsylvania. Harmony Turbines, Inc. was originally founded on August 11, 2020. Harmony Turbines, Inc. is working on creating small scale Vertical Axis Wind Turbine products and solutions for home and small business use. Harmony Turbines, Inc. is focusing production on units sized 10kW or less but would license to organizations looking to make larger units for industrial purposes. Harmony Turbines, Inc.'s patented intellectual property encompasses both its proprietary turbine blade and generator designs. Both unique production lines are being developed and manufactured by Harmony Turbines. Harmony Turbines, Inc. is working on creating the first small scale Vertical Axis Wind Turbines that finally make sense for the average homeowner which will be beautiful, low maintenance, safe and efficient. The Harmony Turbines, Inc. is a privately held Pennsylvania corporation headquartered in Lebanon, Pennsylvania.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The financial statements of the Company are prepared on the accrual basis of accounting and in accordance with accounting principles generally accepted in the United States of America. Accordingly, revenues are recognized when earned and expenses are recorded when incurred.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of financial statements and the reported amounts of revenues and disbursements during the reporting period. Actual results could differ from those estimates.

Cash and cash equivalents

For purpose of the statement of cash flows, the Company considers all money market funds and highly liquid debt instruments purchased with a maturity of three months or less when purchased to be cash equivalents.

Liabilities

Harmony Turbines, Inc. maintains current liabilities with no related party payable carrying month to month. Harmony Turbines, Inc. maintains no Long term liabilities on its assets.

HARMONY TURBINES, INC
Notes to Financial Statements
For the Twelve Months Ended Dec. 31, 2022

Note 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Advertising Costs

Advertising costs associated with marketing the Company's products and services are generally expensed as costs are incurred.

Revenue Recognition

All revenues are recorded in accordance with ASC 606, Revenue from Contracts with Customers, which is recognized when: (i) a contract with a customer has been identified, (ii) the performance obligation(s) in the contract have been identified, (iii) the transaction price has been determined, (iv) the transaction price has been allocated to each performance obligation in the contract, and (v) the Organization has satisfied the applicable performance obligation over time or at a point in time.

Investments

Investments with readily determinable fair values are reported at fair value based upon quoted market prices or published net asset values for alternative investments with characteristics similar to a mutual fund. Other alternative investments (nontraditional, not readily marketable vehicles), such as certain hedge funds, private equity, alternative hedged strategies and real assets are reported at net asset value, as a practical expedient for estimated fair value, as provided by the investment managers of the respective funds. The reported values may differ from the values that would have been reported had a ready market for these investments existed. All other investments are stated at fair value based upon quoted market prices in active markets.

Fair Value Measurements

The Company determines the fair market value of its financial assets & liabilities based on the fair value hierarchy established in accordance with U.S. generally accepted accounting principles.

Income Taxes

The Harmony Turbines, Inc. is subject to Corporate income and state income taxes in the state it does business. A deferred tax asset as a result of net operating losses (NOL) has not been recognized due to the uncertainty of future positive taxable income to utilize the NOL. Due to the recently enacted Tax Cuts and Jobs Act, any NOLs will be limited to 80% of taxable income generated in future years.

HARMONY TURBINES, INC
Notes to Financial Statements
For the Twelve Months Ended Dec. 31, 2022

Uncertain Tax Provisions

Accounting for uncertain income tax positions, relating to both federal and state income taxes, are required when a more likely than not threshold is attained. If such positions result in uncertainties, then the unrecognized tax liability is estimated based on a cumulative probability assessment that aggregates the estimated tax liability for all uncertain tax positions. With the adoption of these new rules, the Organization assessed its tax positions in accordance with the guidance.

Property, Plant and Equipment

Property, plant and equipment are stated at cost, if purchased or fair value on date of contribution. Depreciation and amortization are computed on a straight-line basis over the estimated useful life of the asset. Capitalization costs incurred in connection with ongoing capital projects are recorded as systems and construction in progress. These costs will be reclassified into categories and depreciated once placed in service. Expenditures for normal maintenance and repairs are charged to expense. The estimated useful lives by asset class are as follows:

	<u>Years</u>
Buildings	25-50
Buildings improvements	10
Vehicles	5
Furniture and office equipment	5
Software and computer equipment	3-5

Note 3. CASH AND CASH EQUIVALENTS

Cash & cash equivalents at December 31, 2022 of the following checking accounts:

	<u>December 31, 2022</u>
Cash	\$ 2,655
Total	<u>\$ 2,655</u>

NOTE 4. SUBSEQUENT EVENTS

Management has evaluated subsequent events through Mar 6, 2024, the date on which the financial statements were available to be issued. Management has determined that none of the events occurring after the date of the balance sheet through the date of Management's review substantially affect the amounts and disclosure of the accompanying financial statements.

HARMONY TURBINES, INC
Notes to Financial Statements
For the Twelve Months Ended Dec. 31, 2022

Note 5. FAIR VALUE MEASUREMENT

The Organization values its investments in accordance with GAAP and consistent with the FASB's official pronouncement on Fair Value Measurements for financial assets and liabilities. The pronouncement defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. GAAP establishes a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the entities own assumptions about how market participants would value an asset or liability based on the best information available. Valuation techniques used to measure fair value utilize relevant observable inputs and minimize the use of unobservable inputs.

The three levels of the fair value hierarchy are as follows:

Level 1 Inputs are quoted prices or published net asset values (unadjusted), in active markets for identical assets or liabilities that the Organization has the ability to access at the measurement date.

Level 2 Inputs are other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3 Inputs are unobservable inputs for the asset or liability.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. In determining fair value, organization utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible; as well as, considers nonperformance risk in its assessment of fair value.

Fair values of assets measured on a recurring basis at Dec. 31, 2022 is as follows:

		FMV	Quoted Prices in Active Markets for identical Assets (Level 1)	Observables Inputs (Level 2)	Unobservable Inputs (Level 3)
Cash	Dec. 31, 2022	\$ 2,655	\$ 2,655	-	-

HARMONY TURBINES, INC
Notes to Financial Statements
For the Twelve Months Ended Dec. 31, 2022

NOTE 6. LITIGATION, COMMITMENTS AND CONTINGENCIES

From time to time the Harmony Turbines, Inc. may be subject to legal proceedings and claims in the ordinary course of its business. However, in the opinion of management, there are no claims, pending or asserted, that will have a material adverse effect on the Company's financial position.

Note 7. SICK LEAVE, VACATION AND OTHER COMPENSATED ABSENCES

Harmony Turbines, Inc. is in conformity with the Pennsylvania Labor Laws and Regulations, Family Care and Medical Leave, and Prohibits Workplace Discrimination.

NOTE 8. CONCENTRATIONS OF CREDIT AND MARKET RISK

The Harmony Turbines, Inc. maintains substantially all of their cash balances in deposit accounts that at times may exceed Federally insured limits. The Harmony Turbines, Inc. has not experienced any losses in such accounts. The Harmony Turbines, Inc. believes they are not exposed to any significant credit risk related to these deposit accounts.

Financial instruments that potentially expose the Company to concentrations of credit and market risk consist primarily of cash and cash equivalents. Cash and cash equivalents are maintained at financial institutions and accounts at each institution are insured by the Federal Deposit Insurance Corporation (FDIC) up to \$250,000. At December 31, 2022, the Harmony Turbines, Inc. had \$0, of uninsured balances at these institutions.

NOTE 9. FIXED ASSETS

Fixed Assets consists of the following at December 31, 2022:

	2022
Furniture and office equipment	\$ 17,699
Software and computer equipment	1,585
	19,284
Less: Accumulated Depreciation	(679)
Fixed Assets, net	\$ 18,605

NOTE 10. RELATED PARTY TRANSACTIONS

Company follows ASC 850, "Related Party Disclosures," for the identification of related parties and disclosure of related party transactions. No transactions require disclosure.

HARMONY TURBINES, INC
Notes to Financial Statements
For the Twelve Months Ended Dec. 31, 2022

NOTE 11. COVID 19

The outbreak of Novel Coronavirus (COVID 19) continues to progress and evolve. Therefore, it is challenging now, to predict the full extent and duration of its business and economic impact. The extent and duration of such impacts remain uncertain and dependent on future developments that cannot be accurately predicted at this time, such as the transmission rate of the coronavirus and the extent and effectiveness of containment actions taken. Given the ongoing economic uncertainty, a reliable estimate of the impact cannot be made at the date of authorization of these financial statements. These developments could impact our future financial results, cash flows and financial condition however the management of the Company was hopeful that it will not significantly impact the business of the Company.

NOTE 12. GOING CONCERN

The accompanying balance sheet has been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The entity has not commenced principal operations and realized losses every year since inception and may continue to generate losses. The Company's ability to continue as a going concern in the next twelve months following the date the financial statements were available to be issued is dependent upon its ability to produce revenues and/or obtain financing sufficient to meet current and future obligations and deploy such to produce profitable operating results. Management has evaluated these conditions and plans to generate revenues and raise capital as needed to satisfy its capital needs. No assurance can be given that the Company will be successful in these efforts. These factors, among others, raise substantial doubt about the ability of the Company to continue as a going concern for a reasonable period of time. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities

SUPPLEMENTAL INFORMATION

HARMONY TURBINES, INC
SUPPLEMENTARY SCHEDULE
GENERAL AND ADMINISTRATION EXPENSES
For the Twelve Months Ended Dec. 31, 2022

General and administrative expenses

Advertising	\$	115,682
Wages and Salaries		96,908
StartEngine Fees		52,169
Supplies		33,667
WeFunder Processing Fees		13,122
Rent		12,852
Payroll Tax Expense		8,314
Legal Fees		8,120
Contract Labor		4,336
Liability Insurance		3,153
Property Insurance		3,016
Travel		2,729
Audit Fees		1,919
Professional Fees		1,574
Telephone and Internet		1,472
Workers Compensation		1,100
Service Expenses		810
depreciation		609
Other Business Expense		774

Total General and Administrative expenses	\$	(362,324)
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Appendix 1 – Financial Statements

Harmony Turbines, Inc.
FINANCIAL STATEMENTS
As of December 31, 2023

With Independent Auditor's Opinion

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INDEPENDENT AUDITOR'S REPORT

To
The officers of,
Harmony Turbines, Inc.

We have audited the accompanying financial statements of Harmony Turbines, Inc., which comprise the Statement of Assets & Liabilities as of December 31, 2023, and the related Statement of Operations, Statement of Changes in Equity and Statements of Cash Flows for the twelve months ended December 31, 2023, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Auditor's Conclusion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Harmony Turbines, Inc. as of December 31, 2023, and the results of their operations and their cash flows for the twelve months ended December 31, 2023, in accordance with accounting principles generally accepted in the United States of America.

Going Concern

As discussed in Notes to the financial statements, Harmony Turbines, Inc. has suffered recurring losses from operations and has a net capital deficiency. Our opinion is not modified with respect to this matter.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying supplementary information shown on page 16 is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the accompanying supplementary information is fairly stated in all material respects in relation to the financial statements as a whole.

Faiza Mehmood
FM Financial services LLC
info@fmfinancialservicesllc.com
Date May 09, 2024

A handwritten signature in blue ink, appearing to read 'Faiza', with a large, stylized flourish extending from the bottom left.

HARMONY TURBINES, INC
COMPARATIVE BALANCE SHEET
31-Dec-23

	2023 US Dollars	2022 US Dollars
ASSETS		
Current Assets		
Cash and Cash Equivalents	\$ 892,310	\$ 474,600
Inventory	\$ 6,626	\$ 16,479
prepaids and deposits	\$ 3,385	\$ 885
Total Current Assets	<u>\$ 902,322</u>	<u>\$ 491,964</u>
Non-Current Assets		
Equipment and Furniture (Net)	\$ 276,575	\$ 18,605
Total Non-Current Assets	<u>\$ 276,575</u>	<u>\$ 18,605</u>
TOTAL ASSETS	<u>\$ 1,178,896</u>	<u>\$ 510,569</u>
LIABILITIES & EQUITY		
Current Liabilities		
Accounts Payable and other Accrued Liabilities	\$ 332	\$ 1,982
Total Current Liabilities	<u>\$ 332</u>	<u>\$ 1,982</u>
Total Liabilities	<u>\$ 332</u>	<u>\$ 1,982</u>
Equity		
Common Stock -		
Issued and Outstanding (10,000,0000)		
Series Seed Preferred Stock -		
Issued and Outstanding (3,642,077)		
Additional Paid in Capital	\$ 2,400,440	\$ 1,039,446
Retained Earnings	\$ (1,221,836)	\$ (530,859)
Total Equity	<u>\$ 1,178,604</u>	<u>\$ 508,587</u>
TOTAL LIABILITIES & OWNER'S EQUITY	<u>\$ 1,178,936</u>	<u>\$ 510,569</u>

Accompanying footnotes are the integral part of the financial Statements

Harmony Turbines Inc
Comparative Statement of Operations
31-Dec-23

	2023 US dollars	2022 US dollars
REVENUE		
Revenue (Net)	\$ 21,440	
Total Revenue	<u>\$ 21,440</u>	<u>\$ -</u>
Cost of Sales	\$ 5,805	
Gross Profit	<u>\$ 15,635</u>	<u>\$ -</u>
Operational Expenses		
Sales and Marketing Expenses	\$ 98,156	
Administrative Expenses	<u>\$ 611,135</u>	<u>\$ 362,324</u>
Total Operational Expenses	<u>\$ 709,291</u>	<u>\$ 362,324</u>
Net Profit/(Loss) before Tax	\$ (693,656)	\$ (362,324)
Other Income	\$ 2,834	\$ 7,000
Net Profit and Loss	<u>\$ (690,822)</u>	<u>\$ (355,324)</u>
Loss per share	\$ (0.07)	\$ (0.04)

Accompanying footnotes are the integral part of the financial Statements

Harmony Turbines, Inc.
Statement of Changes in Equity
As of December 31, 2023

	Common Stock	preferred non- voting Reg CF	Additional Paid in Capital	Retained Earnings	Total
	Shares	Shares			
As of December 31, 2021	10,000,000	874,383	189,159	-175,535	13,624
		436,216	849,840	-355,324	-355,324
As of December 31, 2022	10,000,000	1,310,599	1,038,999	-530,859	508,140
New issuance		2,059,004	1361142		1,361,142
Net Income/(loss)				-690,822	-690,822
As of December 31, 2023	10,000,000	3,369,603	2,400,141	-1,221,681	1,178,460

Accompanying footnotes are the integral part of the financial Statements

Harmony Turbines Inc
Comparative Statement of Cash Flow
As of December 31, 2023

Cash Flow from Operating Activities	2023	2022
Net Income	\$ (690,822)	\$ (355,324)
Non-Cash Adjustments	\$ 15,934	
Change in Inventory	\$ 9,853	\$ (4,741)
Prepaid Expenses	\$ (2,500)	\$ (2,026)
Change in Accrued Liabilities	\$ (1,650)	\$ 1,945
Net Cash from Operating Activities	\$ (669,186)	\$ (360,146)
Cash Flow from investing Activities		
Purchase of Assets	\$ (273,903)	\$ (17,872)
Net Cash from investing Activities	\$ (273,903)	\$ (17,872)
Cash flow from Financing Activities		
Paid in Capital	\$ 1,360,955	\$ 849,964
Net Cash from Financing Activities	\$ 1,360,955	\$ 849,964
Net Cash Generated during the Period	\$ 417,866	\$ 471,946
Cash at the beginning of period	\$ 474,600	\$ 2,654
Cash at the end of Period	\$ 892,310	\$ 474,600

Accompanying footnotes are the integral part of the financial Statements

Harmony Turbines, Inc

NOTES TO THE FINANCIAL STATEMENTS

Nature of the Entity:

Harmony Turbines, Inc. is organized under the laws of the state of Pennsylvania. Harmony Turbines, Inc. was originally founded on August 11, 2020. Harmony Turbines, Inc. is working on creating small scale Vertical Axis Wind Turbine products and solutions for home and small business use. Harmony Turbines, Inc. is focusing production on units sized 10kW or less but would license to organizations looking to make larger units for industrial purposes. Harmony Turbines, Inc.'s patented intellectual property encompasses both its proprietary turbine blade and generator designs. Both unique production lines are being developed and manufactured by Harmony Turbines. Harmony Turbines, Inc. is working on creating the first small scale Vertical Axis Wind Turbines that finally make sense for the average homeowner which will be beautiful, low maintenance, safe and efficient. The Harmony Turbines, Inc. is a privately held Pennsylvania corporation headquartered in Lebanon, Pennsylvania.

Going concern and management's plans

The accompanying balance sheet has been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The entity has not commenced principal operations and realized losses every year since inception and may continue to generate losses. The Company's ability to continue as a going concern in the next twelve months following the date the financial statements were available to be issued is dependent upon its ability to produce revenues and/or obtain financing sufficient to meet current and future obligations and deploy such to produce profitable operating results.

Management has evaluated these conditions and plans to generate revenues and raise capital as needed to satisfy its capital needs. No assurance can be given that the Company will be successful in these efforts. These factors, among others, raise substantial doubt about the ability of the Company to continue as a going concern for a reasonable period of time.

The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities.

Risks and uncertainties

The Company has not yet generated a profit from intended operations. The Company's business and operations are sensitive to general business and economic conditions in the U.S., along with local, state, and federal governmental policy decisions. A host of factors beyond the Company's

control could cause fluctuations in these conditions. Adverse conditions may include recession, downturn or otherwise, government policy changes, availability of a qualified human capital, consumer trends in the transportation economy, and negative press. These adverse conditions could affect the Company's financial condition and the results of its operations.

NOTE 2 -SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES GENERAL ACCOUNTING PRACTICES –

Basis of Presentation

The company adheres to GAAP accrual accounting principles, whereby revenue is recognized upon earning and expenses are recorded upon their incurrence, regardless of the timing of cash receipts and payments.

Management actively oversees day-to-day operations and has established an internal control system to monitor the responsibilities of staff across various departments, aimed at safeguarding company assets.

Use of Estimates: The preparation of financial statements in conformity with Generally Accepted Accounting Principles (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses, as well as the disclosure of contingent assets and liabilities. Significant areas where estimation uncertainty exists include:

Depreciation and Amortization: The determination of useful lives and residual values of property, plant, and equipment (PPE), as well as intangible assets, impacts the calculation of depreciation and amortization expenses.

Allowance for Doubtful Accounts: Management's estimation of the allowance for doubtful accounts affects the reported amounts of accounts receivable and the corresponding bad debt expense.

Inventory Valuation: Estimating the net realizable value of inventory and potential obsolescence requires management judgment, impacting the valuation of inventories and cost of goods sold.

Fair Value Measurements: The fair value of financial instruments, investments, and other assets and liabilities involves significant estimation uncertainty, particularly in the absence of quoted market prices.

Income Taxes: Estimation of current and deferred income tax assets and liabilities, including uncertain tax positions, requires management to assess the probability of future taxable income and the application of tax laws and regulations.

Contingent Liabilities: Management evaluates the likelihood and potential magnitude of contingent liabilities arising from pending litigation, environmental remediation, or other uncertain events, impacting the disclosure of such matters in the financial statements.

These estimates and assumptions are inherently subjective and may differ from actual results, leading to adjustments in future periods. Management exercises judgment in determining these estimates based on historical experience, industry trends, and other relevant factors. However, actual results may vary from these estimates, and such variations could have a material impact on the financial position and operating results of the company.

As auditors, we evaluate the reasonableness of these estimates and consider their potential impact on the financial statements, providing assurance on their fairness and compliance with GAAP.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand and cash in checking, savings accounts and Money Market accounts. All unrestricted liquid short-term investments and certificates of deposit with a maturity of three months or less are considered cash equivalents. The Company maintains its cash accounts at major financial institutions that are guaranteed by the Federal Deposit Insurance Corporations ("FDIC") up to \$250,000. The company does not have cash in any bank that is more than \$250,000 and hence all cash is 100% FDIC secured.

Inventories

The inventory account is several purchases of merchandise that were customized for the entity with logos to sell it through website. The merchandise includes t-shirts, hats, mugs and sweatshirts.

Property and Equipment

Property and equipment are stated at cost. Normal repairs and maintenance costs are charged to earnings as incurred and additions and major improvements are capitalized. The cost of assets retired or otherwise disposed of, and the related depreciation are eliminated from the accounts in the period of disposal and the resulting gain or loss is credited or charged to earnings. Depreciation is recorded using the straight-line method, based on useful lives of the assets. Depreciation expense as of December 31, 2023, and 2022, is \$15,934 and 0 respectively.

The Company reviews the carrying value of property and equipment for impairment whenever events and circumstances indicate that the carrying value of an asset may not be recoverable from the estimated future cash flows expected to result from its use and eventual disposition. In cases where undiscounted expected future cash flows are less than the carrying value, an impairment loss is recognized equal to an amount by which the carrying value exceeds the fair value of assets. The factors considered by management in performing this assessment include current operating results, trends, and prospects, the way the property is used, and the effects of obsolescence, demand, competition, and other economic factors. Based on this assessment there was no impairment as of December 31, 2023, and 2022.

Net loss per share

Net earnings or loss per share are computed by dividing net income or loss by the weighted-average number of common shares outstanding during the period, excluding shares subject to redemption or forfeiture. The Company presents basic and diluted net earnings or loss per share.

Income Taxes

The Harmony Turbines, Inc. is subject to corporate income and state income taxes in the state it does business. A deferred tax asset as a result of net operating losses (NOL) has not been recognized due to the uncertainty of future positive taxable income to utilize the NOL. Due to the recently enacted Tax Cuts and Jobs Act, any NOLs will be limited to 80% of taxable income generated in future years.

Total Net operating loss as of December 31, 2023, and December 31, 2022, is \$1,221,836 and 530,859.

Concentration of Credit Risk

The Company maintains its cash with a major financial institution located in the United States of America which it believes to be creditworthy. Balances are insured by the Federal Deposit Insurance Corporation up to \$250,000. As of December 31, 2023, and December 31, 2022, entity's cash balance in any bank account was not more than FDIC insured limit of \$250,000.

Revenues

ASC Topic 606, "Revenue from Contracts with Customers" establishes principles for reporting information about the nature, amount, timing, and uncertainty of revenue and cash flows arising from the entity's contracts to provide goods or services to customers.

Revenues are recognized when control of the promised goods or services are transferred to a customer, in an amount that reflects the consideration that the Company expects to receive in exchange for those goods or services. The Company applies the following five steps to determine the appropriate amount of revenue to be recognized as it fulfills its obligations under each of its agreements:

- 1) Identify the contract with a customer
- 2) Identify the performance obligations in the contract
- 3) Determine the transaction price
- 4) Allocate the transaction price to performance obligations in the contract
- 5) Recognize revenue as the performance obligation is satisfied.

As of December 31, 2023, and December 31, 2022, the Company didn't generate any revenue from the main line of business.

Advertising and Promotion

Advertising and promotional costs are expensed as incurred. Advertising and promotional expenses for the years ended December 31, 2023, and December 31, 2022, are \$98,156 and \$115,682, respectively which is included in sales and marketing expenses.

Fair Value of Financial Instruments

The carrying value of the Company's financial instruments included in current assets, and current liabilities (such as cash and cash equivalents, restricted cash and cash equivalents, accounts receivable, accounts payable, and accrued expenses approximate fair value due to the short-term nature of such instruments).

The inputs used to measure fair value are based on a hierarchy that prioritizes observable and unobservable inputs used in valuation techniques. These levels, in order of highest to lowest priority, are described below:

Level 1—Quoted prices (unadjusted) in active markets that are accessible at the measurement date for identical assets or liabilities.

Level 2—Observable prices that are based on inputs not quoted on active markets but corroborated by market data.

Level 3—Unobservable inputs reflecting the Company's assumptions, consistent with reasonably available assumptions made by other market participants. These valuations require significant judgment.

COVID-19

The outbreak of Novel Coronavirus (COVID 19) continues to progress and evolve. Therefore, it is challenging now, to predict the full extent and duration of its business and economic impact. The extent and duration of such impacts remain uncertain and dependent on future developments that cannot be accurately predicted at this time, such as the transmission rate of the coronavirus and the extent and effectiveness of containment actions taken. Given the ongoing economic uncertainty, a reliable estimate of the impact cannot be made at the date of authorization of these financial statements. These developments could impact our future financial results, cash flows and financial condition however the management of the Company was hopeful that it will not significantly impact the business of the Company.

Recently Issued and Adopted Accounting Pronouncements

FASB issued ASU No. 2019-02, leases, that requires organizations that lease assets, referred to as "lessees", to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases with lease terms of more than twelve months. ASU 2019-02 will also require disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases and will include qualitative and quantitative requirements. The new standard is effective for fiscal years beginning after December 15, 2021, and early application is permitted. We are currently evaluating the effect that the updated standard will have on financial statements and related disclosures.

The FASB issues ASUs to amend the authoritative literature in ASC. There have been a few ASUs to date, including those above, that amend the original text of ASC. Management believes that those issued to date either (i) provide supplemental guidance, (ii) are technical corrections, (iii) are not applicable to us or (iv) are not expected to have a significant impact on our financial statements.

Property and Equipment

Property and Equipment consist of Furniture and Fixture, Machinery and Equipment, vehicle and leasehold improvements. As of December 31, 2023, cost and depreciation is below:

Furniture and Fixtures	\$ 5,458
Machinery and Equipment	\$ 129,614
Vehicles	\$ 15,150
Leasehold Improvements	\$ 142,287
Less	
Accumulated Depreciation	\$ (15,934)
Non-Current Assets (Net)	\$ 276,575

Property, plant and equipment are stated at cost, if purchased or fair value on date of contribution. Depreciation and amortization are computed on a straight-line basis over the estimated useful life of the asset. Capitalization costs incurred in connection with ongoing capital projects are recorded as systems and construction in progress. These costs will be reclassified into categories and depreciated once placed in service. Expenditures for normal maintenance and repairs are charged to expense. The estimated useful lives by asset class are as follows:

	Years
Buildings	25-50
Buildings improvements	10
Vehicles	5
Furniture and office equipment	5
Software and computer equipment	3-5

Related Party Transactions

Company follows ASC 850, "Related Party Disclosures," for the identification of related parties and disclosure of related party transactions. No transactions require disclosure.

Capitalization and Equity Transactions

As of December 31, 2023, Total Common stock issued and outstanding is 10,000,000.

Preferred stock

As of December 31, 2023, Total Preferred stock issued and outstanding is 3,369,603.

Equity Offerings

The entity has raised approximately \$2.4 Million from various investors through Preferred non-voting Reg CF Offering.

Contingencies

The Company's operations are subject to a variety of local and state regulations. Failure to comply with one or more of those regulations could result in fines, restrictions on its operations, or losses of permits that could result in the Company ceasing operations.

Litigation and Claims

From time to time, the Company may be involved in litigation relating to claims arising out of operations in the normal course of business. As of December 31, 2023, the company was not aware of any pending or threatened lawsuits that could reasonably be expected to have a material effect on the results of the Company's operations.

Going Concern

The accompanying balance sheet has been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The entity has not commenced principal operations and realized losses every year since inception and may continue to generate losses. The Company's ability to continue as a going concern in the next twelve months following the date the financial statements were available to be issued is dependent upon its ability to produce revenues and/or obtain financing sufficient to meet current and future obligations and deploy such to produce profitable operating results. Management has evaluated these conditions and plans to generate revenues and raise capital as needed to satisfy its capital needs. No assurance can be given that the Company will be successful in these efforts. These factors, among others, raise substantial doubt about the ability of the Company to continue as a going concern for a reasonable period of time. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities..

Subsequent Events

The Company considers events or transactions that occur after the balance sheet date, but prior to the issuance of the financial statements to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure. Subsequent events have been evaluated through May 06, 2024, which is the date the financial statements were issued.

Harmony Turbines, Inc.
Supplementary Schedule
General and Administrative Expenses
As of December 31, 2023

Software	\$ 1,506
Workers Compensation	\$ 2,201
Advertising	\$ 98,156
Promotional Gifts	\$ 1,549
Bank Service Charges	\$ 38
StartEngine Fees	\$ 107,812
Merchant Fees	\$ 177
Accounting Fees	\$ 872
Equipment: Safety	\$ 282
Recruiting Expenses	\$ 106
Professional Fees	\$ 75
Patent Expenses	\$ 400
Meals: Staff	\$ 1,027
Meals: Clients	\$ 288
Product Discounts	\$ 28
Postage and Delivery	\$ 3,297
Moving	\$ 6,739
Shipping: Online Store	\$ 259
Business License and Fees	\$ 495
Grant Writing	\$ 2,723
Liability Insurance	\$ 3,699
Property Insurance	\$ 3,045
Legal Fees	\$ 1,936
Uniforms	\$ 475
Building: Utilities	\$ 4,718
Automobile: Fuel & Oil	\$ 1,437
Supplies: Office	\$ 3,870
Supplies: Computer	\$ 2,035
Equipment: Small Shop Appliances	\$ 4,117
Small Furniture Expense	\$ 4,673
Equipment: Small Computer	\$ 495
Supplies: Shop	\$ 25,529
Building: Repairs and Maintenance	\$ 3,548
Supplies: Machine Tooling	\$ 11,740
Research & Development	\$ 15,505
Building: Rent	\$ 25,428
Lease Expense	\$ 159
Equipment: Repairs and Maintenance	\$ 1,690
Equipment: Fuel	\$ 154
Wages and Salaries	\$ 298,504
Payroll Tax Expense	\$ 23,746
Training and Conferences	\$ 1,000
Telephone and Internet	\$ 3,226
Travel & Mileage	\$ 226
Depreciation	\$ 15,934
Employee Benefits	\$ 24,373

EXHIBIT C TO FORM C

PROFILE SCREENSHOTS

[See attached]

1 DAY LEFT ⓘ

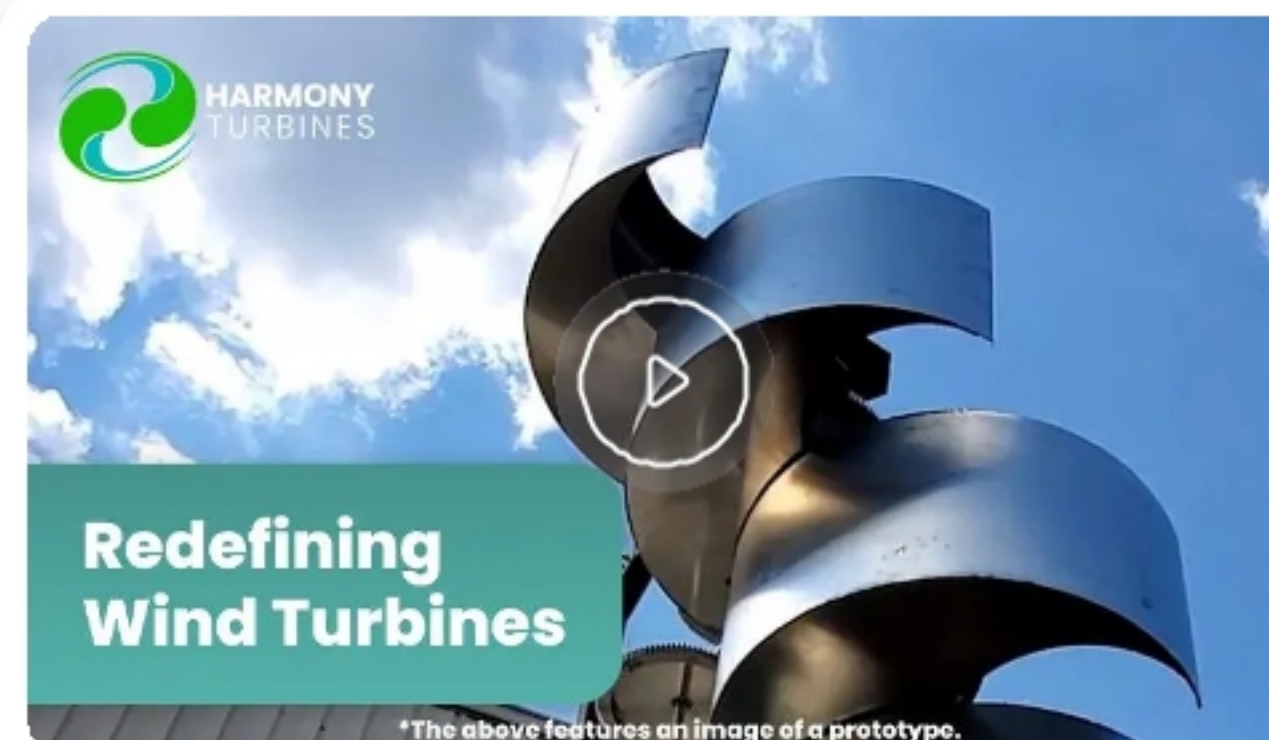
GET A PIECE OF HARMONY TURBINES

Changing Everything About Wind Turbines

At Harmony Turbines, we are working to develop leading-edge residential and small-scale wind turbine systems that stand out in the crowd. A superior wind turbine that we aim to have work in nearly all wind conditions.

[Show less](#)[Get Equity](#)

This Reg CF offering is made available through StartEngine Primary, LLC. This investment is speculative, illiquid, and involves a high degree of risk, including the possible loss of your entire investment.

**\$277,967.83 Raised**[OVERVIEW](#)[ABOUT](#)[TERMS](#)[UPDATES](#)[REWARDS](#)[DISCUSSION](#)[INV >](#)

REASONS TO INVEST



With both our patented furling mechanism and variable air-gap axial flux generator technology - we believe that Harmony Turbines has what it takes to become the next global standard in residential and small-scale wind power generation.



Entering an existing but underdeveloped space, our goal is to be one of the first to bring wide-scale use of residential and small-scale wind turbines to an estimated \$3.46 Billion market.*



With increased world awareness of fuel usage & failing power infrastructure, additional alternative energy sources are crucial. Reliable small-scale wind and solar solutions will be key to this movement worldwide.

*The Company estimated the market based on internal analysis of the total addressable residential, marine, and recreational vehicles market. Please see more details on our offering page.

TEAM



Christopher Moore • CEO & President

Entrepreneur, inventor, & tinkerer, Chris has worked as a programmer for nearly 30 years and on the side has been working with clean energy technologies for 26+ years, working with gravity engines, hydroxy, pulse motors, and electromagnetic technologies. Chris's dream has always been to help make the world and our lives better than they are today.

[Read Less](#)

Get Equity

\$1.50 Per Share

PREVIOUSLY CROWDFUNDED ⓘ

\$2,338,571.54

RAISED ⓘ

\$277,967.83

INVESTORS

270

MIN INVEST ⓘ

\$199.50

VALUATION

\$20.06M



Most Momentum

Top 15 in amount raised last 72 hours

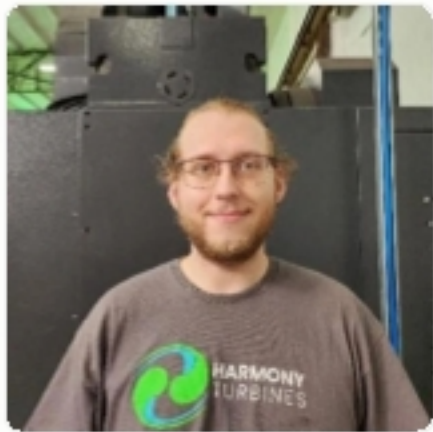
What does this badge mean? [See here](#)

**Cheryl Moore • COO, Secretary & Treasurer**

Cheryl has amassed over 25 years of office, human resources, information technology, and analytics experience. She has a MS in Information Systems and a BS in Human Resources. She has previously run two other businesses where she gained legal, tax, and various other business operational experiences.

[Read Less](#)**Jeremy Good • CAM / CNC Machining Lead**

Jeremy is a CNC Programmer with over 20 years of experience in the trade. Constantly exploring new ideas and methods, he is always ready for the next challenge. He is looking forward to exploring the infinite possibilities at Harmony. Jeremy is a full-time employee.

[Read Less](#)**Dallas Heblow • Shop Assistant**

Dallas has a 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. Dallas is a full-time employee.

[Read Less](#)**Hannah Salmeron • Assistant Office Manager**

Hannah is a proud wife and mother of two, soon to be three boys. She is thrilled to embark on this new adventure with Harmony. With a strong commitment to personal and professional growth, she is eager to expand her skill set and contribute to the ongoing success of the company. Hannah is a full-time employee.

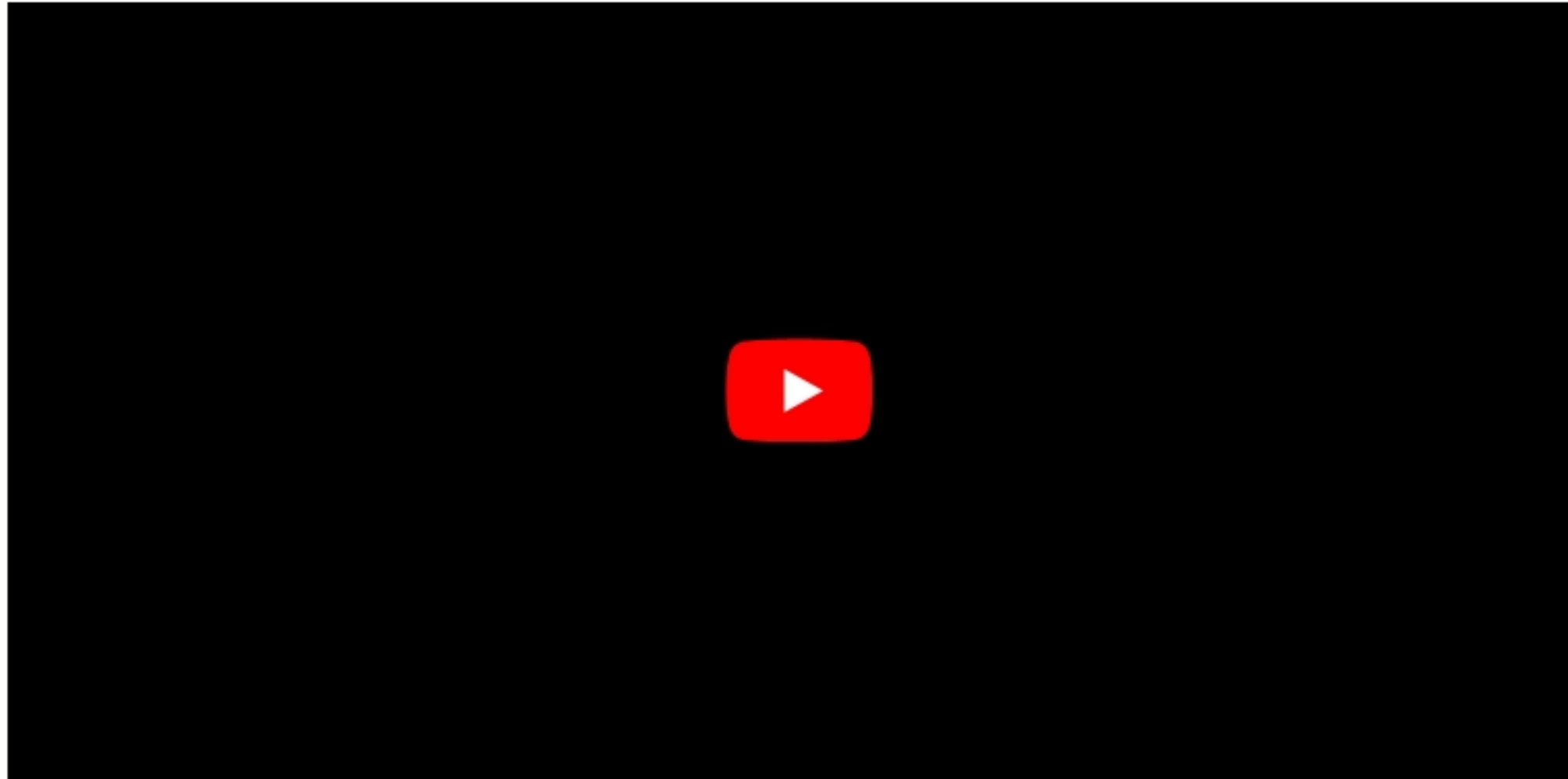
[Read Less](#)**Bryan Lim • Electronics Engineer**

Bryan is a newly graduated electrical engineer who brings fresh perspectives to the field of product development. While he is just starting his career, Bryan is eager to apply his knowledge and enthusiasm to various phases of engineering projects. His recent academic experience has equipped him with the skills to innovate and contribute to the industry.

[Read Less](#)[Show Less](#)

THE PITCH

Small-Scale Wind Turbine Systems That Make Sense



At Harmony Turbines, it's no coincidence that we take inspiration from the Yin and Yang symbol when it comes to our wind turbine technology. That's because we are founded on the concept of working in a balance with nature - not against it. With the focus on convenience, ease of use, features, and cost, our goal is to become the next global standard in residential and small-scale wind power generation. Due to our advanced furling system, we feel our units will not only withstand a greater range of forces from nature, producing full power during high wind events, but that they will do it in style, being beautiful, silent in operation, and posing no danger to people or wildlife.



*The above features an image of a prototype.

With our intuitive and affordable technology, Harmony Turbines is here to redevelop small-scale wind turbines from the ground up. We are currently in the prototyping stage of development.

THE PROBLEM & OUR SOLUTION

A New Spin, Making Wind Power Accessible To Everyone

The Problem with Small Wind Turbines

Small wind turbines have yet to become widespread due to several key challenges:



**Prohibitively
Expensive**



**Low Return on
Investment**



**Unattractive
and Noisy**



**Regulatory
Hurdles**

We see ourselves as the "smartphone" of small-scale and residential wind turbines in an age where everyone else is still in the suitcase and bag-phone era, severely outdated!

Current residential wind turbines tend to be incredibly expensive, unsightly, noisy, and prone to destruction in severe weather. Not only do we think Harmony Turbines will be a more affordable, quieter, and sleeker solution, but our new furling technology will protect our units in high winds that shut down or destroy competing technologies.

We are developing what we believe to be superior wind turbine products that can work in nearly all wind conditions.

What makes us unique is our patented furling system protecting our turbines while producing full power through high winds....

400w Prototype Fully Open



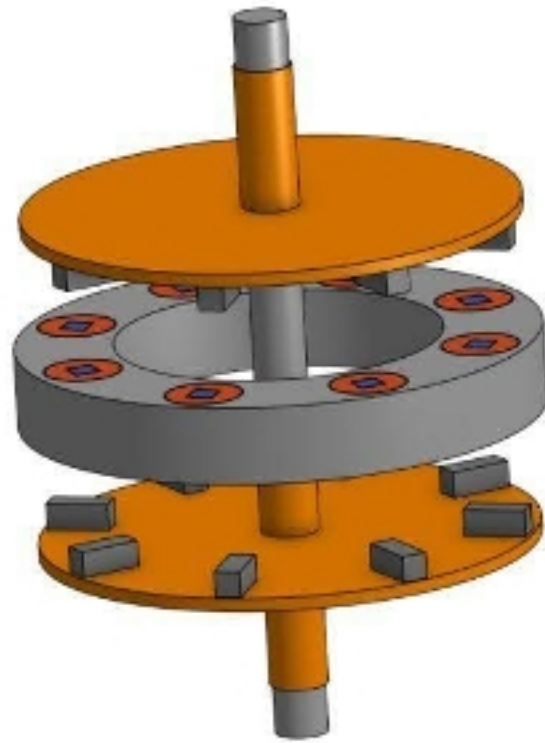
400w Prototype Partly Open



The above features an image of a prototype.

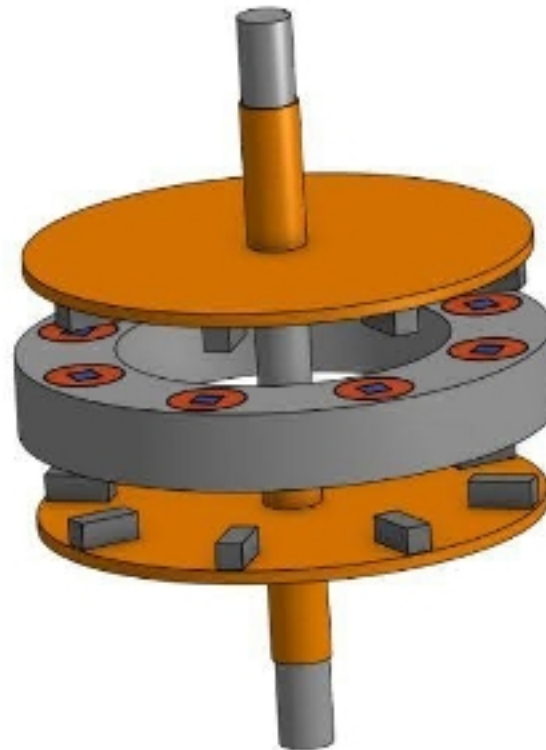
And our variable air-gap axial flux generator design, which should allow wind turbines to self-start at very low wind speeds, while still producing high power output during normal operation.

Maximum Air-Gap



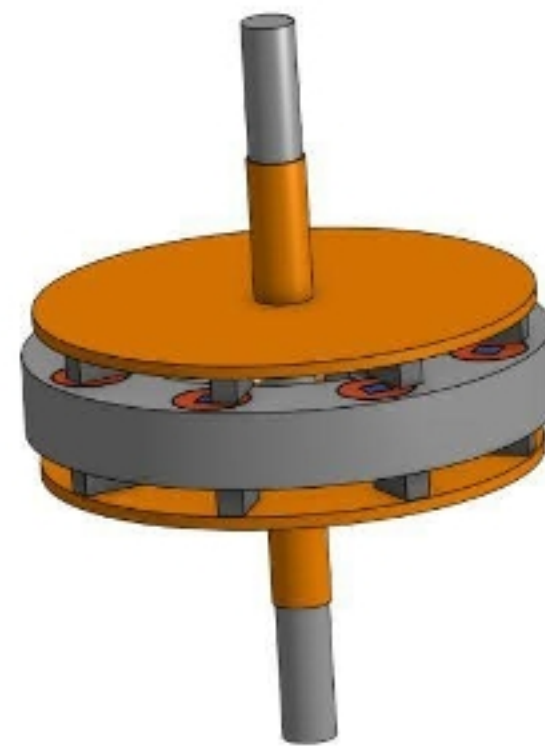
Generator starts with maximum air-gap to avoid [startup cogging](#) and electromagnetic lockup

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

Why a Savonius turbine design? Isn't that inferior to a horizontal axis wind turbine design?

It's understandable that there's a lot of confusion surrounding this topic. When you do an internet search for "wind turbine efficiencies," most of the time you find a graph showing Savonius turbines with the lowest ratings. The magic of the internet makes people think just because they found a quick answer that it's the RIGHT answer.

However, that isn't always true. In this case, if you dig deeper in your search, you'll find a variation to the graph, showing Savonius turbines with higher ratings. It seems two little lines in the graph were switched in some publications back in the 1950's or 60's, and [the incorrect graph continued to be published for decades](#).

Harmony Turbines hopes to RIGHT this WRONG! Our discussions with our partner engineering universities confirmed that they are also aware of this discrepancy in the graphs and have been teaching their students about this mishap for years. So Savonius Turbines are definitely something worth looking into. It's why we are eager to see the data that OUR patented design brings to the table. Click this link to see the graphs and explanations of the discrepancies: [Incorrect Graphs Savonius Design](#).

You've probably heard wind turbines are noisy. But they don't have to be. Listen for yourself!

Will Harmony Turbines power a home?

Now that's a loaded question that isn't easily answered. Wind, just like solar, is a variable resource. The sun isn't always at the perfect angle in a cloud-free sky. Likewise, the wind isn't always blowing at the exact same speed. Power generation will fluctuate and be dependent on your environmental circumstances. Using a "buffer" such as an on-site storage system, will help maximize the amount of power available for use in a home. While one Harmony Turbine would likely not produce enough electricity to power a home, we believe it could noticeably offset a homeowner's electrical costs.

What about placing multiple turbines near each other?

In April 2021 [Oxford University published an article](#) theorizing that vertical axis wind turbines, if placed closely together, could increase each other's performance by up to 15%. We believe multiple Harmony Turbines, like any other vertical-axis wind turbine, could be placed closely together to provide a higher level of efficiency. We plan to test this theory down the road in our BETA testing phase.

It really comes down to ROI (Return on Investment) for Harmony Turbines customers.

If we're able to sell our units at a price which gives the customer a good ROI, then in the end they will be a happy customer. We plan on doing everything we can to minimize costs as we move into production with our units.

THE MARKET & OUR TRACTION

Addressing an Estimated \$3.46 Billion Market

\$3.46 Billion

Estimated Total Addressable Market (TAM) in the U.S.



Residential

Potential market based on a 3% adoption rate among 22.6M homes



Marine

Potential market based on a 5% adoption rate among 11.8M registered boats



Rec. Vehicles

Potential market based on a 1% adoption rate among 11M registered RV

Through our revolutionary turbine technology, we aim to set a new standard in these markets. So far, we feel we are well on our way to bringing about that disruption.

We raised over \$2.3 million in crowdfunding.

With two granted patents, we are finalizing our early production designs.

We are collaborating with Penn State University, Bucknell University, and Northumbria University for data and analytics reports, by incorporating wind tunnel and water tank testing, computational fluid dynamics (CFO) testing, as well as real-world testing.

We are working with representatives from LLNL (Lawrence Livermore National Laboratory) to find government funded grant studies that would be in-line with our technology base.

We've moved Harmony Turbines Headquarters to a larger location, more suitable for low-volume production, and outfitted it with equipment that enables us to make most of our own parts and rapidly

improve or iterate those parts as needed. We've also grown our team to support the future needs of the business.

Famous YouTuber at Harmony Turbines

Here are our next steps...

We took some time over the past year to work on the development of our patented generator design but as that work progressed, we realized that this innovation may be better suited for large turbines since it could add significant cost to our small-scale units. In lieu of taking that route, we opted to purchase several off-the-shelf generators to see if we could find one that will properly handle our turbine's output parameters allowing us to get to market more quickly and affordably. We are in the process of testing those third-party generators now and upon finding a suitable one, we'll move into Alpha Testing with several outdoor turbines at our location. Once the Alpha Testing phase is completed, we will move into our Beta Testing phase with our early adopters. Upon completion of our Beta Testing phase we plan to begin accepting orders for our turbines, moving us into low volume production and eventual profitability.

[Still TBD Podcast - Wind Turbines for Homes - A New Approach \(January 2024\)](#)

WHY INVEST

The Power to Change the World

We believe there are two main ways our products will disrupt the wind turbine industry.

1. Our variable air-gap axial flux generator design should allow wind turbines to self-start at very low wind speeds while still producing high power output during normal operation.
2. Our furling technology is designed to handle high wind situations, allowing our turbines to work even when others are forced to shut down.

HARMONY TURBINES

Disrupting the Industry



Revolutionary Technology

Enables operation in wind speeds as low as 1-2 mph and full power output at significantly lower RPMs

Advanced Furling System

Protects the turbine during high winds while maintaining power generation

*The above features an image of a prototype.

With better battery and storage tech being developed, a new era of decentralized power generation is likely to emerge around the world. We believe reliable small-scale wind and solar solutions will be key to this movement, so our timing to introduce Harmony Turbines to the market couldn't be better.

[Disruptive Investing - Harmony Turbines | The Perfect Small Scale Wind Turbine? \(October 2022\)](#)

Harmony Turbines is planning to incorporate unique features into our products that offer more power and better reliability - giving a potentially better ROI (Return on Investment) over a wider range of wind speeds. Now is the time to invest in sustainable technology making a difference in our society and helping our planet.

**Why wait for
change when
you can BE the
change?**

**Join us as we build a
sustainable future
and help us build a
cleaner, more
resilient energy grid**



ABOUT

HEADQUARTERS

**201 N 5th Avenue, Building 6
Lebanon, PA 17046**

WEBSITE

[View Site](#) 

At Harmony Turbines, we are working to develop leading-edge residential and small-scale wind turbine systems that stand out in the crowd. A superior wind turbine that we aim to have work in nearly all wind conditions.

TERMS

Harmony Turbines

Overview

PRICE PER SHARE

\$1.50

VALUATION

\$20.06M

DEADLINE ⓘ

Oct. 31, 2024 at 6:59 AM UTC

FUNDING GOAL ⓘ

\$15k - \$2.5M

Breakdown

MIN INVESTMENT ⓘ
\$199.50

OFFERING TYPE
Equity

MAX INVESTMENT ⓘ
\$2,499,999

SHARES OFFERED
Preferred Stock

MIN NUMBER OF SHARES OFFERED
10,000

MAX NUMBER OF SHARES OFFERED
1,666,666

Maximum Number of Shares Offered subject to adjustment for bonus shares

SEC Recent Filing	→
Offering Circular	→
Offering Memorandum	→
Financials	^

	Most Recent Fiscal Year-End	Prior Fiscal Year-End
Total Assets	\$1,178,896	\$510,568
Cash & Cash Equivalents	\$892,310	\$474,356
Accounts Receivable	\$0	\$0
Short-Term Debt	\$332	\$1,982
Long-Term Debt	\$0	\$0

Revenue & Sales	\$21,440	\$0
Costs of Goods Sold	\$5,805	\$0
Taxes Paid	\$0	\$0
Net Income	-\$690,822	-\$355,324

Risks



A crowdfunding investment involves risk. You should not invest any funds in this offering unless you can afford to lose your entire investment. In making an investment decision, investors must rely on their own examination of the issuer and the terms of the offering, including the merits and risks involved. These securities have not been recommended or approved by any federal or state securities commission or regulatory authority. Furthermore, these authorities have not passed upon the accuracy or adequacy of this document. The U.S. Securities and Exchange Commission does not pass upon the merits of any securities offered or the terms of the offering, nor does it pass upon the accuracy or completeness of any offering document or literature. These securities are offered under an exemption from registration; however, the U.S. Securities and Exchange Commission has not made an independent determination that these securities are exempt from registration.

**Maximum number of shares offered subject to adjustment for bonus shares. See Bonus info below.*

Investment Incentives and Bonuses*

Time-Based Perks

Early Bird 1: Invest \$20,000+ within the first week | 12% bonus shares

Early Bird 2: Invest within the first 2 weeks | 5% bonus shares

Early Bird 3: Invest within the first 3 weeks | 3% bonus shares

Mid-Campaign Perks (Flash Perks)

Flash Perk 1: Invest \$5,000+ between [day 35 - 40] and receive additional +2% bonus shares

Flash Perk 2: Invest \$5,000+ between [day 60 - 65] and receive additional +2% bonus shares

Amount-Based Perks

Tier 1 Perk: Invest \$1,000+ and receive 2% bonus shares

Tier 2 Perk: Invest \$2,500+ and receive 4% bonus shares

Tier 3 Perk: Invest \$5,000+ and receive [recognition in a youtube update video] + 6% bonus shares

Tier 4 Perk: Invest \$10,000+ and receive [recognition in a youtube update video and have a tree planted in your name] + 8% bonus shares

Tier 5 Perk: Invest \$20,000+ and receive [recognition in a youtube update video, have a tree planted in your name and receive a special edition laser engraved keychain] + 10% bonus shares

Tier 6 Perk: Invest \$100,000+ and receive [recognition in a youtube update video, have a tree planted in your name, receive a special edition laser engraved keychain and enjoy a 30-minute zoom call with the founders] + 10% bonus shares

Loyalty Bonus

As you are a previous investor in Harmony Turbines, you are eligible for additional bonus shares. (3%)”

**Perks will be fulfilled after the close of the campaign*

**In order to receive perks from an investment, one must submit a single investment in the same offering that meets the minimum perk requirement. Bonus shares from perks will not be granted if an investor submits multiple investments that, when combined, meet the perk requirement. All perks occur when the offering is completed.*

Crowdfunding investments made through a self-directed IRA cannot receive non-bonus share perks due to tax laws. The Internal Revenue Service (IRS) prohibits self-dealing transactions in which the investor receives an immediate, personal financial gain on investments owned by their retirement account. As a result, an investor must refuse those non-bonus share perks because they would be receiving a benefit from their IRA account.

The 10% StartEngine Venture Club Bonus

Harmony Turbines Inc. will offer 10% additional bonus shares for all investments that are committed by investors that are eligible for the StartEngine Venture Club. This means eligible StartEngine shareholders will receive a 10% bonus for any shares they purchase in this offering. For example, if you buy 100 shares of Preferred Stock at \$1.50 / share, you will receive 110 shares of Preferred Stock, meaning you’ll own 110 shares for \$150.00. Fractional shares will not be distributed and share bonuses will be determined by rounding down to the nearest whole share. This 10% Bonus is only valid during the investor’s eligibility period. Investors eligible for this bonus will also have priority if they are on a waitlist to invest and the company surpasses its maximum funding goal. They will have the first opportunity to invest should room in the offering become available if prior investments are canceled or fail. Investors will receive the highest single bonus they are eligible for among the bonuses based on the amount invested and the time of offering elapsed (if any). Eligible investors will also receive the Venture Club bonus and the Loyalty Bonus in addition to the aforementioned bonus.

Irregular Use of Proceeds

The Company might incur Irregular Use of Proceeds that may include but are not limited to the following over \$10,000: Vendor payments and salary made to one's self, a friend or relative.

NEW UPDATES

10.28.24

Performance data ...its finally here!

It's finally here, as you know we've been working hard over these past 2 months to get our data gathering system online. We've been machining couplers and mounting brackets, testing various generators, gear ratios and electrical resistance loads sometimes daily over these many weeks. We've done several videos

for you to see those processes and improvements to our data acquisition systems. Well it all came together for us on October 14th, 2024 when we FINALLY had a nice windy day and the very important ability to properly capture Harmony's performance data. Here in Central Pennsylvania, these days do NOT come often but this time we were ready! Performance gathering for Harmony should only get better and more accurate from here on out.

We wanted our first public release of performance data to be in natural wind and not something gathered from driving down the road (making our own wind) because that very process skews the data. It's been a long time coming but we've always said that we will share our data, good or bad, with our community as soon as we are able to do so. So without further delay we are proud to finally begin that process. Please enjoy the video.



If you're interested in helping us on our journey, please spread the word about Harmony Turbines to your friends and family! And if you're interested in becoming part-owner, you can find out all the information about investing (\$200.00 minimum) here: <https://startengine.com/harmony-turbines>.

As always, we are so very grateful for YOU, our community of supporters and investors. Thank you for your continued interest in the development of our Harmony Turbines!

Sincerely,
~The Harmony Turbines Team

To learn more about us, please visit these links:

- <https://HarmonyTurbines.com>
- What Makes Harmony Unique: https://youtu.be/WWcg95kHw_o
- (NEW!) Two Bit da Vinci's "This Could CHANGE Home Wind Energy Forever!" (Oct 2024): <https://youtu.be/AyF0td7oygM?si=YMUJXqMufEDFG6tv>
- Matt Ferrell's "Wind Turbines for Homes - A New Approach" (Jan 2024): <https://youtu.be/J7TwdTFxbpg?si=juEb2YYhO74hY5su>

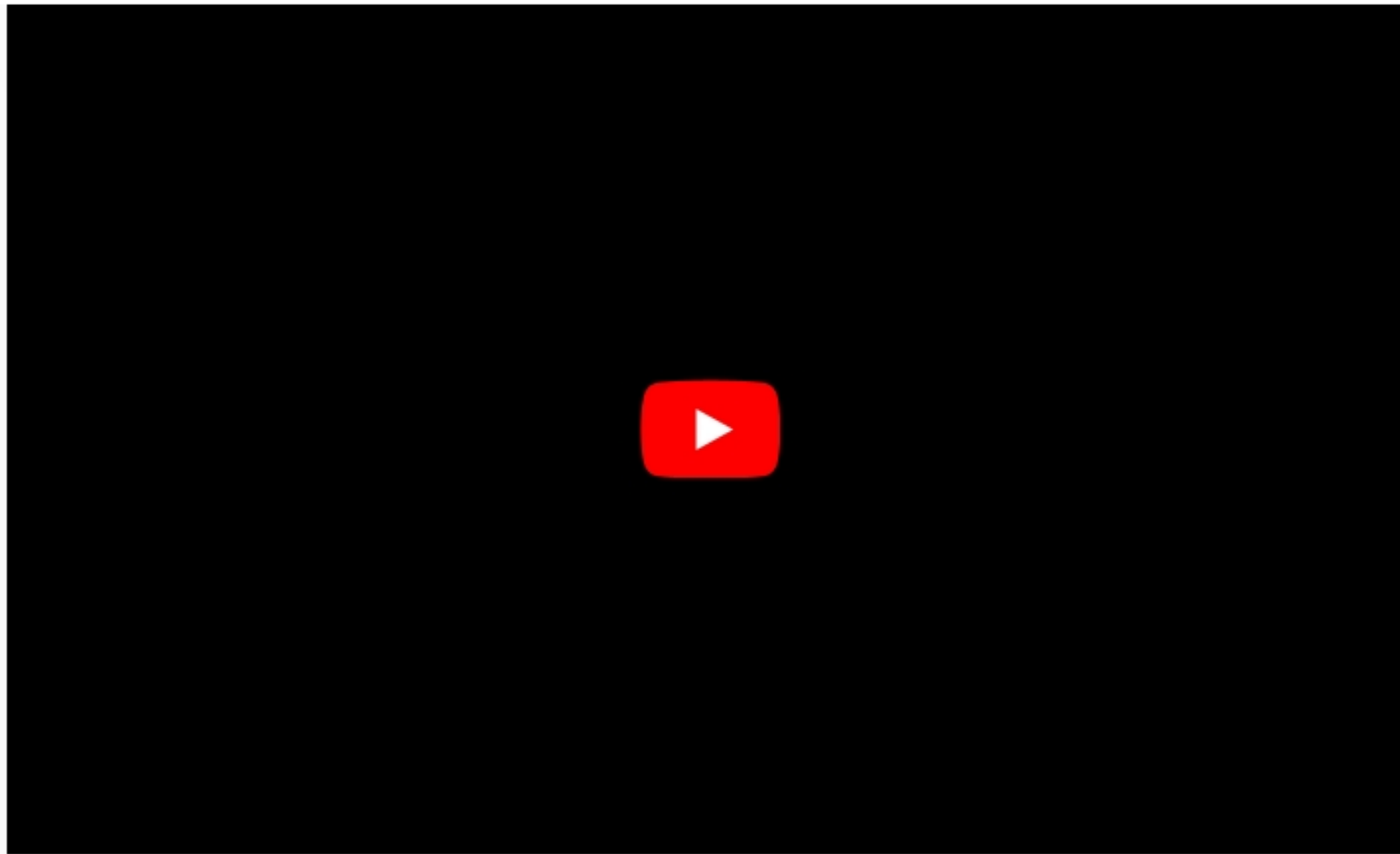
- Building HVAC Science's "Reinventing Wind Power: Inside the World of Harmony Turbines" (Sept 2024) <https://tinyurl.com/Building-HVAC-Science>
- Now You Know's "Harmony Turbines - The Perfect Small Scale Wind Turbine?" (Fall 2022): <https://youtu.be/p4dfGDPUsGM>
- Pitch Deck: <https://tinyurl.com/HarmonyTurbinesPitchDeck>

ALL UPDATES

10.24.24

Famous YouTuber at Harmony Turbines Headquarters?

Several weeks ago we had the pleasure of hosting Ricky Roy and team from [Two Bit da Vinci](#) here at Harmony Turbines Headquarters. What a great day of camaraderie and tech talk. We enjoyed getting to know them and also educating them about wind power, the solution we're building and the challenges we face in our development and as a startup. Check out the video he published on Harmony Turbines and our tech!





Thank you for continuing to follow our journey! And for those of you who have supported us through investments and/or donations, we thank you for sharing in our mission in a very real way.

Sincerely,
~The Harmony Turbines Team

Want a Piece of Harmony Turbines? **Click to Invest Now!**

To learn more about us, please visit these links:

- <https://HarmonyTurbines.com>
- What Makes Harmony Unique: https://youtu.be/WWcg95kHw_o
- **(NEW!)** Two Bit da Vinci's "This Could CHANGE Home Wind Energy Forever!" (Oct 2024): <https://youtu.be/AyF0td7oygM?si=YMUJXqMufEDFG6tv>
- Matt Ferrell's "Wind Turbines for Homes - A New Approach" (Jan 2024): <https://youtu.be/J7TwdTFxbpg?si=juEb2YYh074hY5su>
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- Now You Know's "Harmony Turbines - The Perfect Small Scale Wind Turbine?" (Fall 2022): <https://youtu.be/p4dfGDPUsgM>
- Pitch Deck: <https://tinyurl.com/HarmonyTurbinesPitchDeck>

10.23.24

We Put Harmony Turbines in Chains!

Here at Harmony Turbines we are on the path to collecting as much data as we can with our turbines, whether we test in a strong natural wind (which is rare here in south central PA) or if we create our own wind by taking the turbine(s) out for a ride in our truck. Regardless, when we find a potentially easier way to DO our testing, we take some time to try it out and see if it works. Let's take a deep dive with Chris, for just a few minutes, to look more closely at the new testing improvements we've made to simplify our gear ratio testing!

Also, if you wait until the end, we share a Very Important SNEAK PEEK of our next video where we plan to, for the FIRST TIME EVER, share some raw footage and performance data of natural wind testing we did on October 14th!



We appreciate each and every one of you. Thank you for your continued support and interest in our development! Please stay tuned for more!

Sincerely,
~The Harmony Turbines Team

Why wait for change, when you can BE the change?
Invest Today!

To learn more about us, please visit these links:

- <https://HarmonyTurbines.com>
- What Makes Harmony Turbines Unique: https://youtu.be/WWcg95kHw_o
- **(NEW!)** Solving the Home Wind Power Problem! (Oct 2024): <https://youtu.be/AyF0td7oygM?si=cOC6ccrACjnzwxv>
- Still TBD Podcast (Jan 2024): <https://youtu.be/J7TwdTFxbpg?si=juEb2YYhO74hY5su>
- Building HVAC Science Podcast (Sept 2024) <https://www.buildinghvacscience.com/ep183-reinventing-wind-power-inside-the-world-of-harmony-turbines-august-2024/>
- Now You Know Interview (Fall 2022): <https://youtu.be/p4dfGDPUsgM>
- Pitch Deck:
<https://harmonyvawt.com/Documents/Harmony%20Turbines%20Pitch%20Deck.pdf>

10.16.24

Back Seat Shenanigans that will Shock You!

We bet you're dying to know what happens in the back seat of our truck! (wink wink) Don't worry, there's nothing dirty here, but what we DO present in this video is VERY exciting. We give you a quick tour of our Mobile HTHQ (Harmony Turbines Headquarters) and show you how we've fine-tuned the way we collect our data while truck testing. More to come on those results soon!



Thank you for continuing to follow our journey! We appreciate each and every one of you.

Sincerely,

~The Harmony Turbines Team

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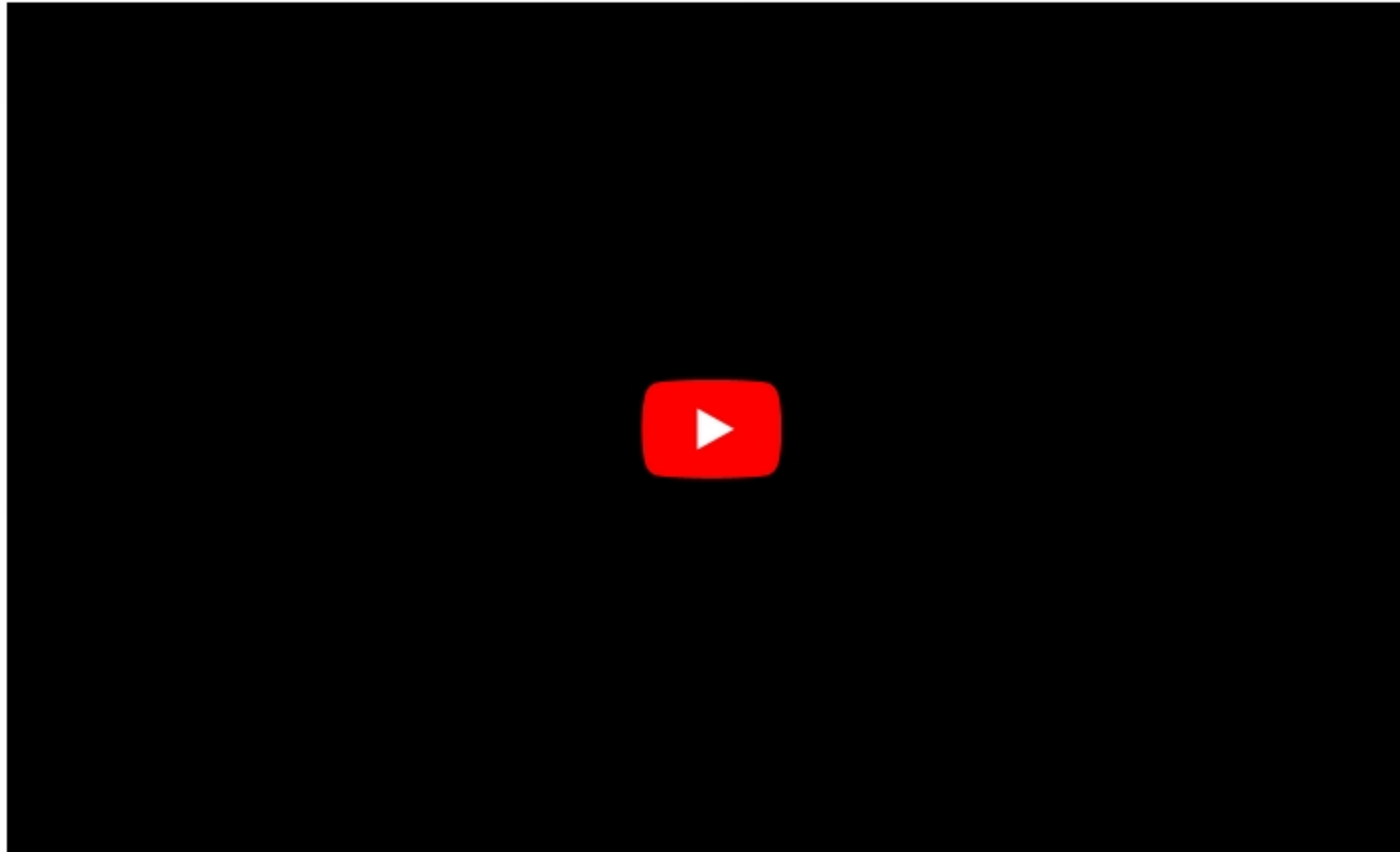
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10.10.24

Drill Press Meets Wind Turbine

Why would we put one of our Harmony wind turbines up against a drill press? Well, that's not exactly the match-up, however using a drill press as part of our testing process has proven to be quite helpful. Watch this video as Chris takes a deeper dive into our electrical load resistance testing.



As always, we are so very grateful for YOU, our community of supporters and investors. Thank you for your continued interest in the development of our Harmony Turbines!

Sincerely,
~The Harmony Turbines Team

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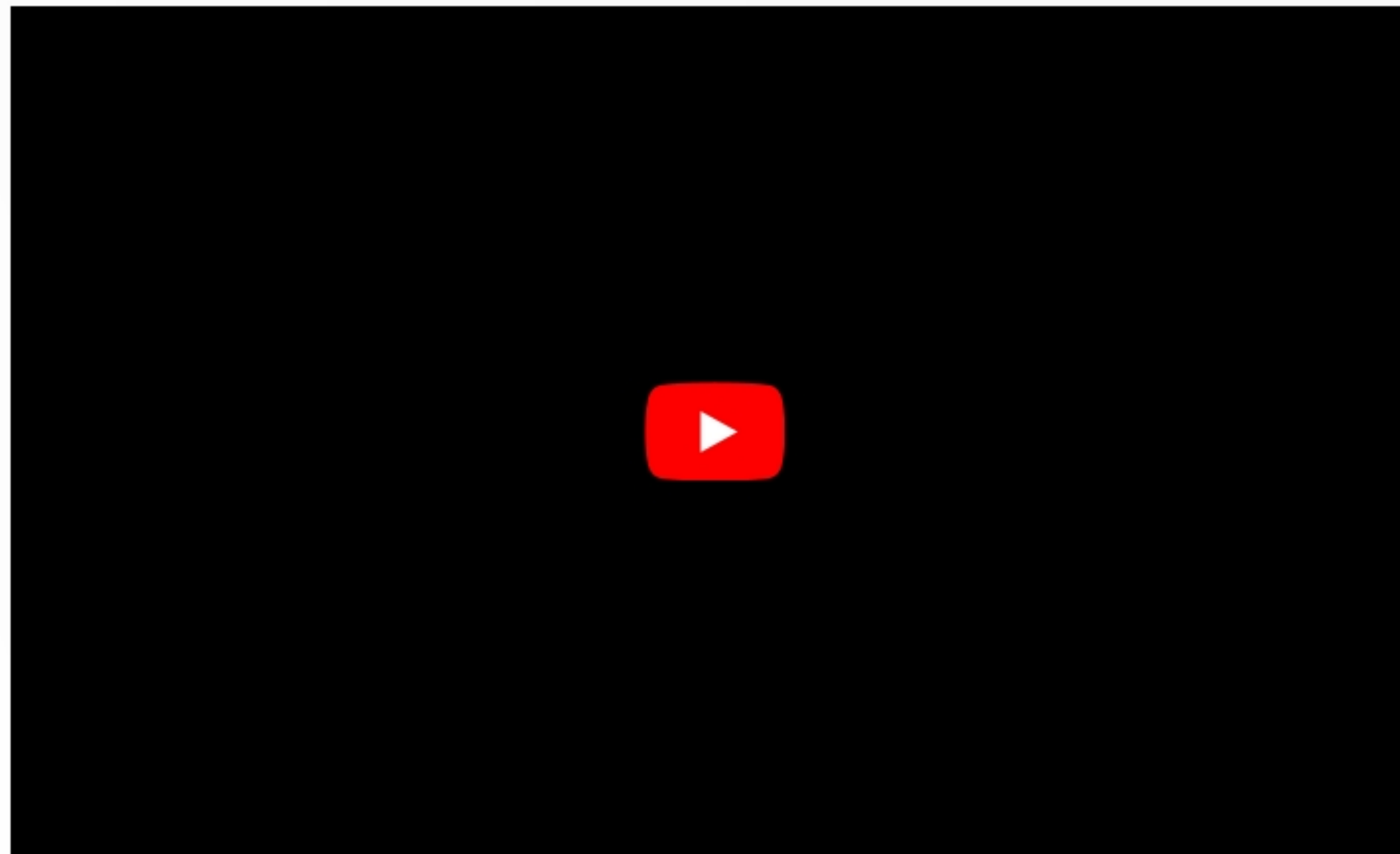
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10.07.24

This Wind Turbine Practically Builds Itself!

Greetings from Harmony Turbines! One of the things we've been working on in tandem with our generator testing, is improving the time it takes to both assemble our frames and also install our scoop sets into the frames. Watch this video for some fun timelapse footage and some quick insight into why assembly time remains part of our focus.



We hope you are as excited about these improvements as we are! Assembly time may not feel like an important part of development, but in the future when we're ready to build these for you, the effort we're

putting forth now will have been completely worthwhile.

We wouldn't be here without YOU, our community, so thank you for your continued support and interest in our development!

Sincerely,

~The Harmony Turbines Team

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10.03.24

Can a 2-scoop VAWT array outperform 8? You decide!

Greetings from Harmony Turbines! We recently assembled our first prototype featuring our new single scoop array! Please watch this short video as we share this new design with you and talk about why we're testing it and what our next steps are.



We hope you're as excited about this new design as we are. We believe there is a lot of potential in this version. We hope that after watching, you agree. We'll continue testing various generators as we look for the best one to pair with our low-RPM wind turbines. Once we accomplish this, we'll be able to move into Alpha and then later Beta testing phases. How exciting!

Thank you for continuing to follow our journey! And for those of you who have invested, we thank you for sharing in our mission in a very real way.

Sincerely,
~The Harmony Turbines Team

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Generator Testing in Progress!

Hello from the team here at Harmony Turbines!

Today we're providing a quick update for you regarding our progress with our generator testing. In this video, Chris takes a few minutes to explain our current methods for determining if any of the 3rd party generators we purchased will be a good match for our Harmony Turbines.



We're excited about our progress and enjoy sharing the journey with you. As always, thank you for your continued support and interest in our development! We wouldn't be here without you and we're so very grateful for YOU, our community.

Sincerely,
~The Harmony Turbines Team

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Pitch Deck: <https://harmonyvawt.com/Documents/Harmony%20Turbines%20Pitch%20Deck.pdf>

09.16.24

New Podcast Published about Harmony Turbines!

Happy September! We continue testing various generators and will have more on that later this week. In the meantime we'd like share this exciting podcast with you that was recently published. Thank you to Bill Spohn and Eric Kaiser for hosting us; they are great guys who asked us really thoughtful questions and were a lot of fun to talk with. Check it out!

<https://www.buildinghvacscience.com/ep183-reinventing-wind-power-inside-the-world-of-harmony-turbines-august-2024/>

SEPT. 13, 2024

EP183 Reinventing Wind Power: Inside the World of Harmony Turbines (August 2024)



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In this episode of the Building HVAC Science Podcast, hosts Eric Kaiser and Bill Snohn are joined by Chris and Cheryl Moore, the

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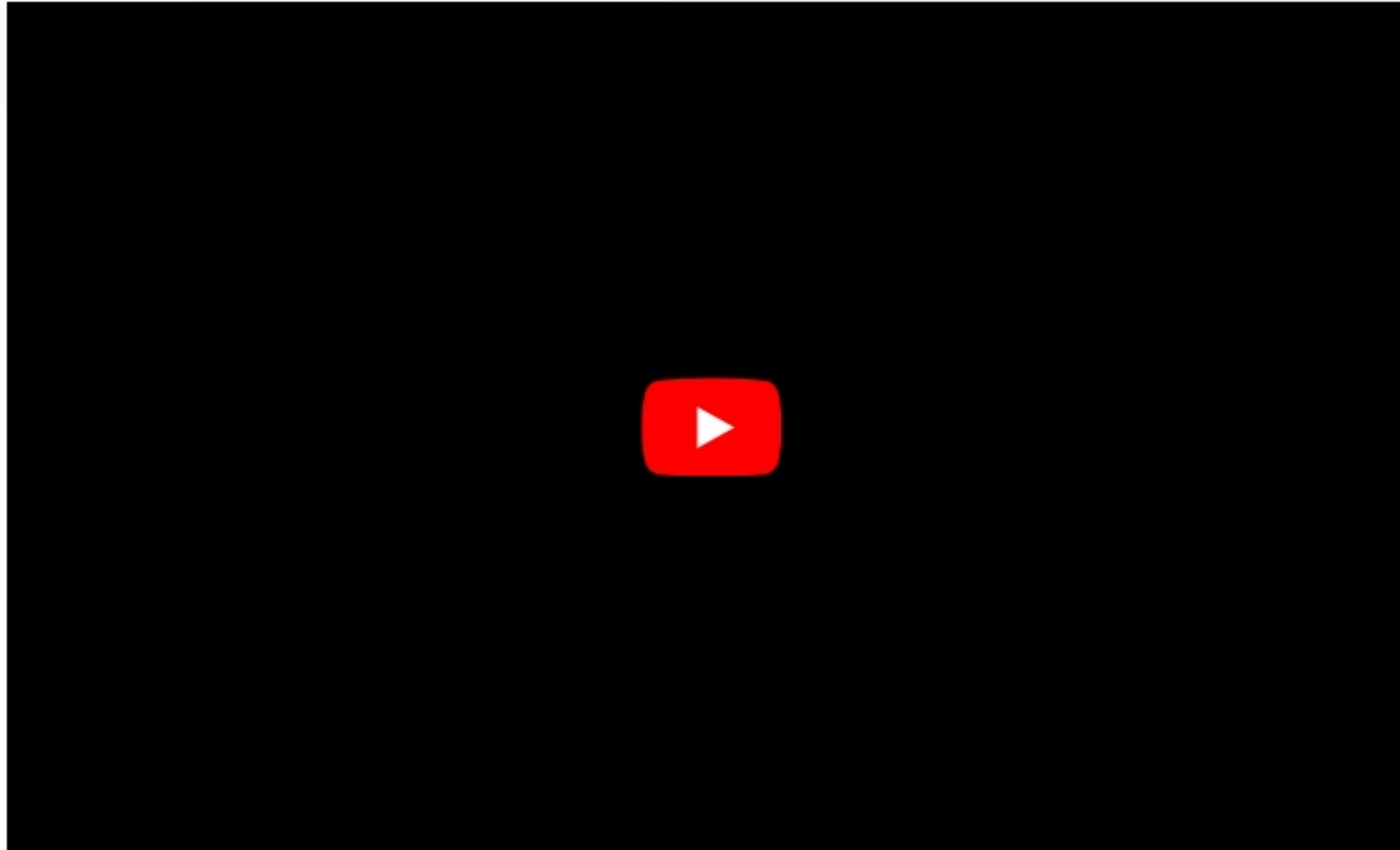
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09.03.24

How Fast can Our Turbine Scoops Close / Furl?

We're often asked how fast our turbine scoops furl. What better way to answer this question than with a video! Watch as we time the process for you -- we're showing you unedited, real-time raw footage of the turbine furling from fully open to fully closed in in this clip. Please excuse the loud background noise; we were running our industrial fans to help with the heat (mid 90's) outside! The noise is NOT related to our Harmony Turbine spinning and furling.



So 30 seconds... not bad. Now keep in mind that we're still testing and things could change but as of right now this is a good speed for our units. As with any geared application you sacrifice speed for power. After some testing we might find that we need to go with larger gears which would slow things down more but that remains to be seen. For now this is a good starting point for our furling systems. Several improvements were made in our most recent MK-3 prototype that allows for this elegant, simple and smooth furling operation above what our MK-2 units did.

The question about timing comes from a concern / misconception that our furling could take too long in suddenly windy weather and that the turbine wouldn't be able to effectively protect itself. Let's take a deeper dive into this. While 30 seconds seems like a long time, please remember that this is to FULLY close which is not a normal operating procedure. When winds kick up, Harmony closes a little and re-tests to see if RPMs are back in an acceptable range. It continually monitors RPMs and adjusts the furling state as needed. The only time it should ever be fully closed is if the owner commands a shut-down for something like maintenance. During normal operation Harmony should always be open and producing power with occasional instances where it is furled (partially closed) during high wind situations.

These micro-adjustments will be quick, as you can see in the video, taking only a few seconds to adjust to the correct furling state. So yes, we believe Harmony's furling system will be quick enough to react and

adjust to varying wind activity, allowing it to spin at a safe RPM rate while still producing maximum power. We're excited to move into our Alpha testing soon, where we'll be able to see the furling in action in live unpredictable weather situations.

[If you're interested in being part of our story, consider investing!](#)

We appreciate each and every one of you. Some of you are curious and want to learn more, some are financial supporters and some are moral supporters / encouragers. In fact, some of you are all of these things! We are humbly thankful for each and every one of you!

Sincerely,
~The Harmony Turbines Team

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08.30.24

Job Opening? What job opening?

Hey folks, remember how ~2 weeks ago we posted a job for an Electronics Engineer? Well guess what? The job has been filled and our new Electronics Engineer Bryan, has already joined our team. It's just crazy that within a 3-week time period we were able to post a job, screen and interview viable candidates, make someone a job offer AND have them start! We're excited to introduce him to you in the very near future once he's settled in.

For those of you who regularly watch our videos, you'll probably remember how sometimes we've talked about "the universe" watching out for us and helping us along the way. Well this is yet another example of the synchronicity we experience continually here at Harmony Turbines. We have a need and suddenly the solution is there before us. The universe is definitely helping us as we strive every day, to make our world a better place. We thought finding an Electronics Engineer would be a long and frustrating process but thankfully it was very fast in this case. Hiring as a start-up that's not in production yet can be very daunting, as it takes a special kind of person to willingly put themselves in a risky (albeit exciting) position here. So again Harmony Turbines welcomes Bryan as our new Electronics Engineer. Be sure to watch for our full update on him next week.

[If you're interested in being part of our story, consider investing!](#)

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~The Harmony Turbines Team

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10%

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Invest \$2,500+ and receive 4% bonus shares

Select

\$5,000

Tier 3 Perk

Invest \$5,000+ and receive recognition in a YouTube update

\$10,000

Tier 4 Perk

Invest \$10,000+ and receive recognition in a YouTube update

\$20,000

Tier 5 Perk

Invest \$20,000+ and receive recognition in a YouTube update

video + 6% bonus shares

Select

video and have a tree planted in
your name + 8% bonus shares

Select

video, have a tree planted in your
name and receive a special edition
laser engraved keychain + 10%
bonus shares

Select

\$100,000

Tier 6 Perk

Invest \$100,000+ and receive
recognition in a YouTube update
video, have a tree planted in your
name, receive a special edition
laser engraved keychain and enjoy
a 30-minute zoom call with the
founders + 10% bonus shares

Select

JOIN THE DISCUSSION



What's on your mind?

0/2500

Post



Jasmin Hayes

4 days ago

Hi, your company caught my eye and intrigued me to invest, can we still track our investment after the funding stops? And or can we still continue to invest?

[Show less](#)



CM

Christopher Moore

4 days ago

Hi Jasmin, after the funding round closes you'll be able to track your investment through our Transfer Agent's website. You cannot make any further investments once our funding round is complete. But if we are approved for an extension on this campaign or if we open another funding round at a later date, then you could reinvest.

[Show less](#)



HJ

Heather Johnson

10 days ago

Do you anticipate a turbine could withstand major hurricane force winds? I live on the coast of SW FL and we can get storms with winds in excess of 150 mph.

[Show less](#)



CM

Christopher Moore

10 days ago

Heather we're going to build them to be as strong as possible and to operate in extreme weather, but obviously time and testing will be the only way to see how well they do in severe situations.

[Show less](#)



GS

George Andrew Simons

12 days ago

I am a proud international non-accredited shareholder of Harmony Turbines on StartEngine.com from the country of Bermuda!@@@

[Show less](#)



CM

Christopher Moore

12 days ago

Thank you George! Welcome aboard.

[Show less](#)



View 1 more reply

GS

George Andrew Simons

12 days ago

Harmony Turbines is the new Global Standard!@#

[Show less](#)



PS

Prakash Sripathy

a month ago

Thanks Christopher. I caught up with the FAQ, I am in. Thanks and keep up the momentum. I will let the KC guys know as well.

[Show less](#)



PS

Prakash Sripathy

a month ago

Hello Christopher,
Great progress. Few questions
- How does your technology and design stack up to the likes of Flower Turbine design. They are also way ahead in their development plus cluster capability.
- How much does typical residential unit cost and what would be the form factor and power generated?
- How much you need to raise to get to next major milestone? Looking at competitive data, you may need close to \$15M to get commercialization stage?
- Do you have any commercial partnership?
Thanks in advance for your response.

[Show less](#)



PS

Prakash Sripathy

a month ago

One more question, is this a down round? KingsCrowd website says it so. Just want to confirm.

[Show less](#)



[View 1 more reply](#)

TM

Thomas Mueller

2 months ago

My 6th investment in Harmony Turbines over the last 4 years.

I absolutely love how Christopher and Cheryl keep the community up to date on their progress.

It's definitely my most favorite investment that checks all the boxes, including product and team.

[Show less](#)



CM

Christopher Moore

2 months ago

Thank you Thomas, your support throughout our project is most appreciated. Each day we move closer to production as our team grows and things get more and more exciting.

[Show less](#)

↑ 0



PB

Philip Barbonis

2 months ago

How is the valuation arrived at? You have not sold a single unit yet... so far as I know...

[Show less](#)

🗨 1

↑ 0



CM

Christopher Moore

2 months ago

Hi Philip, that's all outlined in our form C which you can access anytime here from our StartEngine raise page.

[Show less](#)

↑ 0



RK

Richard Koch

3 months ago

Just in case you evolve your beta testing into wanting a mountainous site, I'm at the 4000 foot level in the Sierra Mountains. FYI, I was an Air Force electronics technician for 20 years with EXTENSIVE installation experience. If you can provide installation drawings. block diagrams with some analysis and whatever schematic diagrams that a maintainer would need, I just might be able to do the install and any preventive maintenance, troubleshooting and restoral actions. Not to mention documentation. This area has a fair amount of snow also. If you need it, siting data, climatology, etc., could be easily researched and provided. In case you'll be looking for such a site.....

Show less

1

↑ 0



CM

Christopher Moore

3 months ago

Hi Richard, would you please email us your information at support@harmonyturbines.com? We'll get you added to the list. Thanks! -Cheryl

Show less

↑ 0



AB

Andru Blonquist

3 months ago

Initially, you talked about a specific type of "in-house" generator that you would develop that would allow power generation at very low speeds and then it would automatically adjust power generation as the speed increased. I think you even had a patent on your generator concept. I see now that you are exploring "3rd-party" generators and I wanted to understand what might be changing in your plans. Have you abandoned your original generator plans? Does this mean you will need higher wind speeds to start generating power?

Show less

1

↑ 0



CM

Christopher Moore

3 months ago

We speak about this in our April as well as our May updates
<https://youtu.be/sAgcBVQoTQg?si=mAFfngRsURVwqgDj&t=1245>
<https://youtu.be/aAp5yCdYr94?si=pbwfIP9iqdw1fIvC&t=593>

In short we are definitely not abandoning our patented generator designs. We're just prioritizing the turbine development right now to focus on getting DATA. That's most quickly and easily achieved with an off-the-shelf generator. It just takes some trial and error to find one that suits our needs. What this allows us to do is offer early units

with these off-the-shelf generators much sooner than waiting for all of our R&D to take place on our own generator design. We are not sure that it will be cost-effective to offer our patented generator with small-scale residential units because they are more complicated. Our patented generator is probably best suited for much larger wind turbines of all kinds, not just Harmony's. So once we get the revenue stream moving and have units in the field we plan on taking a deep dive into the viability of coupling our patented generator with our turbines. But that may have to wait until we're further down the road.

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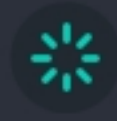
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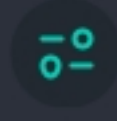
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When will I receive my shares?



At the close of an offering, all investors whose funds have “cleared” by this time will be included in the disbursement. At this time, each investor will receive an email from StartEngine with their Countersigned Subscription Agreement, which will serve as their proof of purchase moving forward.

Please keep in mind that a company can conduct a series of “closes” or withdrawals of funds throughout the duration of the campaign. If you are included in that withdrawal period, you will be emailed your countersigned subscription agreement and proof of purchase immediately following that withdrawal.

What will the return on my investment be?



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Can I cancel my investment?



For Regulation Crowdfunding, investors are able to cancel their investment at any point throughout the campaign up until 48 hours before the closing of the offering. Note: If the company does a rolling close, they will post an update to their current investors, giving them the opportunity to cancel during this timeframe. If you do not cancel within this 5-day timeframe, your funds will be invested in the company, and you will no longer be able to cancel the investment. If your funds show as 'Invested' on your account dashboard, your investment can no longer be canceled.

For Regulation A+, StartEngine allows for a four-hour cancellation period. Once the four-hour window has passed, it is up to each company to set their own cancellation policy. You may find the company's cancellation policy in the company's offering circular.

Once your investment is canceled, there is a 10-day clearing period (from the date your investment was submitted). After your funds have cleared the bank, you will receive your refund within 10 business days.

Refunds that are made through ACH payments can take up to 10 business days to clear. Unfortunately, we are at the mercy of the bank, but we will do everything we can to get you your refund as soon as possible. However, every investment needs to go through the clearing process in order to get sent back to the account associated with the investment.

What is the difference between Regulation Crowdfunding and Regulation A+?



Both Title III (Regulation Crowdfunding) and Title IV (Reg A+) help entrepreneurs crowdfund capital investments from unaccredited and accredited investors. The differences between these regulations are related to the investor limitations, the differing amounts of money companies are permitted to raise, and differing disclosure and filing requirements. To learn more about Regulation Crowdfunding, [click here](#), and for Regulation A+, [click here](#).

More FAQs





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VIDEO TRANSCRIPT

Campaign Video

Change, change, change is coming. A new wind turbine that uses the power of furling to keep producing power in high winds when other wind turbines must stop to protect themselves from damage.

Harmony turbines is revolutionizing how the world thinks about harvesting the wind. Our goal is to make wind turbines accessible, effective, and attractive to people around the world.

Our initial design is a small one intended for residential use. However, we are planning for a variety of sizes, smaller ones for boating and recreational use and larger ones for industrial settings.

We believe our innovation will be vital in decentralizing power and also in bringing power to developing countries where electricity is scarce or even unavailable.

The possible applications of Harmony's design are widespread, as in addition to generating electricity, the turbines could also be used for pumping, purifying, or desalinating water, as well as for condensing water from the air to provide this life saving gift where it's needed most.

If we get this right, the global impact could be tremendous. We're now accepting investments as part of an equity fundraising campaign. The funds we raise will help us continue the research, development, and testing of our products and will help us reach the production stage more rapidly.

Small steps lead to big changes, so please consider investing in harmony turbines.

Why wait for change when you can be the change? Harmony turbines we now have the power to change the world.

Still TBD Podcast

0:00

For two years, we have had yacht and catamaran manufacturers calling us. And they've been

0:11

calling us because they want our wind turbines on their units. And then one day we got a

0:18

phone call from a company asking if we would license their tech to them because they're

0:24

looking to use it in a Flettner rotor design while they're going from A to B.

0:30

So you would have Harmony furled up in a cylinder, and you rotate it, you just are running the

0:36

generator in reverse. Now you're improving your efficiency as you go from A to B. You anchor up when you get to your destination, unfurl while you're producing power under

0:46

anchor. You just blew my mind. You just blew my mind. That is really

0:52

cool. That is really cool. you because you may not have picked up on that little nuance. No. It's there. That is amazing. On today's

1:00

episode of Still to be Determined, we're going to be talking about some new technologies

1:07

that are based. At Harmony Turbines, which Matt had the opportunity to speak to the two leads at Harmony, Chris and Cheryl

1:18

Moore, who are leading the research there. And at the end of 2023, Matt sat down and spoke with them and. His interview, we're

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going to share his interview with them as a complete video here. Just a tip to the wise

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though, keep in mind, this was recorded at the end of 2023. So when Matt or Chris or

1:40

Cheryl say this is going to happen next year, they mean this year. So a little bit of timey wimey stuff for everybody to keep in mind, but we hope you'll

1:49

be. Uh, entertained and interested in the content of their discussion around Harmony Turbines, what their research

1:58

is leading to, and what they hope to achieve in the near future. Well, to kick things off, I was hoping you guys could both introduce yourselves,

2:05

and I would like to know a little bit more about how you started Harmony, why you started

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Harmony, and how you got to where you are right now. I've been inventing and working with clean energy tech for probably the better part of

2:19

. 20 years, 25 years. Um, it started when I was just looking to try and figure out something

2:28

that I could do other than programming and working for the hospitals as a coder because I, you know, that was paying the bills, but it wasn't really fulfilling.

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Anything that I wanted to do in life and, um, it started as a, I was reading while I

2:43

was flying back and forth all over the country about cold fusion and clean energy tech research,

2:48

but I thought, man, I'm never going to be able to afford to do that. So, um, I, I guess it just evolved from a love of. Starting with scrap material, starting with nothing, and

3:00

I taught myself, um, there was a Dave Gingery series of books about building your own machine

3:05

shop out of scrap materials and using waste oil and, you know, building your own foundry

3:11

and machining parts. And so that's what got me down the path of machining and, um, inventing and one thing

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led to the next, the next, the next. And I, a hundred inventions later, you know, a big, huge spreadsheet, I'm like. All right, how do I turn

this into a career? So Matt, it's

3:27

like you're sitting there with all these inventions and nothing's going anywhere. You're not able to do anything outside of just tinker on the weekends and in your spare

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time. So um, a company called Score helped me with that and they said let's focus on

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taking one of your inventions all the way through to get that ball rolling and then you could fund other projects as you do this.

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So Harmony is really the first The first thing that we're taking from the idea, the ideation

3:57

stage, all the way through to, you know, trying to take it to a finished product. Right. So it went

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from tinkering on the weekends and your spare time to taking that passion and spinning it into your first full

4:09

time job. Crazy scary, like how do we go from this is a hobby to suddenly now it's not only paying

4:17

my salary, but now it's paying both of our salaries and trying to turn it into something

4:22

that can you know, be beneficial to everyone in the world. So, right. It has been a wild

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ride. Yeah. These things don't fund themselves. So, uh, this, we had looked at doing Kickstarter years ago as a possible way to fund this,

4:39

but can you imagine putting like a huge turbine that hasn't been, uh, Even made yet, like

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thousands of dollars, nobody would do it. And when he came across the equity funding, the crowdfunding that we ended up doing, um, that was, that was how things got started

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and how he was able to quit his full time job. And start working on this and, you know, that was a little rollercoaster there too. And

5:04

then he did another raise and now we're both in this and really, uh, jumping in full force.

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It took three raises to get to the point where we were able to quit our jobs and both come on board full time. And hire other people.

5:19

And hire some other people, yeah. One of my big questions is, Why wind? Like, what drove you to do these kind of small, like, Savonius style wind turbine?

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What drove you to that? So everyone out there thinks of wind turbines as these big propeller turbines that

5:36

are out on the coast, and they do have a few small, um, scaled down versions that they're

5:42

trying to sell as residential turbines, but they're very I'll say they're very poor at their job, because all they did was shrunk down the great big ones and thought that they

5:51

should be good for people and people's backyards just the same as the big ones. Um, that's not really the case, because the little ones, if you've ever been up close

6:00

with one when it's spinning, you know, even just a hundred feet away from it, They're like, incredibly noisy, they're frenetic to watch them, they're just twitching and moving

6:11

and stopping and starting, and it's just insane. We have video of some, when we were down at the beach, and it was a, a thunderstorm was

6:20

starting to kick up, so you were getting some gusting and then stopping and this thing was just, you know, going berserk, it was like, and then it would stop, and then it would

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be like, and then stop, and I'm like, is that really?

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The best technology that we can put out, you know, as a society right now to say, here

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you go folks, this is something you can put on your boat or on your house for wind capture,

6:46

wind gen wind power generation in the 2020s. It was insane, and I thought there's gotta be a better way. So I think Harmony was born out of the desire to do something that makes

6:58

sense, you know, that is easy to look at, is convenient, has a lot of nice features

7:04

built into it, and just makes sense all around. Felt like all they did, again, I'm saying the same thing over, but shrinking down that

7:13

great big technology out on the coast isn't the right answer. That's like You know, trying to sell somebody, uh, I don't even know, like, you know, just shrink down the biggest vehicle

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that you can think of and think it's going to be great for everyone to run around in these mini versions of Mack trucks or something like that.

7:31

It's, you know, people don't shop for a car because they're looking for convenience. They're looking for trunk space. They're looking for miles per gallon, whatever. Same thing happens

7:40

in wind turbines. We want something that's pleasant to look at, pleasant to be around,

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that's not dangerous, that's not noisy and intrusive, that the neighbors aren't going to be calling and complaining.

7:51

Um, so that's what Harmony is trying to do, all of those things, and it's a bit of a tall

7:56

order, we know, just like these. You know, when these came out 30 years ago, they were

8:03

the size of a brick, literally, they were called brick boats. And they were huge, they were crazy, but they gave you something, a level of convenience that you didn't have

8:11

with landlines, and that started a whole revolution, you know, a paradigm shift in telecommunications.

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I hope that Harmony is the smartphone of wind turbines. It's Our desire that we're like

8:26

the smartphone in a generation that everyone's running around right now, installing brick phones on their homes, you know, and suitcase phones, if you remember them.

8:35

Oh yeah. Oh my god, yes. Yeah, the car phone where it was like almost installed into the

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car. Yep. Um, so one question I had for you about the kind of the design of it is What sets

8:47

your design apart from what others have done before? So Savonius wind turbines are the king. They're literally the undisputed

8:55

king of low wind speed power production. When you look at all the power curves and everything, and we even on our FAQ site go into some historically bad data.

9:04

Um, badly published data back in the 1950s, where they drew incorrect lines, um, I won't

9:10

pull it up right now, Matt, but it's on our FAQ, and I can send you the, the screenshots of it. There was bad data published showing Savonius turbines to be a very, very poor

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producer in these low winds, when they were really originally tested in the 30, Um, percent

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efficiency range, which is great when you're talking low wind speed power production.

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So, we wanted our turbine to be catering to the masses, so to speak. Not, you know, 30

9:37

mile an hour winds that are constantly, you know, pressing down on the coast 300 feet up in the air. You're gonna put this on your roof, you're gonna put it in your backyard,

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you're gonna put it maybe on the side of your barn or something like that. Um, generally, wind in the rural and even urban areas is not very good. So it's dirty

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wind, it's disrupted wind, and Savonius turbines are the king of low wind speed power production.

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Now, it's not magic. This isn't Like zero point energy or, you know, getting more out

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of a system than you're putting in. It's not magic. It does need wind to make power. But if the majority of the United States and the world

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at large doesn't have good wind, shouldn't we try and make a wind turbine that can at least capitalize on that? You know, poor wind condition rather than being oversold on something

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that, Oh, in a crazy typhoon or a thunderstorm, you might get this wind. But if it goes even 10 miles an hour above what it's rated for, then it's probably going

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to be destroyed. You know, it's like the caveats on buying a turbine that you can get right

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now are just so crazy. They're 60, 000. They're usually like you're getting a 20 kilowatt

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wind turbine and. You're overbuying so that it might produce one or two kilowatts of power

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on an average 14, 15 mile an hour wind speed. And then if you go above their rated wind speed, then it has to shut itself off. Stop

11:08

producing because it's got to protect itself. And if it goes any higher, then it can even be destroyed. We have people that have yachts and catamarans and, you know, they're calling

11:18

us saying, Chris, when are you going to have this ready? I've already gone through three. Of these crappy propeller turbines this season already,

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you know, they're out in the boating field because they're being destroyed by these storms that come up. So, we're trying to make a better mousetrap. We're trying to make a better product.

11:35

That answers a lot of the big gaps in the industry right now. So the way we approach that problem is we have our furling mechanism where our scoops

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or fins or whatever you want to call them at a certain RPM or when the turbine reaches

11:51

its max RPM, they'll close in towards each other a little bit. And the purpose of this is twofold. One, it'll, uh, control the spin, so we're not spinning out of control, but

12:02

the second thing that that does is it allows us to continue generating power. Even though we have strong winds, even though we're partially closed, we're still generating

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power. The other ones, they stop. They're not doing anything in the highest winds. Like,

12:16

you should be getting the most power out of those situations and they're stopped. Right.

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That's, uh, you know, you asked what would set Harmony apart from some of the other ones and this is a major

12:27

piece of it. Yeah, being able to put power right on through that storm where everyone else has to stop.

12:34

Yeah, that furling motion that you're talking about, has anybody else tried that? No. So, to our knowledge, there is not a single product on the market

12:43

that's coming close to doing anything like that. They can pitch their rotors.

12:48

In the, um, the big propeller type ones, they can actually change the pitch of the rotor to try and maximize their RPMs and different wind speeds, but they cannot escape the wind.

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Harmony is literally reducing its diameter. So, you know, when you're talking, uh, propeller

13:06

turbine, it's the whole circumference, the diameter of that turbine as it spins. In Harmony, it's more of a A Y times X or a Z times X. So that footprint in the length

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times the height is what is being reduced because we're squishing it down. We're not

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going and turning into a cylinder, we're just coming in maybe 10 percent or 15 percent depending

13:29

on the RPM. But we're still enabling it to spin to control the RPMs.

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Is there any additional complexity to your system over that other system, like the difference between

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tipping versus the furling? Uh, no, I don't know that it would be more complex. I, I'm sorry. I thought you

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were saying, is there more complexity in Harmony versus like standard residential wind turbines

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don't have that built into them because that's right to do. So you're really saying we're giving Harmony, little baby residential Harmony, the same

14:01

capability In a way that the big, huge multi million dollar turbines have, because those

14:06

big multi million dollar turbines can do the pitching, the little ones can't. It's too expensive, it's not worth it, it wouldn't really get people much bang for their buck

14:15

in that case. But with Harmony, we're actually trying to build that into the design so that it's inherent.

14:22

You don't need a brake, you don't need to stop, it merely furls in to whatever degree it needs to control its RPMs. Kind of like the governor. Right. So

14:31

if, if in theory you didn't have that furling and it could max out at 30 miles per hour with the furling, you could have 60 mile an hour winds, but it's furling stuff in to keep

14:41

the control. Yep. You're okay. We, once we start testing, when we say this model can withstand 250 RPM,

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we don't want to go above that. As it approaches 250 RPM, it would just. Pull in a little bit,

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and then in 15 seconds, it would check its RPMs, and if it's good, then it would stay there, if it's still too fast, it would just pull in a little bit more, so it's constantly

15:01

running a PID loop, just like, you know, CNC machines are running a process loop, where

15:07

they're saying, how much do I need to change, how much did I change. And now if it needs to adjust again, it knows how far it needs to go in the next move.

15:14

Now, this is going to be a question you may not be able to answer at this point, given where you are in your development, but from like a technical specs point of view, if like

15:22

I'm a homeowner and I'm looking to put one of these in my house, what could I expect a single unit to be able to produce?

15:29

Like what would the rated amount be? Our hope right now, our goal is that we're Making units that are about 500 watts in power,

15:38

400 to 500 watts in a 25 mile an hour wind. Um, I would love to come back in a couple

15:46

months after we finally start getting our data and say to you, we're way above that. We're at 2000 watts in a 25 mile an hour wind, but I don't, I'd rather under promise and

15:56

over deliver than the other way around. Right. So our hope is that it would be at least 400 to 500 watts. Okay.

16:05

And how much, and again, you're probably not going to be able to answer this question about cost. But it's one of those, typically when you're talking about Savonius turbines, they

16:13

tend to be much more expensive per watt than something like a solar panel. Yeah. And I know it's not really a fair comparison to go wind versus solar because you can do

16:22

both. There's nothing that says you can't do both. What do you see, what do you see the cost potentially being, um, per watt if you have any kind of concept around that yet?

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What do you, what do you feel about this in the market of like a residential space? Like, how do you think, how, how appealing will this be for the residential

16:40

market? I guess that's a tough one. We're in our infancy right now. When solar came out it was what, \$10, \$12 a watt. It was crazy. Very expensive. We're probably going to be

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in that same range, \$10 to \$12 watt, because if we're talking a 500 watt turbine and it's

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costing the consumer \$5000, that's a 10 to one ratio right there. Um, we may even be higher than that. We may be, 12 to 14 a watt when it comes out. Um,

17:06

that's only when it launches. I mean, Tesla was like, what, 70 to 80 thousand dollars, for their first cars, and now they're 30, 000, you know, 28, 000 for some of the Model

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3s. So, like anything, as soon as we launch with it, it's always going to be, you know,

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the most expensive time. You get your niche consumers that really want that, that have been watching and following,

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and then they help to build the momentum for you to move into less expensive, more economic

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models. You might find ways to cut down on manufacturing costs and waste in your production

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process, um, lighter, more, uh, affordable materials, or Maybe even 3D printed materials.

17:49

Recycled plastics from ocean and landfill reclamation projects. Things like that. We're looking at all kinds of things to be, not only making clean energy, but helping to clean

17:59

the planet up at the same time. If we can pull, like, the Precious Plastics Project. I don't know if you know about that, but I'd love to use reclaimed plastics out of the

18:07

ocean to make, you know, scoops for our units. But that's down the road, it's, it's way too early to get into that. Yeah. Yeah.

18:15

And to get to your current state of where you are right now, I, I believe you just finished a study with, what was it, Bucknell? Mm hmm. Um, are you working with other colleges and

18:25

universities beyond Bucknell? Yeah, we're actually working with, um, a year and a half, two years ago, we got

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the original three schools. So it was Bucknell University, Penn State University. And then Northumbria University

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over in the UK, all three of them approached us and wanted to work with us. We actually had two additional colleges approach us, Thomas Jefferson and Villanova. We had to pick just

18:53

three because, you know, being a three person company, yeah, two, three person company. Like, we can't work with five universities here. So we spread them out, we made, you

19:03

know, we divided things up. Bucknell was working on the actual Turbine on their rooftop, full

19:08

size scale unit, um, doing testing. Penn State was doing water tank testing for clustering

19:13

effects, putting a bunch of little harmony turbines close together to help with increasing efficiency.

19:19

Um, the wall effect as the wind gets squeezed through vertical axis wind turbines, it actually

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can increase the efficiency like 15 to 25 percent. Studies that, um, Oxford University

19:31

in April of 21 put out this amazing study showing huge increases in, um, wind farm production.

19:38

If wind farms would switch over to vertical axis wind turbines. So, and clustering them together, yeah. That's,

19:45

that's the exact opposite of what you typically see about studies about like the wind farms where they're actually causing like too much turbulence and it drops the

19:52

efficiency of the entire farm. They, they, it's like a half a mile away they have to

19:58

be before the wind is, you know, steady enough that they can put another one.

20:03

With the vertical axis wind turbines, they can be very close, and you can do a lot more densification of your, of your wind farm layout, so we envision a, you know, if things go well,

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I mean, my gosh, you could have Harmony Turbine wind farms that are a thousand units out there, all nice, close together, easy to set up, you don't need big, huge, 400 foot tall cranes,

20:24

and you Yes, you have a bunch of small ones, but now you have redundancy. If one of them goes out or two of them gets knocked out, it's not like a big huge six

20:32

million dollar wind turbine getting knocked out. Um, right. So, there's a lot of cool

20:38

things there. And then Northumbria University, they want to do the computational fluid dynamics

20:43

to look at our geometry of the scoops themselves. Um, to help with improving that. Increasing the efficiency of it. Recently then, we were

20:54

contacted by Lawrence Livermore National Laboratory. And now we do have permission to actually

21:01

drop their name and say, um, you know, we've been contacted by them. We even released it in our update. Um, yeah. So, Lawrence Livermore National Laboratory reached out to us and

21:12

said, Hey, we love what you're doing. We want to work with you. Let's see if we can do a project to help you increase your

21:18

scoop. Efficiency. So now they want to do that as well.

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That's well, what first congratulations on that. That's a great partnership, but it sounds

21:29

like that's also, but yeah, but it sounds like that's where you're probably focused right now is on refining this, the design of the scoops and the.

21:37

Orient, like, the size and shape and everything. I've seen that in your recent, uh, some of your recent videos you've been putting out. In the development, because what, what version

21:46

are you on right now of your design? We call, um, we separated it into two things because our patent is actually

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one is on the Furling and the other we have a patent on my Axial Flux Generator and that

21:59

one, um, We're on version 3, so we call it Mark 3 for our turbine, and then we are actually

22:06

on Mark 4 for our generator. So, even though the generator has not, we have not really done any videos or anything,

22:14

we have to keep that very close to the vest. Hush hush. It's like secret sauce stuff there, Matt. So, there's too many, too many generator companies out there, motor companies, and

22:24

even with EV market, everyone's starting to talk about axial flux motors. Axial flux motors are the future of EV. Well, guess what? We are the first. To hold a patent

22:33

on the first axial flux generator with solid core, um, coils and a variable air gap. So

22:41

I don't know if you looked at our patent or looked at our FAQ or pitch deck or anything,

22:46

but that is the second big technology that we have. We're the first to come up with an axial flux generator that has literally got a variable

22:54

air gap in there. And you say, well, why would you do that? It's because startup cogging

22:59

is the biggest problem for wind turbines, um, in low wind speed. They have to use kicker

23:06

motors that used to be, believe it or not, big, like 50 horsepower Kubota diesel engines

23:12

in the wind turbines that were out all over Texas and Arizona and Nevada and stuff like

23:17

that. They would fire up with a diesel Kubota engine to get them going, to get them spinning. It's

23:24

ridiculous. So they could set that up and produce clean energy. And you're like, wow, okay, this is the best we can do. Our generator is literally an entire separate revenue stream

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that could be, you know, even if our wind turbine tech with a turbine is, it fails, it's a flop, we still have a totally separate Revenue stream that could be brought forth

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from the generator, being retrofitted into millions of wind turbines, big and small,

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multi million dollar turbines, all around the world. Because that startup cogging is such an issue, that our generator could literally, by starting

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with those platters far away, you eliminate the cogging, but you still allow solid core coils in your design. And then after it gets going, those platters come down and move into

24:07

closer proximity of the coils. That's interesting because it's, it's, I, I was saying to you before we really started talking, which was, I love that you

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guys are being so open and sharing your progress on the design of the scoops and everything like that, but it kept making me wonder, like, what about it, what is it about what you guys

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are doing that is defensible, that is something that's a little closer to the vest and it sounds like it is the, the generator,

24:29

like you said, the secret sauce. And also how we're doing the furling, that is a very complicated mechanism to Enable

24:38

your system to actually open and close properly. So, you know, we take pictures of it, we show video of it, but we don't take people on a tour of here's the guts of how you do it.

24:47

And here's how you machine the parts or 3d print the parts. So in a way, that's a little bit of secret sauce, but the generator has to be very, very

24:56

secret sauce, close to the vest. There's too many companies out there that could throw 2 million, 3 million at it and try and get around

our, you know, our technology patents.

25:07

Well, what, what's the biggest challenge that you guys have come up against so

25:13

far? We're tiny. So we have a limited amount of resources and we have very limited funds.

25:21

I mean, I know a \$2 million raise sounds like a lot of money, but once you're done with the raise and paying for advertising and all the fees you're left with, you know, we were

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left with 1.3, yeah, 1.3 million when we were all done with everything and.

25:37

It's like, okay, we've got to survive now for 24 months and then make the company profitable

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in that time without going bankrupt. So resources management would be the biggest challenge

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for, for our little company, you know, just having enough people to help get it done,

25:56

but do it. In an economic way that you're not bankrupt by the time you get done. Right. So with that comes a lot of weird decisions. Where we're we, we talked about it in our

26:08

last video, or two or three maybe, where, um, we're starting to look at taking on side

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jobs. 'cause we have machining equipment here. We know how to use it. You know, we use it for our own prototyping. But as we look at the funding that.

26:23

That we have and how we're trying to stretch it out and we're trying to do stuff with it. How do we get that breathing room where we can still function and not have to really

26:32

stress out about running out of money before doing another raise? So it's like balancing.

26:41

Finding new revenue streams, which, you know, we're looking at the side jobs, machining jobs, and, but then how do you handle your investors?

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Like, are your investors going to be upset that you're not moving forward as quick, or are they going to be happy that you're trying to protect their investment by keeping the

26:54

vision alive and not running out of money? We've had a lot of, like, he and I and, uh,

27:00

Nate, our engineer, We have a lot of discussions about this, you know, how do we all feel about

27:06

it? But how does it impact the people that we're communicating with? What is the right decision

27:12

for us, for our investors, for Harmony? That's tough. Yeah, I was scared to death actually, to tell the, you know, our investors, our community

27:22

that, Hey, we're, we're starting to do jobs on the side to help supplement our monthly,

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you know, revenue stream here, because if we don't. It's gonna get very scary very quickly, you know, you just, you would literally run out

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of money if the only thing you're doing is R& D, you have no money coming in. So, we

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have machines sitting there literally 85 percent of the time not being used because we're in

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the middle of R& D, we're designing, we're doing CAD work, we're testing, we're, you know, 3D printing things, and the machines are sitting back there just whistling a tune,

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and we're like, wow, we really ought to put these machines to better use while we have

28:02

downtime elsewhere. So, that's what we're starting to do. We're starting to get into doing some manufacturing

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on the side to help supplement our income while we do the research and continue the

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research. That actually touches on something that I come across all the time with different companies and startups I talk

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to, but I see in the community, and I'm talking about like, not the investors, but like Just

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the general public, people who are interested in this. It seems to be that there's a lack of understanding about the complexity it takes to go from an

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idea to something you've launched in the market. And it takes a long time to do that and a lot of effort. And so, yeah, a lot of people Don't get it. So it's like, you're, you're

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living it right now. Like how would you, what would you want to say to people to help them understand?

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How would you describe it to somebody, the process and the time and effort it takes to do this? It's originally when I started, like even back in 2019, putting videos out,

29:01

I'm like, yeah, by, you know, by next year we'll probably have data and maybe we'll even have our first prototypes. Oh my word. If I could go back in time and smack myself.

29:09

You just, you have no idea how many real life issues come up that get in the way of that

29:17

progress. And to take, you think, Oh, it's just a wind turbine. How, how complex can that be? It's crazy. Go build one. Yeah. Right. It's like, it's crazy with everything that

29:30

you have to take into account. So I would say the biggest, you know, advice I have there is for people starting a new startup or trying to bring a new widget to the market.

29:39

Assume, out of the box, that it's going to take five to six times longer than what you

29:45

originally thought. It's, like, crazy. You know, for our community that busts on us sometimes for how long things are taking, it's Even you said

29:55

a little earlier, uh, not many people, like a lot of people work in stealth mode and don't talk about what they're doing.

30:02

Um, maybe we're one of the few that people are paying attention to that's being so open with everything that everyone is seeing the entire journey with all the frustrations and

30:12

struggles and not just kind of coming in at the very end right before things are ready

30:18

to be on the market. Uh, I think, you know, when, when people think of the products that are out there, you know, new products.

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They've already been through the R& D and they're not hearing about them until they're ready to go on the market. Well, all of them had an R& D process. They just didn't have

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it out there. They didn't show it to the world. Right. So it was kind of a difference too. We made that

30:42

decision long ago. And I took people on this journey because I figured it was the only way we would gain a market share or traction in the market because to just bring this widget

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out and be like, Hey guys, look at this cool thing we made. No one would even know. They'd be like, what? It's a, it's a vertical wind turbine. They're

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crap. But by Bringing people along with you on the journey from the inception of the idea,

31:05

and showing them the bad data that's out there, the bad research that's out there, all of the, the problems with the current units, and showing the whole process from the beginning,

31:14

we have built a community of supporters, now that, the biggest complaint we have is, Doggone

31:20

it, why don't you have this thing ready yet? Like, that's What people are upset about why is why can't I go buy this and in a way? That's

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a really good problem to have because people believe in what you're doing so much so that

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they're upset They can't get it right now. So You know at this point. Yes, it's frustrating,

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but it's not necessarily a bad problem. It's just Kind of like a really big fire burning, you know, behind me here.

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I was going to say, it's like that, I think that is a really good explanation when you

31:56

said a lot of people are in stealth mode, which is the way most companies handle it. So when they come out, it looks like this miracle product that's like, they just totally

32:03

ignored the eight years of R& D that it took to get to that point. Yeah. It's like, you guys are. Boop. Yeah.

32:11

Oh boy. Kind of like you actually said something in there that I'd want to hit on a little

32:17

bit, which is said people often hear vertical access wind turbine. Oh, those are crap.

32:22

Dismiss it. Yeah. Do you want to expand on that? 20 minutes ago I was talking about there's

32:29

bad data out there. We actually have it on our pitch deck. We have it in our FAQ and we have links to, I should go get the book. I actually have

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the physical book in my desk. Signed by the author, with the bad data in it, and that

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was pretty much the beginning of this bad data, before the internet and everything, back in the 1950s. It's speculated, and I'll say this because I'm using the word speculated,

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that someone was paid off to change. It's, all it is, is two arrows that are drawn incorrectly. The labels were all the same,

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they were showing, like the, uh, you can take a picture from our From our FAQ and put it

33:04

in here, but they've got the label for the Savonius turbine and the American multi blade,

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like, farm wind turbine, the, you know, just a farm thing that pumps water.

33:16

Those labels are in the same spot, but what they did was they drew the arrows. Wrong.

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In the, I don't know, 1956 or something like that, and then it suddenly got published in

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all these engineering papers and scholastic, you know, books that they were teaching about

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wind turbines and everything, so suddenly this bad data was proliferated all throughout .

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The, you know, pen and paper and hardback cover society because there was no internet

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and no one to sit there and debunk it. For like 60 years, this bad data has been all

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over the internet. So if you go out and you just search on wind turbine efficiencies, or wind turbine efficiency charts, and you look, you'll see 50, 60, 70 pictures that

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are all the same thing, pretty much a little caricature or drawing here or whatever there.

34:07

But then, if you really dig into it and look, you're gonna see the Savonius Turbine is like the lowest, crappiest out of all of them, out of like 10 or 12 pictures. And then you'll

34:16

see one that suddenly it's like up in the 30, and you're like, well wait, what's that one? It's the same graph, just the arrows are reversed.

34:23

Yeah, so the bad data, because the internet is just a copy and paste society, it was just

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making it a thousand times worse. And just putting all this bad data out there. In working with the universities Penn State especially, like, the professor slapped her hands down

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on the table, she goes, Yes, yes, yes, I've been trying to teach this for the past five years in my classes, but the data's wrong.

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So they were excited to work with us on this project because they wanted to help debunk this bad data. So I'd love to be part of debunking that here in the next couple of years if,

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if things go well. So, because it was bad data, it clearly slowed the research and development in that area. What do you

35:09

think the size and the potential is for the suburban, even urban residential apartment

35:16

buildings, condos, that kind of thing? What do you think the potential is there for wind generation in a more urban,

35:22

suburban setting? I think if we do it well. Our phone calls, emails, and newsletter lists

35:30

speak for themselves. We, Matt, we literally have Thousands of people begging for this

35:36

product, waiting for this product to come out. We have yacht and catamaran manufacturers calling us.

35:41

Carnival Cruise Lines has contacted us about putting them on their ships. We literally were in a NASA, uh, not a official NASA presentation, but an unofficial NASA presentation for our

35:53

turbines being on a Mars expedition about six months ago. Um, there is All kinds of

36:00

potential for, people are starting to wake up and see the propeller turbines are not the way to go, there's got to be something better, and as far as if you're saying what's

36:10

the potential from an energy standpoint, like how many gigawatt hours throughout the United States or something like that, um, when you're talking, it's The first studies that were

36:22

done on computers back in the 1950s, they said, well, the global demand for computers

36:27

is about six units worldwide. And here we are, 70 years later, and there's billions of them, probably in the trillions

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now, if you count every, you know, electronic device from watches and phones and all kinds of things. It's when you have something that is a paradigm shift. And, totally changes

36:49

the landscape, just like cell phones did. You don't even, you can't even begin to fathom what the potential could be, because ease

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of use and availability and functionality are all key components in what we're trying

37:02

to do. So if you make a product that is so convenient, so easy to use, so intuitive,

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and it's survivable and affordable and environmentally friendly, I mean, you do the math, it's like,

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where could this go? I don't even want to speculate where it could go. Yeah, you know, it's, it's

37:19

virtually an untapped market right now. So it's not like 90 percent of residential areas

37:26

already have wind turbines. And so then you're trying to convince them to get rid of that and get a new one. You know, it's, people are looking for them, but not buying it.

37:36

You know, the emails that I answer regularly, you know, I've been researching. I don't like what I'm seeing, you know, love yours. And they're like. People are waiting for the right

37:47

solution to come out, and so we hope that we are the ones that fill that gap. People are looking for it. They're not necessarily moving on the bad solutions, or the inferior

37:58

solutions. I shouldn't say that. The inferior solutions, um, you know, they're just kind of waiting

38:03

because they don't know what to do. Like, there's nothing out there that grabs people right now for that.

38:09

It is the analogy that I used a little bit ago when I said we want to be the smartphone

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in an era of nothing but suitcase phones and brick phones and bag phones. That's what they have right now. The current market, the current units out there on the

38:23

market are just like the brick phones and the bag phones and they're just, yes, you

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can make phone calls on them, yes, they're portable, but You know, how functional, how

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convenient are they? And if we can come out with a product that checks off ten of the boxes people are looking for instead of just one, you've got a game changer there.

38:45

Um. That's what we're trying to do. We're trying to finally crack this market wide open

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with something that people are like, wow, that's awesome. Well, I think

38:56

to help people understand, like if, if in a residential setting, what it might look like, because you can't just put a turbine like five feet off, five feet off the ground

39:04

and say, it's going to do great. Right. You typically have to raise it up high enough. Sure. What kind of height range would we be talking about for your kind of

39:11

setup? Um, I would love to, after we get out in the market and we're launched. You know,

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have underwriting laboratories approve us for installations on roof peaks or top of

39:23

apartment buildings or condominiums, um, high rise buildings in the cities, on the corners

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of the buildings. You could have like, you know, ten of them going up every story or whatever. You know,

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there's the sky's the limit, no pun intended, with where you could go with this. Just anywhere

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where wind is being squeezed or funneled, or tops of hills, or, um, you know, accessible

39:47

places that are reasonably Off the ground. You know, you don't want them at ground level because someone could walk into it and then,

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you know, you're having a lot of crazy, stupid stuff happening. You need them at least, you know, ten feet off the ground so you avoid lawsuits. Um, yeah, we want them to be something

40:07

approachable and easy to install. Not, right now, if you called A wind turbine company, if you could even find one and said,

40:14

Hey, I want to get a wind turbine out here. I've got solar on my property. Let's put wind on my property. They'd be trying to sell you something that you have to build this, um,

40:23

frame that goes up in the air 60 feet. They'd be quoting you numbers of 25 kilowatt units, and it would be 65, 000 to install,

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and you're going to look at them and go. Okay, thank you. There's no way I can do that. You

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know, at least 99. 9 percent of the people making that call would not be able to do that.

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We're looking to improve that phone call tremendously by it being something that the average person

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can actually afford to do. And in that way Yes, in the beginning it would be more expensive, it would be costly, but

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as the technology comes down into mass production, then it would start becoming something that

41:03

everyone could afford. Just kind of like cell phones, I keep going back to them. In the beginning, only the crazy people could afford the bag phones and the suitcase phones, but

41:12

look where they are now. You know, now you can't find people that don't have one.

41:17

We were just joking before about how people are impatient. And you said you'd smack yourself around, having said, oh, we'll have it in a year. Now, knowing what you know now, what

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is your current I know very rough, like, estimate as to when you are hoping to have, like, the

41:36

first units that you could actually start selling. Ooh. Wow. That's scary. Because the current

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verbiage that we're telling people is that, you know, it, it all starts with data. We

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can't even speculate until we start getting data. And then we know what kind of changes

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we need to make to the turbine, like that will drive everything. So our goal is that

42:00

probably. By mid summer next year. It's what we were telling people

42:06

that we would probably have some test sites up. Like, that's what we're, like, beta unit,

42:13

like, beta units, even up here on our, like, we're, we want to be gathering data by summer

42:18

next year. Yeah, I think that's a better way to phrase it. Right, gathering data by next summer. We're, we're literally, we have it strapped in the back of our truck right now. If I took

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the laptop out there and showed you, it's literally loaded up, strapped down, ready to go. We have our, um, eddy current resistance break built and it is dialed in so we can

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actually get data. Um, we are starting to gather our own data.

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Literally, this week we're ready to go. But, as my wife said, those data points are going

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to drive what changes we may need to make in the new design, in the Mark 4 turbine,

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and in the Mark 5 generator, so to speak. Um, so, we will be gathering data over the

43:03

next six months here. A tremendous opportunity to finally, after three and a half years,

43:08

finally get this juicy data that we've been waiting for. We know our scoop geometry is not optimal. We're already doing the little wind tunnel

43:16

testing and comparing A to B so we can see where we need to go with the new designs. Now we have a way to get that tangible, the data, to put our hands on it and say, Okay,

43:26

in the wind tunnel, this one proves to be better. Let's build a full size unit and take it out on the road and actually see if it is. So

43:33

Matt. I love you, honey, but a year next summer to have beta units out there might be scary,

43:39

because they would be current models, and the current models are already outdated, even

43:45

before we left, we already know that the current models, we joked about our gold standard. Because Nate, our engineer, actually printed it in gold without trying it. But it is the

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representation of our current model, so we call it our gold standard. And it's, it's

44:01

got a lot of room for improvement. So, to put those units out in the field would be

44:06

disappointing. And, you know, it's only going to be marginal data at best to put those out

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in the field. Um, we need to improve the scoop geometry, and that's the work we're doing right now

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with the wind tunnel testing, um, with Northumbria University starting their project finally,

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and then the Penn State data as well. Uh, if Lawrence Livermore, if we can finally lock

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in on a project grant to do this, then we would even be doing a project with them. So, it's, it's longer. It is not next summer that we'll have, we'll be in the field with

44:42

beta units. It might be Our own units that we're out in the field doing testing with,

44:48

you know, this whole next year, but it's not going to be the current models. It's going to be just models helping us improve efficiency.

44:56

So, what I'm taking away from that is, everybody needs to be patient.

45:05

We should almost redo that whole soundbite because you're like, so, in three words, how long will this be? And we're like, giving you a 300 word explanation. Um, yeah. Can

45:13

you ask the question again so that he can answer it

45:19

and I don't say anything? It's going to be a while. I need to update my verbiage. Yeah.

45:27

Lessons learned from the past mistakes, you know? Yeah. I mean, in short, it does sound like progress is absolutely being made and it's

45:38

going to be really hard to estimate because you're still waiting on that data and the refinements to your scoop design. And so once you have all that figured out, then you'd

45:46

be able to give a better estimate as to when it will be ready. That's why we've gone, that's why we've gone the route of telling the story rather than

45:53

trying to predict the future. We are simply, and I know it sounds crazy. But that little

45:59

bit of a shift from, instead of trying to predict things and run it like a company, we're just telling our story and sharing our journey as we go.

46:08

And people have actually calmed down a lot. It was when we were trying to put a pin on

46:13

it, when we were trying to pin the tail on the donkey, and that's when people were getting upset. And it's because you were letting them down. Now we're just Sharing the story and,

46:24

and trying not to build up expectations, but rather just here's where we're at, here's what we're doing.

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And my hope is that people understand that and see it as a process that does take a long

46:35

time rather than we're dashing their expectations for, you know, we've had people like they're

46:44

building a house right now and gosh darn it, they wanted a Harmony Turbine. What do you mean it's not ready? They want all this stuff, what they're going to

46:51

need to install one. How big of a, how big of a pad do I need to pour and how many, you know, bolts do I need?

46:58

And I'm like, Oh my word, dude, you know, we're nowhere near that. These people are,

47:07

that does show there's excitement for products like this. I mean, anytime I talk about wind energy on my channel, people go nuts with what can I get for my house?

47:17

It's like, there's really nothing good out there yet. Gotta wait. There's one other really cool. piece of tech that you may not have picked

47:26

up on in any of our older videos, Matt, but I'll tell you about it now. Have you heard of Flettner rotors? Yes. Okay. Yes, I have. They are doing testing right now with cargo

47:40

container ships and large ships where they are taking Flettner rotors and rotating them

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up on the deck of these ships. And they're, you tell me, how much are they seeing as far as improved efficiency? I

47:52

don't know the exact numbers offhand, but they're seeing a big improvement. Huge improvement. I've heard up to 30 percent improved efficiency.

48:02

For two years, we have had yacht and catamaran manufacturers calling us, and they've been

48:07

calling us because they want our wind turbines on their units. And then one day we got a phone call from a company asking if we would license their

48:18

tech to them. Because they're looking to use it in a Flettner rotor design while they're

48:23

going from A to B. So, you would have Harmony furled up in a cylinder, and you rotate it,

48:31

you just are running the generator in reverse, now you're improving your efficiency as you go from A to B, you anchor up when you get to your destination, unfurl, open them up,

48:40

you're producing power under anchor. You just blew my, you just blew my mind. That is really cool.

48:47

That is really cool. That's you because you may not have picked up on that little nuance. No. It's there. That is amazing.

48:55

That is so cool. That is. That's insane. That is really awesome. The universe is giving us so many things to work on, I can't even keep

49:04

my mind straight half the time. So we're just trying to keep our heads above water, figure out what we need to focus on

49:10

because so many things right now are just coming out of the woodwork. And it's like,

49:16

it's exciting, but it's crazy to try and manage all those, you know, juggling all those balls.

49:22

Half the time, I'm just like, guys, just let us figure out the recipe, then we'll all bake the cookies together, you know?

49:30

It's like, that's where we're at. Well, is there, is there any of that thing else that we haven't touched on that you'd

49:38

want to touch on? No, I guess I would just ask that people understand this is a lengthy and difficult

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and convoluted process. It's the real world. And in many ways, I think the model of what

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we're doing, of how we're sharing the journey, how we're being open and honest, we're not hiding things, we're not, you know, keeping it all hidden until the last day when it pops

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out of the, you know, the, the jack in the box, boing, and it's done. I think this is the way that research should happen, literally around the world. It should

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be an open, honest forum. You should be showing what you're doing, sharing what you're doing,

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and taking people along for that journey. It's a different. methodology than has been

50:21

employed around the world for, you know, the last hundred years. So that's why it's so strange for people to see us doing it. Um, in many ways, I think

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this is the way that it should be done, you know, to quote the Mandalorian, this is the way. This is the way. I would really like more of it. So I don't know, from one little

50:43

tiny company to the rest of the world, I would say, yeah, let's. Let's start opening up our research and doing more of this open, honest development and

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not hiding the ugly parts of it because people get jaded. People get, you know, false perceptions

51:02

of how things are made when that happens. And we have no grasp on reality, what it takes to really change the world and make it a better place.

51:08

If we just think we press a button and it's all better, then that means everyone else is going to take care of all the nasty problems and we can just, you know, do the fun stuff.

51:18

But In the reality of the world, everyone has to work to make it a better place. I love that. That's a perfect place to kind of end on that, because it's, I agree with

51:28

that 100%, three cheers for that. I wish people were more open about this, because it would also help the cynicism that's out

51:35

there. Uh, just like when it's, everything's in a black box, people let their minds run

51:41

wild. Um, when you're sharing it, that makes it a lot harder. So I appreciate that. Um, yeah, we can, we can wrap it right there. I just want to thank you again for taking

51:49

the time to talk to me. Sure. Thank you as well for your interest in taking your time.

51:54

We've been, I've been watching you at least for, I don't know, four or five years now. So it was pretty Wow. My wife Cheryl comes to me and she's like, so we got a call from

52:03

the, uh, YouTube guy Matt Ferrell. So, that was pretty cool, I have to say, that really,

52:15

that made me smile when I got, when we got your call. That is awesome. Yeah, yeah. When you guys sprang up, because we were doing this research

52:22

into this more residential kind of style of, Uh, Windpower. Yeah. And you guys sprang up

52:28

and I saw when my team shared with me, like, look at all the stuff they're sharing. I was like, my mind was blown of like, wow, I kind of went down a rabbit hole of like, I wish

52:37

everybody was doing what you guys are doing right now. Cause it's just incredible. So keep it up. Well, that's awesome to hear. We're getting, you know, at least

52:44

your vote of approval for what we're doing. We were hoping that we weren't, like, committing suicide with our company. Not that,

52:52

not that you're, you know. No. No. You know, it's,

52:58

it's nice to hear. I guess it's nice to, to hear someone like yourself who does interview and get in with a lot of different tech groups and things like that, to hear you say that.

53:08

It makes us think, okay, we're probably on to something that's at least in the right direction here. I love it.

53:13

It's inspiring. It's why, it's why I make the videos I do because I get inspiration out of all the folks that are doing incredible things. So keep doing it.

53:24

Thank you so much to Chris and Cheryl for taking the time to sit down and chat with Matt. And I know I look forward to hearing more about what they're working on later this year.

53:35

And if you're interested in following their work and finding out more of the details of their work, you can check out their website, which is at <https://harmonyturbines.com>.

53:47

com. And in an unusual move, Matt made sure to flag this for me, they're making their

53:56

progress and information about their research available publicly. So they are putting in

54:03

posts on their site. They're using YouTube to share basically two camera discussions

54:10

about what's going on with their work, a really interesting approach given.

54:15

How proprietary knowledge usually works and how corporations usually operate. So if you

54:20

want to follow along with what they're doing, they want you to do that. So please do drop

54:26

by their website. And I know that I'm looking forward to what they come up with in the next

54:32

year. And Matt, I hope you have. Plans to stay in touch with them so that we can follow them on this website as well. So

54:38

thank you everybody for checking out that interview. Don't forget, you can jump into the comments with any questions or comments about this episode or any previous ones. All

54:48

of that really helps the channel. Uh, don't forget to subscribe. Don't forget to leave a review. Don't forget to share us with your friends. And if you'd

54:56

like to directly support us, you can directly support us via YouTube's join button, or you

55:01

can go to stilltbd. Dot fm. Click the join button there. It allows you to throw some coins at our heads. We appreciate the welts and then we get to the difficult business

55:10

of talking to one another. Thank you so much everybody for taking the time to watch or listen. We'll talk to you next time.

Disruptive Investing Interview Video Transcript

0:01

all right well I'm so lucky today to have with me from Harmony turbines Christopher and Cheryl Moore they are the co-founders and co-partners of the

0:08

company and we heard about you guys from one of our viewers sent us a video saying what's up with this company

0:13

they're making some weird looking wind turbine thing you gotta look into it so we're looking into it thank you so much

0:19

for being with us today thank you for having us thank you very much Zach yes we've been watching your show for a

0:24

little while and um it's you know something that I would watch a video here a video there and it's been a few

0:31

years that I've known about you so awesome well that's the great part about this community right is that we all get

0:36

to learn about what's going on in sustainable energy so tell me about for people who've never heard of Harmony

0:41

turbines uh tell me about what it is you guys are working on and you know what's going on in your shop we decided or I

0:49

decided to make Harmony turbines because I've always been for the last 25 years

0:54

trying to come up with some way to work in sustainable and clean energy Tech as

0:59

a career you know I'm like doing it work for a living normally for

1:04

the last 30 years and I I didn't want to do that for the rest of my life I wanted to make a difference I wanted to get

1:10

some of the ideas that were up in my head out into the world to make a difference so that's where Harmony stems

1:16

from we were trying to just do something that would help make a difference make the world a better place and I've got a

1:22

lot of different ideas and inventions but Harmony seemed like the perfect opportunity at the right time so it was

1:29

just a Synergy of we need this Tech it's the right time the right place and you

1:36

know so that it just sort of sprang from that but what makes your turbine

1:41

different than I mean I go on Amazon right I can find a lot of like wind turbines in fact Jesse and I have made

1:47

some and bought some um and it just seems like there's a plethora of wind turbines what makes you a special we

1:52

were just talking about this really not even half an hour ago and it's like the

1:59

industry at large just said okay we've got these huge huge massive things that are out there on the coast that are 6

2:05

and 10 megawatts let's just shrink them down and give them to people and hope that they'll be happy with them well

2:11

Zach we don't want the big huge ones anywhere near our homes we don't want them anywhere near us because they're

2:17

ugly they're noisy they're problematic they break and blow up when the wind gets High I mean there's a lot of issues

2:23

so right now there's legislation and Court battles all over the place people saying not in my backyard you know get

2:28

that away from me why would we think that people would want to shrink that down and put it in their yard yay we

2:34

don't want the big ones in our yard but the small ones are awesome no you need to rethink this technology from the

2:40

ground up you need to rethink from a standpoint of what a consumer is going

2:46

to be happy with you can ride your bike to work or you can drive your car to work you choose to take your car so that

2:52

you get to work in one piece your hair is not all messed up you're not soaked because it was raining you know there's a lot of convenience that goes into that

2:58

decision yes the bike is more economical but there's reasons that you you ride

3:03

the car Harmony is that Harmony is the solution to all of the problems that we see right

3:10

now wind turbines and small scale you can drive all around and you don't

3:16

see them anywhere like okay one out of a thousand homes one out of ten thousand homes has one because the products that

3:23

are out there on the market right now they suck am I allowed to say that word on your show of course okay

3:29

they suck and we were like we can do this better we're smarter than that we

3:34

can make a product that actually works and people are happy with people are pleased with and that's what Harmony is

3:41

about doing something that makes the environment and you know the world a

3:46

better place but at the same time does it in a way people are happy with so that they buy it and endorse it so there

3:52

are two patents that we have for our technology that specifically address

3:57

um the the noise the startup speeds the protecting itself in high winds so that it doesn't blow up like so many we see

4:05

on YouTube so yeah there's you know specifically we have a furling mechanism for our our Scoops or for the wingspan

4:13

that help us protect ourselves and the generator helps with starting up in low wind

4:19

speeds it helps with the noise Factor like a lot of times people don't realize that the the noise factor that we hear

4:25

with current versions of wind turbines is not only perhaps the blade spinning but it also has to do with the generator

4:32

so we have a patent on a generator design that is

4:38

kind of like keeping our lips shut on that one um and we're working on it but it really

4:45

ties into um The Quiet features of our wind turbines um it helps with the it's

4:52

handling the RPMs differently than current generators used for wind turbines so we're just we're really

4:57

excited about how these two these patents these designs that he has how

5:02

they are directly going to address the reasons people don't buy these for

5:08

their let me say it the way it's supposed to be how they work in harmony with one another right see to make a

5:14

perfect product here there's that yeah all right so when Jesse and I have been doing some experiments with wind on our

5:20

own we really encountered the first big problem which I think a lot of homeowners don't know much about which

5:25

is wind which is that wind down here where us humans live is not the same wind that is as you go up it's terrible

5:32

it's terrible it's dirty wind exactly and I didn't understand it comes from all different directions things like

5:38

that yeah that is one of the main principal things that Harmony solves because it is a

5:43

vertical axis wind turbine and all vertical axis wind turbines can take wind coming from any direction and

5:49

continue spinning so I'm not sure so walk me through that because I didn't understand dirty wind before I just

5:55

thought oh if the trees are moving it's windy today but I quickly learned that our wind turbine didn't turn

6:02

and we would move it all over the yard and we're like what is this broken no it's not broken is that the wind is you

6:08

know 80 feet above me right did you have a propeller type turbine that you were testing yeah okay

6:14

so our turbine comes from a savonius Heritage so ours is a savonius rotor

6:23

vertical axis wind turbine we have ribbed sections in Harmony and then a

6:28

helix twist so you really are combining three things together with our turbine that you didn't have with your turbine

6:34

when you were testing your propeller one you need higher winds to get started spinning six seven miles an hour for

6:42

those to get moving because they're using um lift principles and aerodynamic

6:48

principles that are different from our technology so right off the bat unless you have six

6:54

or seven miles an hour of consistent wind you might have seen it go there it started Jesse and then it stopped and

6:59

you're like oh crap that was anticlimactic with Harmony one and two mile an hour winds the lightest little

7:05

gust it'll begin spinning now you're not let's not mince words here you're not generating power at one in two miles an

7:11

hour there's just no power in that wind but people who buy something they don't want to look out their window and yeah it's

7:17

not spinning mom nope it's still not spinning mom three days later still not spinning mom

7:23

it does no good people want to see something happening with a product they buy so they can feel good about it so

7:30

then the other problem we had was the opposite extreme that you talked about where the manufacturer said you can't have it blow over certain speed or it

7:36

will break and we're like well what what are we supposed to do like go take it down when it's so how does yours work

7:42

when it's uh too windy out so that is one of the primary things we have patented we call it furling technology

7:49

and basically we are reducing the exposure to the wind right now even the

7:54

big boys out there on the coast can't reduce their exposure they can feather their blades they can turn them but they

8:01

can't escape the wind and if I'm I don't even um think they escape in the way you and

8:08

I would think they are actually turning 90 degrees to the wind which makes their blade get buffeted even harder when the

8:16

wind is the strongest which to me is totally opposite of how we should be reducing that you know load and we we

8:24

are actually increasing it in those big turbines so they're they're fighting that wind even stronger by turning flat

8:30

to the wind with us with Harmony all we do is reduce our diameter and we don't

8:35

need a break to do it we don't need a dump load to do it all we need is a simple little stepper motor that turns

8:40

on for five seconds and it pulls you in maybe 10 10 if it's still not slow

8:46

enough because it's going to constantly be checking its RPMs then it says pull in a little bit more and it checks its

8:52

RPMs and if it's still too high it pulls in again and finally you're going to get to a point where it says yes now my RPMs

8:58

are safe and it keeps on spinning so here's the kicker those big wind

9:04

turbines and the ones that you can buy in your yard that are actually sophisticated enough to stop themselves they have to stop when the

wind gets

9:11

Beyond a certain point so now you're wasting what is essentially your best win you waited all month for good wind

9:17

now it came you have to stop but hey Mom the wind turbine's not turning

9:22

it doesn't even make sense I mean Zach how we've got all this technology out

9:28

there all over the place and we expect people to buy it it just doesn't make sense it's like nobody thought about this stuff from the ground up they just

9:34

took oh there's a big one let's make it small and sell it to people it's ridiculous I love this I love hearing

9:40

about first principles thinking and I love that you didn't stop and go well there's other wind turbines out there so

9:46

forget it I can't do that you you went let's start with the Clean Slate of paper we'll start over that is exactly

9:52

what we did we started with a clean sheet of paper let's make this beautiful let's make it make sense let's make it

9:58

easy for people to maintain and easy for them to you know have it in their yard

10:03

and instead of their neighbors being like John what the heck was that thing that you you know that's really annoying

10:09

what you bought they'd be coming over and being like dude where'd you get that that's freaking awesome that's what we want we want something that people when

10:15

they put it in their yard they get 10 more customers for harmony turbine because now people want what they have

10:21

not you know uh what do they call it an injunction that people or neighbors are filing against them because they put

10:27

this ugly thing up you know that's what we need to if we're going to make solutions that help the planet it needs

10:33

to be things that that find mass adoption around the world not just in the US or Europe but around the world

10:41

and so that's what we were doing we're coming up with technology that we know when people finally get this in their

10:47

hands they're going to be so happy with it and I think um one of our our hopes too is that like

10:52

right now there's a lot of legislations in townships and counties for homes that

10:59

restrict and have a lot of rules around what you can do with a wind turbine you know here in our area

11:05

there's only one person we know that has a wind turbine down the road and there's there were a lot of rules for her to put

11:11

that in and what we're hoping is that with our design and the the quiet and

11:18

Beauty you know that kind of thing and it protects itself we're hoping that it'll make it a lot easier for townships

11:24

and counties to say okay all right yes this this makes sense we can allow our

11:30

folks to do this so that you know there's we're hoping that it prompts legislation changes after things catch

11:37

on after you get enough of these out there and people start saying these are great what's wrong with our laws that

11:43

we're not allowed to use this right now it kind of makes sense they the the units that are out there are horrible

11:49

they suck they're terrible and annoying and they don't work and they're problematic why would we make

11:56

legislation go to the the effort of making legislation to let people put these annoying horrible things in their

12:03

yard it's it doesn't make sense but when you have have something that's amazing and it just works

12:09

now it makes sense to give that some you know give that a second look let's maybe

12:15

look at changing this law if it's this type of turbine then we'll allow it and things like that I think that's going to

12:20

start catching on all over who do you think your typical customers are going to be do they live in a certain part of the country do they have to live in

12:26

windy spots do they have to have a certain income so obviously you need wind to make this work it's not magic

12:32

it's not perpetual motion or a Zero Point Energy so you need win bottom line

12:37

if you don't have good wind in your area then probably a wind turbine is not for you but if you have decent wind in your

12:44

area then that's our perfect customer we want to be all over the world we want to

12:51

be everywhere we initially would Target the Boating and the coastal

12:56

areas as our strongest proponents our strongest initial Market because when

13:01

you think about it people who have boats they already if you go down to the shore

13:06

and you look in the slips and the docks in the marinas they've got hundreds of these little stupid wind turbines on

13:13

their boats right now because that's all they can buy I have people calling me I'm not joking three times a month Chris

13:20

when are you guys going to come out with this product you know I need this so bad I've already gone through three wind

13:25

turbines on my yacht this summer three they've already got the battery banks on their boats they've already got

13:31

inverters on their boats they already have good strong winds constantly available on their boats and they have

13:37

the problem of high winds coming up unexpectedly all the time on their boats

13:43

sounds kind of like the perfect solution or you know Harmony sounds like the perfect solution for this scenario so

13:49

the Boating sector is one of our top places that we're going to Market to right out of the gate coastal areas as

13:56

well because other than the fact that they may not have inverters and Battery banks on their home they've got all the

14:01

other scenarios you know with the high winds and the constant Goods strong winds so our hope is that these would be

14:07

our initial strong customers and then from there kind of grow as a Grassroots movement right then it can move into the

14:13

home environment you know as people see the success of them in the coastal area

14:19

and the acceptance of them then I think it'll just naturally

14:25

gravitate and start happening into the the normal environment right as you move further west and into the Inland areas

14:33

and there's going to be people that just buy it because it's freaking cool and they love it and they want to endorse it

14:38

but they have no wind so you know you're going to get some of those scenarios where people are like this is horrible it's it you know I don't have I'm not

14:45

getting very good production well it's not magic you know we have to maybe put that as a disclaimer it's awesome but

14:50

it's not magic now you guys got started in 2020 so your relatively new startup where are you on your journey because as

14:56

we've learned from Elon it's one thing to build a prototype it's another thing to go to mass production so are you still fine-tuning your prototype are you

15:03

working on mass production where are you yeah we are actually Machining parts and cutting parts right now we've gone

15:08

through three different iterations of trying to come up with a prototype that would work for the consumer and be

15:16

inexpensive enough that it would be fine Mass adoption we began with a larger

15:22

dream of having like a one kilowatt unit that we could send out to customers but at that one

15:28

um last year I had to kind of put that in mothballs for a little bit it's too big to launch a product with something

15:34

that we can't even make in our shop and get out in mass production it's just we have to be able to build it to test it

15:40

to then move it out into production so we backed off and now we're starting our

15:46

we started our 400 watt campaign just two months ago we hit a brick wall with

15:53

the Plastics manufacturers and plastic suppliers that we were working through to get the Scoops and some of the

15:59

gearing and things like that produced we were looking at getting them injection molded and it was the prices were just so horrendous act that we couldn't do it

16:06

so we said you know what okay we mothballed that and we retooled and now we're doing a 100 percent fully metal

16:14

aluminum and steel prototype which will probably roll right into our what we would call our mark one turbines that

16:21

that we roll out to early adopters and early beta customers so the the footage

16:26

that we would be that we'll be providing you is of our proof of concept so we have the proof of Concepts created

16:32

perfect concept prototypes right they they furl and whatnot but they're not weatherproof so literally right now the

16:38

Prototype that we're working on is a weatherproof one like that can handle the rain and all that that we can we're

16:44

going to make a couple of them here all at the same time and start putting them out there to get our data it's our minimum viable product

16:51

our MVP so basically we're working on two units right now one for our shop and one for Bucknell University because

16:57

we're partnered with Penn State Bucknell and northumbria University for larger research projects that they're actually

17:03

doing on on our Tech on Harmony turbines specifically Bucknell is getting delivery of like unit number two

17:10

literally that unit will be placed up on hardpoints on their engineering building and they're going to be monitoring it 24

17:17

7 and working with all kinds of good delicious juicy data for us so the two units were building and cutting gears

17:23

and cutting parts for right now are our first two Mark II yeah I said Mark one

17:29

before but our Mark II prototypes the mark ones were the plastic ones that we had to scrap so Mark II 400 watt units

17:36

is what we're rolling out with that'll be what's what we move into you know we may be up to mark four or five by then

17:41

but it should be some addition or rendition of these 400 watt units fully

17:47

metal and as we tweak and test and find problems we're going to adjust we're going to begin rolling them out to

17:53

customers maybe we'll make after this run of two we'll make four more and we'll get them out to early adopter

18:00

locations you know that will help us gather data and then we'll make 10 more and then we'll make 20 more and finally

18:06

at that point we'll say okay we've worked enough bugs out of this it's been in the field for a year and a half 18 months is long enough to feel good

18:13

enough about going into low volume production and from there who knows you know we may end up partnering with a

18:19

larger entity who wants to get these out in mass or maybe someone would just want to buy us out any of those options would

18:26

be viable we're not looking to do this for the rest of our lives we're looking to get them out to people and we need to

18:32

get it to a certain point where then we can hand the reins to a responsible company that will do that that puts it in writing that they are going to be

18:39

getting this out to the consumers oh that's really interesting so let's talk about right now you're approaching I

18:44

think your third funding round right and this is going to be a crowdfund I think think I heard on start engine and so for

18:49

people out there who are like I don't know you're talking about Zach what is crowdfunding uh can you guys kind of walk us through that a bit sure you have

18:56

two ways of raising funds in the crowd um Spectrum one is your Kickstarter and

19:02

Indiegogo where you take pre-orders for a product and then you make those widgets those products with the money

19:09

that you got from the pre-orders and then you disseminate them after you're done making them to your thousand plus

19:15

customers or whatever our model was too expensive to do that we weren't going to get a lot of people

19:21

that would buy into an unknown you know like okay we could

19:26

have set a price at three thousand dollars or something hoping that that would be enough make 100 or 500 or a thousand of these

19:34

units and then get them out to people the the road for that was way too long we had too much testing too much

19:39

iteration you know and iterative work and things that needed to be done too many unknowns it was a far more

19:45

complicated widget than just a simple new coffee mug or something

19:51

so we went the other route that is equity crowdfunding you give away small chunks of your company in exchange for

19:59

people sending you investment Equity income that comes into your company that you then use to develop your product and

20:06

go through what we're doing right now so our first two funding rounds that we did were with we funder we raised a

20:13

total of about four hundred and four thousand dollars between those two rounds to get the equipment we need to

20:18

rent the space that we need to get them models and the raw materials and the tooling and everything because there's a

20:25

lot of iterations a lot of changes a lot of you know 90 degree turn we were going

20:31

in this direction we have to shift and people have beat us up for a while saying well you were stupid getting that

20:37

shop and getting that equipment you could have just farmed it out to you know shops to to make the parts for you

20:42

but what they don't understand is when you're doing real difficult research and r d like what we are with a lot of

20:49

moving Parts a lot of unknowns you have to change and iterate maybe five six

20:55

seven times in a year and then we've been at it for two years so now what 15 iterations later all these changes we

21:02

would have been bankrupt before we even got started and not only that even shops in our area here the lead time I'm on

21:09

jobs is two months I mean you can't make a change to a part and say okay now what

21:14

do we do for two months until we get that piece back in and and then we can keep on going like you you can't

21:21

be productive that way and so we we feel good about how we have built the shop

21:27

and um absolutely put it together that we can just we just do it all ourselves

21:32

yeah we literally are making it it works 85 of the parts that we need right there

21:38

in shop and we can instantly in a moment's notice switch gears change designs I recap it recam it and then two

21:45

days later we're Machining the parts I mean come on yeah we got beat up in the beginning last year by people well you

21:51

were so stupid doing that you know you're so irresponsible to your investors I call BS on that because we

21:58

did the most amazing thing that we could have done all of the equipment's used but we own it 100 we have no leased

22:05

equipment we have nothing other than our rent that we pay and our time right and we

22:11

are literally able to move at the speed of our own shop now instantly making

22:16

changes instantly making iterative updates and we have the capabilities to make like I said 85 of our pieces and

22:24

parts right there I mean that's that's gold when you really think about a little prototype you know shop like what

22:30

we are and the goal of the next fundraising campaign that we do is you

22:35

know we're we're working right now on making uh the prototypes that can actually be put out in the weather to

22:42

gather data and so we can see what we need to change so that would help push

22:47

us through that phase which leads into low volume production if we have units

22:53

out there that people are starting to test for us and they're working then we can start taking pre-orders and start

23:00

you know doing our low volume production our shop can handle the low volume production so the the goal of this

23:07

campaign is to push us through the prototyping this last piece of it some data Gathering and then put us into the

23:14

low volume production where we can start generating our own Revenue that's we're hoping yeah if we can raise enough money

23:21

to get us through the next 18 months or so we should be there so we're literally like two months away from our U our two

23:28

first units that we're making being to a certain point that we can hand the unit off to Bucknell and we can actually

23:33

start getting some data we have our generator that Cheryl spoke of that

23:38

we've been very very hush-hush about because it's it's so Cutting Edge that

23:44

it's um I'll I'll give people a teaser I mean it's patented so it is public domain but it's an axial flux generator

23:51

with solid core technology it excites both the North and South Pole of the

23:56

cores at the same time but it has what's called a variable air gap so Zach if

24:02

you've been following Tesla and you know the EV market for a long time you're

24:07

starting starting here the buzzwords axial flux Motors all the time now over the past six months eight months axial

24:14

flux Motors axial flux Motors well guess what Harmony turbines has had the patent for two years on the first axial flux

24:22

generator with a variable air gap so we simply start with the upper and lower

24:27

magnetic platters far away from the coils and when the wind begins spinning

24:32

it'll basically have zero resistance we're able to start spinning in one to

24:37

two mile an hour wind now you get the flywheel effect going you get all that mass you get all that inertia moving and

24:44

then after you're up to a certain RPM range those platters will begin moving down into proximity of the coils where

24:51

now you have all of the beautiful benefits of the axial flux motor the solid core dual pole coils that we have

24:57

so he had mentioned earlier that our wind turbine starts up in one to two

25:03

and maybe not generating electricity it's just you know spinning and this is part of the the beauty of the generator

25:10

the harmonious um is that because you know we're just

25:15

we're just spinning but to we're getting that momentum that then allows us to start generating electricity earlier in

25:22

the process than the normal wind turbines that you see out there that makes so much sense I was going to ask you what is this magic that allows it to

25:28

spin at low speed so that is thank you for that explanation that's really cool have you heard the term synchronicity it's where the universe is pushing

25:35

things together to happen at the right time that's been happening a lot for us and you're just one of the three or four

25:42

very big things that have happened right here right when we need it and it sort

25:47

of feels like the universe is saying all right a little tiny Harmony turbines will will help you get through this because we're not out to be rich and

25:55

famous we're not out to be Titans of the wind turbine industry we're just looking to finally do our one small part to help

26:03

make the world a better place and we're doing it from the ground up with a product that makes so much sense and

26:08

when you look at it and when you see it and when it's functioning as it should be people are going to want this everywhere in the world and in the end

26:15

it's going to help I gotta say as an investor I was really kind of relieved when you talked about that if you get to

26:21

the mass production phase that you guys aren't going to try and maybe take that on yourselves because a lot of companies I think go oh yeah when we get to that

26:27

part we'll just ramp up a factory or something and we'll do it and it's not that you can't but it's um it's really

26:33

tricky and lots of companies you know get stuck at that point right it's another 10 years of horrible crazy

26:40

sleepless nights and a divorce or two and yeah it would be awful no we have no

26:46

crazy delusions of doing that we will hand it off to a partner either selling it completely or partnering with a

26:53

company that puts it in writing that they will have X number of units out to the public by this date and if they fail

26:59

to do that the rights would revert back to us and we could sell them to another company or whatever we're not in any way

27:05

delusional enough to think we could take this to Mill millions and millions of people we're going to get it to the

27:10

point where low volume production is getting a good name for harmony out there people see what it's all about but

27:16

now our biggest problem is how do we get it to the 20 000 customers that are banging at our door so you talked about

27:22

your first unit is probably going to be a 400 watt unit for those people watching who are like I don't know what

27:27

that is but 400 watts can you walk us through like what does that allow a person to do like what how does that

27:32

help yeah um and we get people asking all the time will this run my house or can I run my

27:39

house on this no it's just like a rain barrel you collect rain when it rains and it goes into your rain barrel and it

27:45

offsets how much water that you have to use from the city to go water your

27:50

garden or your plants it's there when you want to offset those costs so in the

27:56

case of Harmony or any solar or wind that you put on your home they're all the same it's not like we have something

28:01

different if you have solar if you have wind on your property it all works the same you can dump it into a battery

28:08

and then that is where you can store the power to use it as you know as you need

28:14

to or during the day through inverters and things like that or you can do a grid tie inverter where as you're making

28:21

it it's just running into your home and if you have extra that you're making beyond what your home is using because

28:27

all the lights are off and people are at work and then it's sending some back to the grid either way it'll work in either

28:34

of those two scenarios where you're either sending the power back to the Grid or you're putting it in a battery Bank to then later be used as needed or

28:42

on demand so when we when we talk about the 400 watt units they may be smallish

28:47

you know and and the power that they produce is you know produces power but

28:52

it's not like the one megawatt units or anything like that but the the beauty of having a vertical axis wind turbine is

28:59

that when you put multiples together uh the Oxford University had an article

29:05

that they put out last year last year April of last year discussing uh the

29:10

efficiencies being increased for vertical axis wind turbines when they are clustered together so so that's cool

29:17

because even though we have a little form of units you can put a couple in your field in your backyard whatever and

29:24

Not only would they do 400 watts but they would if you place them properly you could get even more power out of

29:30

them so is it it's Penn State that is looking at the clustering effect that's

29:36

part of the research that they're doing is what kind of like how far apart would you have to have them what arrangement would you do for maximum efficiency when

29:43

you're clustering them together so that's another exciting piece about how we're doing our wind turbines in the

29:49

design and and bringing vertical axis wind turbines back like making them a thing they're they're not a thing right

29:55

now so they've gotten a lot of bad press over the last 60 years and I'll send you in

30:01

our b-roll the footage of the the chart that actually it's got a chart of like

30:07

horizontal axis wind turbines and the American Windmill and stuff like that but they drew the line wrong where they

30:15

labeled American Windmill and a savonius turbine the savonius turbine when they originally tested it was over 30 percent

30:21

efficient and the curve was showing that and then somewhere you have to wonder

30:27

did someone get paid off you know did this happen by accident or did it happen because someone paid someone you know 30

30:33

000 bucks 60 years ago to just draw a line to the wrong place but that has been literally taught in

30:41

universities and in engineering classes we had Dr uh Pana from Penn State

30:47

slapped her hands down on the table when I was talking about this in our Zoom video and she was like yes yes yes I've

30:53

been trying to tell my students that for years the charts are wrong but it's cool because I can't say I'm

31:00

upset about it it's allowed us this little niche market in which to grow where nobody even gave us a second look

31:06

they're all like oh it's vertical axis when turbines those are crap well guess what we're about to turn that incorrect

31:12

data on its ear and as more and more engineering white

31:19

papers are written and studies are done and they prove yes these things are 30 plus percent efficient now we're moving

31:26

into the realm of mass adoption because the way those charts were written they

31:31

were like 10 percent efficient and of course no one's going to look at something that's only 10 efficient but the savonius turbines are 30 plus

31:39

percent efficient when you add the Helix twist like Harmony has now you raise the efficiency more when you add the add the

31:46

ribbed sections to them now you raise the efficiency even more and the biggest drawback in those articles that were

31:53

written 60 years ago that they found with the savonius turbine was its problems in high wind situations

32:01

prone to destruction in high wind situations hello we've solved that problem so it's

32:07

kind of like The Best of Both Worlds now we have this super strong turbine able to start and run in low wind speeds with

32:14

great amounts of torque and reliability but we've also solved the high end problem that the old ends you know not

32:21

ancestral ones but the older models 60 years ago had we have solved that with our referraling

32:27

technology I love that you talked about synchronicity because I think that what's happening right now is with

32:33

batteries and with the you know YouTube the ability for people who might have heard about this in the past and gone

32:39

well I don't know that sounds pretty scary I don't know how to do it now you're seeing that people out there are

32:44

showing you how to do it and that's what we want to do on this channel same thing is we want to show that like batteries are not scary
wind turbines are not

32:50

scary solar's not scary it's all stuff like you're you're in your garage now probably America right working on a car

32:57

that's scary right it has things blowing up inside of it and we're all used to doing that right going into our garage

33:02

and working on an old Mustang or something and I just think that if we can go forward working on new technology

33:08

that is not scary really and can make your house sustainable uh I think

33:14

everyone's gonna be doing these projects they're going to be fun to do and I think there's going to be more and more electricians and
other trades that are

33:21

going to say like oh yeah we can do those projects for you I think what's weird today is that if you talk to most electricians and tell me if
this is true

33:27

in your area but if you talk to them about power walls or solar a lot of them are like yeah I don't do that and it's

33:33

like why wouldn't you do that this is exciting technology I think it's because of what we just said the products that

33:39

are out there on the market suck and when you look at the power wall market

33:44

and things like that and even electric vehicles the best technology we had up to this date was your lithium ion now

33:51

they're finally starting to talk about solid state batteries and carbon zeolites and carbon Bucky Balls and

33:57

things like that and you have the ability now within the next five years to where we are going to have either

34:03

super capacitors or Ultra capacitors to store this power where you've got millions of charge cycles Zach Millions

34:10

before you have any degradation and when we get to that stage synchronicity it is

34:16

the perfect time to now add your solar and your wind right on your home because

34:22

with a bank of super capacitors in your basement that could give you two or three days of storage

34:28

all of the problems of the current technology go away and you can actually have the same thing going on

34:35

like with the cell phone industry where people went you know and started cutting their their landlines because they now

34:41

had a cell phone and they could be disconnected we're going to be able to disconnect from the grid when we get to

34:47

the technology that you're talking about very very soon in a few years and when

34:52

that Battery Technology finally comes to maturity people are going to be looking desperately for the best sources that

34:59

they can dump into to fill their Banks up the best solar probably you know thin film solar that's going to be out there

35:04

and multi-layer solar and then the wind turbine technology which we hope Harmony

35:10

will be at the Forefront of so our technology will scale up from

35:15

small scale and home and Business and boating all the way up into who knows you know maybe 100 kilowatts of size I

35:22

don't ever see Harmony getting into the megawatt size but I could see it getting into hundreds of you know 100 kilowatts

35:29

or something like that and as Cheryl just said the clustering effect is going to be huge in Grid layouts like that

35:35

we're out in the ocean now you have these beautiful things out there they're not you know monstrosities that are

35:42

causing problems but something beautiful that now if something happens to one or two of them you're not knocking out

35:48

power for a whole area because you've got redundancy in numbers and the

35:53

ability to set them up with easier cheaper quicker more efficient you know Rigs and cranes and stuff instead of the

36:00

500 Tall Foot cranes that they need to do it now they could do it with 10 times less cost and 10 times less danger to

36:08

get these set up and that's what's appealing our technology can scale to a certain point

36:14

and be environmentally friendly all at the same time well guys I heard that you

36:19

just went live with your start engine so that is available now for people who are interested in investing yes yes yes it

36:26

is and there are perks we have several layers of perks for our investors uh one

36:31

of them is time based so uh we have it listed there on the on our campaign page

36:37

on start engine now Jesse and I say this all the time um this is capitalism and if you put your money to work on

36:43

projects that you want to have happen then they tend to happen and so I'm going to say right now I'm very

36:48

interested in investing I'm gonna wait till Jesse is seeing this interview and talked about it with me but over on patreon we're going to announce whether

36:55

we're investing in you guys or not so please head on over to our patreon and check that out on our investor Club it's

37:00

not a guarantee all startups are startups and so really good chance that they're not going to make it but if you don't invest

37:07

in the things you believe in then they're definitely not going to make it so if you believe in what these guys are doing over here uh I urge you to go

37:14

check it out and think about it and talk to your friends and family about it and see if you want to invest I love that you're doing crowdfunding because for a

37:21

very small investment as you said a minimum of 200 what you might go and spend on a fun weekend in Vegas right

37:27

you can put into a company that could turn into something really big and I'm really excited that you're willing to

37:33

have some other company maybe take on the production part I mean let's talk about a gigafactory someday that maybe

37:38

has a corner of it working on Harmony turbines like that's a possible thing I'd love to chat with

37:45

Elon about this but you can't just call Elon up and chat to him on the phone maybe you can but people ask us that all

37:51

the time why can't you call up Elon I know if I could this would be on my top 10 list of what I want to talk to him about yeah we probably also wouldn't

37:58

need crowdfunding if we had someone like him that you know was like yeah that's a really cool project how much do you need

38:04

well that does make you realize that um you've done the hard work of solving this problem you're iterating right now

38:10

it seems so easy to think like oh well I'll just do a vertical turbine yeah that's that's it I'm sure as you've said

38:16

you've gone through dozens of iterations tweaks um and you're constantly getting data and to that point I would love if

38:23

uh if I can be on one of your early lists of testers out there we would love Jesse and I to test out your turbine give you the data you need because this

38:30

is how we move the ball forward yeah we are going to be looking for people just like yourselves just like the two of you

38:36

to do that for us so you're the perfect candidate and we will call you yeah

38:41

awesome yeah and I think it'd be great so people can kind of you know keep their eye on what's going on I think the

38:47

problem with the internet the internet's awesome right YouTube is awesome but the problem is also we get lots of videos

38:52

sent to us of companies and people and lots of things that look good on their face like you know perpetual motion

38:58

machines look great on their face uh you know wow free energy until you look a little deeper and I love that we got to

39:04

talk to you today to find out who are the people behind this um it's just thank you again for taking

39:09

the time to talk to us you're welcome thank you Zach yes we're going to be speaking with Cheryl and Christopher on

39:16

our patreon investor Club on a live stream with them so that you can ask them questions if you're interested in

39:21

doing that it's going to be on Monday October 17th so if you're seeing this over the weekend you can prepare for

39:26

that head on over to patreon.com now you know if you haven't already you can support us for as little as a buck a

39:32

month and if you want to join our patreon investor Club that's even better because then you can get to talk to CEOs

39:37

like this and find out if this is the right investment for you so we'll be doing that on October 17th on Monday and

39:43

you get to talk to them live on our live stream we'll see you there

Transcript for Solving the Home Wind Power Problem! (Two Bit da Vinci)

Introduction to Harmony Turbines

0:01

we're in a golden age for solar panels

0:02

and home batteries with prices coming

0:04

down and adoption going up the same

0:06

hasn't been true for the wind

0:09

turbine this behind me is Harmony's

0:11

berkele access wind turbine and if you

0:13

get in tight you can kind of start to

0:14

see some of the magic that makes this

0:16

special I've also learned a ton about

0:18

the challenges of residential wind

0:20

turbines and why we might finally start

0:23

to see a golden age for that so let's

0:25

see if you can't figure this out

0:26

together I'm Ricky and this is tuid

0:28

advention

0:30

this video is brought to you by

How the Savonius Turbine works

0:33

[Music]

0:40

ecoflow Harmony makes What's called the

0:42

savonus wind turbine this is what it

0:44

looks like imagine taking an oil barrel

0:47

and cutting it in the middle and

0:49

offsetting it right that's kind of what

0:51

you've got now their iconic design here

0:53

has an helical component and the reason

0:55

for that is that way there's always some

0:57

part some scoop that is oriented to

1:00

where the wind is coming from so this

1:02

was minimal stall always be able to get

Different designs testing

1:09

started you've actually built a wind

1:12

tunnel to test on these different

1:14

designs and see how they perform correct

1:16

basically we needed to look at a lot of

1:18

different scoop geometries um

1:20

variability in all kinds of things

1:22

permutations from the performance is

1:26

best suited at small scale because 3D

1:28

printer technology can bang this out in

1:30

you know 3 hours versus sitting there

1:32

and building something for 3 weeks you

1:34

can't rate the turbine this way but you

1:36

can see how a compares to be and that's

1:38

the big thing so we have just a classic

1:41

what do you call it the half split yeah

1:43

basically this would be your savonius

1:45

your sort of a generic savonius design

1:48

and that's what that one is right there

1:50

sing around 2.3 volts I'd say right

1:52

right let's try this one what did you

1:54

call this one again a Venturi effect

1:56

fluid turbine vft so this has a lot of

1:58

the benefits of that classic savonius

2:01

with a little bit of maybe stall

2:02

protection with a little bit more of a

2:04

capture area right but I'd say that's

2:06

pretty much what we were seeing before

2:07

perhaps even a tiny bit higher although

2:09

that would be much more difficult to

2:11

machine and much more difficult to furl

2:13

because you have no way of holding on to

2:16

it like the top and bottom oh there's no

2:19

place for the gearing or anything to be

2:21

so this is what we see a lot in the

2:23

marketing and on on your YouTube channel

2:24

on our yeah we call it our gold standard

2:26

I'm you know we laughed about it after

2:28

we realized we literally printed in Gold

2:30

filament so it's our gold standard that

2:32

we've been showing for several years

2:34

yeah let's see how it performs so the

2:36

idea was that you would be able to take

2:37

and wind in any direction and never

2:39

stall but it is not necessarily the best

2:42

design and the wind tunnel has proven

2:43

that for us that does look really cool

2:46

yes but that's substantially lower yes

2:49

so at some point you've got to say hey

2:51

it looks cool but if it's not performing

2:54

in the end it's all about the return on

2:55

investment for the customer so what's

2:57

really fascinating about engineering is

2:59

as you see

3:00

the bin that's why I'm so glad you

3:02

showed us the bin of all the trial and

3:04

error you can see the thought process

3:06

you can see how this was approached and

3:09

I know what this was this was what if we

3:12

get all the benefit of having the

3:14

classic y savonius while having a little

3:17

area allocated for catching wind in

3:20

different directions to help with

3:21

stalling right that's exactly what this

3:23

is you're to put that one on I I I do

3:25

want to try I'm curious what the drop in

3:27

performance would be go ahead and if it

3:29

would be worth it

3:30

right okay yeah we were trying to go for

3:34

the increased performance that this

3:36

would yield but whoa yeah I know this is

3:39

why it's so cool to be able to do this

3:41

experimentation this is our best one yet

3:44

yeah but that one would be a little bit

3:47

difficult to to make it work out there

3:49

in full scale I'm trying to understand

3:52

why this would be so much better this

3:54

these are all questions that many many

3:57

tens of thousands of dollars in a cfd

3:59

laboratory would be able to explain we

4:02

don't have that so our lowtech solution

4:04

is our little wind tunnel here shall we

4:06

go check out the yes the large scale

Full scale turbines

4:11

yep

4:12

[Music]

4:15

okay you know we go from 3D printed wind

4:20

tunnel to full scale this is where we

4:23

get to see the rubber meets the road

4:24

here did what the wind tunnel showed

4:27

actually perform in in full scale true

4:30

savonia turbines allow a little bit of

4:32

the wind to come from the front that's

4:34

catching and shuttle it through this Gap

4:36

to the one that's you know coming into

4:39

the oncoming wind so that helps to push

4:42

it around a little bit further a little

4:44

bit faster check this out this is the

Ecoflow Info

4:46

next generation of batteries from our

4:47

sponsor this week ecoflow and as you can

4:49

see I've been using their batteries for

4:51

years now in fact the Delta Pro 3 I took

4:53

to Burning Man and I used it to power

4:55

everything from air conditioners mini

4:56

fridges and microwaves pretty amazing

4:59

but today I want to talk about these two

5:01

the Delta 3 plus has a total of 13

5:03

output ports six 110 volt AC ports up

5:06

here two 36 w usba ports two 140 W USBC

5:10

ports and a car Power output all in the

5:13

Delta 3 plus can output 2600 Watts

5:16

thanks to its X boost technology

5:18

charging is equally impressive plug into

5:20

the wall and charge at, 1500 watts in

5:22

less than an hour it even has two solar

5:24

panel input ports each good for 500

5:26

watts in fact we've got something

5:27

powering it right now or in emergency

5:30

it'll even charge via the ecoflow dual

5:32

fuel Smart generator with the optional

5:34

extra batteries you can extend this to 5

5:36

kwatt hours of storage but my favorite

5:38

use case is using it as an uninterrupted

5:40

power supply for our Network equipment

5:42

and internet modems you can just plug it

5:43

in and in 10 milliseconds it'll switch

5:45

over and power anything in the event of

5:47

a power outage by the way it even has

5:49

storm warning mode which will tell you

5:50

when storms are upcoming to remember to

5:52

top off the battery and be ready and you

5:54

can even set it to time of use mode to

5:56

save your energy and use it when

5:58

electricity is the most expensive charge

6:00

when it's left and for the ultimate in

6:02

portability we have this the river 3 it

6:05

weighs just 7.8 lbs and you can take it

6:08

with you anywhere it has two AC ports

6:10

with up to 300 watts in total or 600

6:12

thanks to X boost it has two USB A's and

6:14

a 100 wat USBC Port as well and with 245

6:18

W hours of storage you can fully charge

6:19

my MacBook Pro about 2 and 1 half times

6:22

you can charge either battery from the

6:24

wall from solar panels from your car or

6:28

from a smart generator the are endless

6:30

the river 3 is drop proof from over 3 ft

6:33

and it has an ip54 waterproof rating

6:35

it's really durable and easy to take

6:37

anywhere there really is a battery for

6:38

every use case and if you want to learn

6:40

more about eof flow's class leading

6:42

battery technologies check out the links

6:44

in the description we also have some

6:45

discount codes down below and you can

Energy production

6:47

check it out for yourselves huge thanks

6:48

to ecoflow and you now back to the show

6:51

so this is the the single drum we also

6:55

have the the Helix designs over here

6:57

right yes and you can just see how much

6:59

more complex it gets because every one

7:01

of these has its own sets of Gears

7:05

coming off the main shaft its own

7:06

furling yeah and that all translates to

7:08

cost of production you know the

7:10

complexity the time it would take to

7:11

build it the components we have to

7:13

machine all of that comes into

7:15

play this is one that I made back in the

7:18

day in my basement so this has the

7:21

ability to do everything remote control

7:23

so this is closing now yep it's closing

7:25

so we're 50% closed right there already

7:29

yeah well now now it's becoming pretty

7:30

obvious I think yeah in the beginning

7:33

you know like you can't even see when

7:35

it's yeah happening in the beginning so

7:38

from 100% open to like 70% open it's

7:41

very hard to tell the difference so in

7:43

the world of solar panels we have

7:44

ratings right we have your 300 WT panels

7:46

or 400 500 WT panels we have to achieve

7:49

that level of marketing for the wind

7:52

industry so talk to us about the size

7:54

and what do we got here eventually when

7:56

we go into production we will of course

7:58

have the ratings on this our last step

8:00

is certifying the turbines finding the

8:02

correct generator that'll be coupled

8:04

with this to deal with the RPM range and

8:06

the torque requirements that we have but

8:07

this should be mathematically about a

8:10

400 to 500 watt unit in a 25 mph wind

8:13

this was actually the very second one

8:15

after this one was made this was the

8:18

next one you went from that to yes to

8:20

right off right because we were you know

8:23

I was really like only around 200 Watts

8:25

with that one and I wanted to be

8:27

somewhere up around a kilowatt the width

8:29

times the height is really what gives

8:31

you that exposure to the wind and then

8:33

you just your efficiency is what tells

8:35

you whether you're getting that or not

8:37

gotcha so and so what this is was this

8:40

the test rig that you realized how yeah

8:43

how powerful the just the full we have

8:46

the the wind is coming on through really

8:48

whipping through here yeah 15 M hour

8:51

wind right now is what we're seeing on

8:53

the

8:53

anomer and you can see that thing is

8:56

really kicking by the way these would be

8:59

mounted 10 ft away from the ground and

9:02

then the the whole entire rig is about 6

9:04

feet but it would be out of the way it's

9:05

not like you're going to actually

9:06

interface with it yeah you can't hit

9:08

your head on it or something can I can I

9:10

do the furling here yes you can so here

9:13

we've got the controls to furl and

9:15

unfurl I think this is yep it's so quiet

9:18

you can't even hear it so we're closing

9:21

it down now I mean there's there's a lot

9:23

of engineering and all the gearing and

9:27

controls and logic right all this is

9:29

automatic yes it'll be basically

9:31

monitoring its RPMs in a pit Loop so

9:34

where do I want to be if my RPMs are too

9:36

high I need to furl in for 5 seconds and

9:38

then it's going to check what its RPMs

9:40

are in like 15 seconds or so this bulb

9:42

now is pretty den and as we've brought

9:44

in the furls you can see that the uh the

9:46

RPM the rotation of the system has come

9:49

down now I'm going to unfurl it and then

9:51

we'll see nothing's changing with the

9:52

air flow the air flow is the same but

9:54

now we're unfurling it he's holding the

9:56

light look at how much brighter that got

9:57

it's just a little indication of the

9:59

power output of this thing that wind is

10:01

really whipping through yeah the thing

10:02

that I want to impress right now is the

10:04

generator is what's limiting us because

10:06

of the RPMs like if you put your hand on

10:09

this I don't believe I could

10:11

stop this without incredible amounts of

10:14

force

10:15

so it's this is not meant to run in this

10:20

really really really low RPM range

10:22

that's why that's all we're getting so

10:24

one thing you mentioned that the the 500

10:26

watt rating is for wind speeds of 25

10:28

miles an hour yeah how would that what

10:30

would that look like if you were getting

10:32

5 or 10 mph you know the goal is here at

10:35

25 mph making 400 to 500 watts but the

10:38

hope is that you find the generator that

10:40

would still allow you to make maybe 20

10:43

watts at that 7 mph range that would be

10:46

great got it so finding the right

10:48

generator is going to be key to that so

Maintenance and price

10:50

keeping in the trend of comparing with

10:52

solar this has moving Parts on like

10:54

solar tell us about maintenance and some

10:56

of those considerations so of course

10:58

every thing that we do here is trying to

11:01

think of longevity and return on

11:03

investment one of them is the thrust

11:05

bearing in a vertical axis wind turbine

11:07

they're a major concern because in

11:10

almost all vertical axis when turbines

11:12

out there the thrust bearing is one of

11:14

the main failure points in them we have

11:16

gone to in the Mark 3 units a magnetic

11:19

bearing we actually had started looking

11:21

at doing it a while back but you can see

11:23

if I just lift up on

11:26

it see it lifting there that is the

11:30

magnetic bearing in here between two

11:32

very large n45 magnets so they're in

11:35

opposition to one another just like when

11:37

you were a kid in grade school and put

11:38

two two of them on a pencil and they

11:40

bounced same exact thing the word on the

11:42

street from the magnetic vendors and

11:44

everything basically you can have them

11:45

in opposition like this for 50 years and

11:47

it's not going to you might get a slight

11:49

degradation so the air gap might

11:51

decrease a little bit but it's small

11:53

percentage points everything that we do

11:55

we're trying to think of the ability to

11:57

change it out in the field should it be

11:59

necessary should there be some something

12:01

hits one of the scoops and damages it

12:04

you would be able to remove this whole

12:06

scoop put a new one in right in the

12:09

field you don't need to disassemble the

12:10

whole unit you don't need to take it

12:11

anywhere to do that so we have the

12:13

thrust bearing major point of failure

12:15

that we hope we have addressed you know

12:18

appropriately or way more than other

12:19

units out on the market we've got one

12:22

radial bearing up top and then another

12:23

radial bearing at the bottom but that's

12:25

really your only points of um not even

12:29

rtion but where your wear points would

12:31

be cold weather cold climate

12:33

environments or severe environments

12:34

would have to be sort of down the road

12:36

as we're in production will determine

12:39

what needs to be done for those

12:41

environments if they if we're getting a

12:43

lot of interest in Alaska or you know

12:46

Upper Canada where they need to deal

12:47

with this then we'll we'll throw some

12:49

money at researching that problem and

12:51

coming up with solutions for it and you

12:54

got to remember that for solar panels

12:56

same problems if you have a snowstorm

12:58

you cover the panel and there's no

12:59

production right and you just got to

13:01

wait until that that clears up right so

13:03

some of these challenges are challenges

13:05

even today for established yeah things

13:07

like like solar so how about price what

13:11

are you thinking about and I know it's

13:12

early yeah we're still in the Prototype

13:14

stage so these are prototype numbers

13:16

they're going to be inflated but if we

13:18

can make them for 35 36 and sell them

13:22

for you know 6,000 or 65 early models

13:26

it's a it's a decent profit margin there

13:28

that we can keep the the lights on we

13:29

can keep our people employed and we can

13:31

keep buying more materials to make new

13:32

units all right so let's go through the

Process description

13:35

process of how we go from wind energy on

13:38

this side right we've got ourselves some

13:42

wind and what has to happen in order for

13:45

us to have I'm going to draw a little

13:47

house

13:49

here and to go to electricity on this

13:54

side

13:55

okay do you want me to fill in or do you

13:57

want to drive do that even work I

14:00

thought it I thought it get better the

14:02

second time and that's

14:05

significantly I think it's too too far

14:07

to the side but it's fine dude oh my God

14:10

that's even worse this is the worst of

14:11

the three all right we have a vertical

14:13

axis wind turbine which is making

14:15

rotational Force so you have a spinning

14:17

shaft here that's

14:19

rotating from the wind now you have that

14:22

mechanical Power you then have to take

14:24

that into a generator which takes this

14:28

rotational Force

14:29

and goes into electrical what you call

14:33

um

14:34

[Music]

14:35

wild

14:37

three-phase AC so your wild three-phase

14:41

AC is then basically coming out as three

14:45

wires into your charge controller your

14:48

charge controller then takes that and

14:50

turns it into DC for you so these guys

14:54

are really these two pieces right

14:57

here are what we are trying to work out

15:00

right now we have this really under

15:03

control and we've had it under control

15:04

for a while coming out of here you've

15:07

got your

15:08

DC so this is not a simple thing even

15:12

though they exist all over the world

15:14

they're used for all different purposes

15:15

that's the hard part that we're on so

15:17

this DC then can go into a battery Bank

15:19

it could go could go into a grid tie

15:21

inverter whatever you want to do for

15:23

your home use got it so what's

15:25

interesting is we could charge a battery

15:27

right yep Direct

15:29

ly with

15:31

this that's pretty good yeah with DC or

15:35

to your point we could go to an

15:37

inverter yep inverter to then power your

15:41

house yes but the Casual Observer might

15:43

be thinking well you just had AC right

15:46

here why go through all of this to come

15:48

back here again to let's say 60 H AC yep

15:53

it's because the wind doesn't blow at a

15:55

consistent speed so you would get maybe

15:58

five Herz you'd get 80 Herz you know any

16:02

variation in that wind speed correct

16:04

your your lines might be super

16:06

compressed or super opened up and that

16:09

your equipment in your home is not going

16:11

to be happy with dirty power like that

16:13

you're going to be it'll be seeing it as

16:15

brownouts and all sorts of things

16:16

because you can't hold a constant AC in

16:20

a

16:21

variable condition like wind so you need

16:24

to take it into a buffer such as your DC

16:27

or your battery bank and then from that

16:29

clean stable Source you take it into

16:31

your inverter so you can even have a

16:33

line coming down from your battery Bank

16:36

into your inverter and then instead of

16:38

going directly into here you have a much

16:40

more controlled Source giving you clean

16:43

power to your house right the second

16:45

question and this is also one of the

16:47

foundational challenges of a of a wind

16:51

turbine is what happens in here so we

16:55

talked about charge controllers for

16:56

solar which is a little bit different

16:58

because

16:59

you kind of had mentioned on a really

17:01

cold day hot day maybe the voltage

17:02

changes or like the sun just starts to

17:04

rise compared to High Noon you've got

17:06

this pretty largely linear sort of

17:09

distribution and so maybe the voltage

17:11

here is 20 maybe the voltage here is 30

17:13

and you've got these set points where

17:15

the charge controller can say when it

17:17

gets closer to that switch over to this

17:18

voltage and this current and it'll pick

17:20

the most Optimum path to get you your DC

17:24

right how does it change for wind wind

17:27

is exponential so when you start out at

17:29

zero you're down here at the bottom and

17:31

then it grows on an exponential curve

17:34

that is very very difficult to for a lot

17:36

of people to get their mind around

17:38

because you don't start producing what's

17:40

called usable power until you're

17:42

somewhere around the 12 to 15 mph range

17:45

so if we say this is like 12 mph for a

17:47

specific size wind turbine at 12 mph you

17:50

might be getting let's say 35 watts of

17:54

power out of that in a constant 12 mph

17:57

wind but by the time time you're at say

18:00

18 mph you might be getting 100 Watts so

18:06

it's not a linear curve like this it's

18:09

an exponential curve and then at 25 mph

18:13

you're getting say

18:15

430 Watts most people in the United

18:18

States have average wind speeds in here

18:21

in this range and that's the real big

18:23

challenge here we want to be able to

18:25

capture and rate our turbine here at 25

18:27

mph and we want to be between 400 and

18:29

500 watts of output at 25 mph but we

18:32

don't want to ignore the large line

18:35

share of where they get their wind you

18:38

know a lot of people will buy a 2,000

18:40

watt wind turbine and think they're

18:41

going to get all this power but they're

18:43

not getting anything because the wind is

18:45

down here in some ways I feel like we're

18:47

Reinventing the wheel there are charge

18:49

controllers out there but they're not

18:50

optimized for vwt vertical axis wind

18:53

turbine technology they're all rated for

18:55

much higher RPM range of horizontal AIS

18:57

wind turbines got

18:59

so we've got a unique challenge ahead of

19:01

us absolutely yeah now this is I mean

19:03

it's the opportunity and it's the

19:04

challenge that's right often coupled yeah

19:07

and the savonius is sort of the king of

19:11

low winds speed power production so we

19:13

can produce power I mean you're seeing

19:15

it here in a 7 mph wind that thing is

19:18

definitely producing you know wattage

19:22

it's just how do we capitalize with our

19:23

generator and our charge controller on

19:25

Scavenging that for the end consumer so

19:28

we don't want ignore that wind just for

19:31

the purpose of getting you know 25 mph

19:33

winds which might happen twice a month

19:35

you know in a thunderstorm or whatever

19:37

so this uh savonius turbine Works in a

Betz Limit

19:39

principle called differential drag the

19:42

air that comes on this side of the axis

19:44

is just going to get diverted around

19:45

with minimal impact but here in the

19:48

scoop you're going to hit it and it's

19:50

going to redirect it and push it and

19:52

give you rotation now in terms of

19:54

efficiency there's a number called

19:56

Betz's limit which we should talk about

19:58

which is the theoretical limit of how

20:00

much energy any wind turbine could

20:03

extract from the incoming wind and that

20:06

percent is about 60%

20:08

59.3 to be exact that means no matter

20:10

what vertical axis horizontal up high

20:13

large small whatever you have you can't

20:16

get more than

20:17

59.3% of the wind resource so the large

20:21

scale wind turbines that you see like

20:23

the offshore wind the massive ones those

20:25

are able to get about 75 to 80% of

20:28

Betz's limit so about 45 percent overall

20:32

how good are these well this is a little

20:35

bit of a controversial thing cuz there

20:36

were some mismatch data we'll talk about

20:38

but ultimately these are about 30% which

20:41

is not bad pretty close to the large

20:43

scale systems but the really amazing

20:45

part is these work in a completely

20:47

different envelope than large scale

20:50

horizontal access wind turbines because

20:51

these work on Lower slower flows of air

20:54

and dirtier air these can spin in air

20:57

speeds of 5 mph hour where typical wind

20:59

turbines would not even be moving and

21:02

they obviously will perform even better

21:04

at speeds of about 25 miles hour I think

21:06

that would be the ideal maximum energy

21:08

spot but these work in a large variety

21:11

of applications remember when I

Savonius mistake

21:13

mentioned there's a little bit of a

21:13

controversy about how efficient saon win

21:16

turbines are check this out this is a

21:18

signed copy by the author himself um

21:21

back in the 19 like 50s when this was

21:23

first published where they began making

21:26

this mistake so they have the savonius

21:28

rotor and the American multi-blade

21:31

turbines the labels are in the same

21:33

spots as they were in the original but

21:34

they drew the lines incorrectly so back

21:37

then in the very beginning when they did

21:39

this research savonia turbines were

21:41

actually raised up in the like 32 33%

21:45

efficiency range so that arrow is wrong

21:47

yes that Arrow was that should be

21:48

pointing there yep what about that where

21:50

should that be pointing to the one down

21:51

below they just flip-flop those two

21:53

arrows and so the thought process is if

21:55

you're only about 10 to 15% efficient

21:59

that's okay it's not bad nobody's going

22:00

to look at it but it's not going to be

22:02

maybe worth any kind of investment but

22:04

if you can get closer to

22:05

30% then yes because your big

22:08

multi-million dollar turbines are only

22:11

up here you know and your Darius

22:13

turbines are in this range so look at

22:16

that comparison between Darius and

22:18

savonius if you can get into this range

22:21

now you're talking something that's far

22:22

more worthwhile worth investing money

22:24

into and you have you have the the

22:26

signed copy there you go you're looking

22:28

for some fun reading so wind turbines

24:06 Closing statement

22:31

are as amazing as we thought they were

22:33

and there's some pretty amazing research

22:34

happening behind me is a one kilowatt

22:37

home wind turbine that you could have I

22:39

mean obviously it's pretty big but it's

22:41

not I I could probably fit that in my

22:43

house or if you go a step down you have

22:47

yourself a 500 watt or half a kilowatt

22:50

now this would be the equivalent of

22:52

maybe two solar panels one and a half

22:53

solar panels and it might cost a little

22:55

bit more but remember a wind turbine is

22:57

like a solar panel and a battery because

23:00

if this is producing even 200 WTS right

23:03

over the course of 10 hours through the

23:05

night that's 2 Kil hours that's 2 Kil

23:08

hours you don't need a store in a

23:09

battery that means that anytime you can

23:12

add some wind you're not just replac in

23:14

the Solar component or adding to it

23:17

you're also helping with the battery

23:18

because you don't have to just charge

23:20

the batteries in your house for a small

23:22

period of time when the sun is shining

23:24

and then have to run your house all

23:26

night through a battery instead you

23:28

could additively add to your generation

23:30

throughout the entire day with one of

23:32

these and that's why I've been wanting

23:33

to get one for so long so as soon as

23:36

they're ready to ship and they

23:37

commercial I'm going to buy one and try

23:39

it out because I'm just wildly curious

23:42

what do you think would you want to

23:43

check this out would you buy a Harmony

23:45

win turbine or any win turbine for your

23:47

house if it was commercially viable and

23:49

ready for us to do it s off in the

23:51

comments below and if you thought that

23:53

video was cool check out this one next

23:54

and until next week I'm Ricky D Vinci

23:57

thank you so much for watching watch

STARTENGINE SUBSCRIPTION PROCESS (Exhibit E)

Platform Compensation

- As compensation for the services provided by StartEngine Capital, the issuer is required to pay to StartEngine Capital a fee consisting of a 5.5-13% (five and one-half to thirteen) commission based on the dollar amount of securities sold in the Offering and paid upon disbursement of funds from escrow at the time of closing. The commission is paid in cash and in securities of the Issuer identical to those offered to the public in the Offering at the sole discretion of StartEngine Capital. Additionally, the issuer must reimburse certain expenses related to the Offering. The securities issued to StartEngine Capital, if any, will be of the same class and have the same terms, conditions, and rights as the securities being offered and sold by the issuer on StartEngine Capital's website.
- As compensation for the services provided by StartEngine Capital, investors are also required to pay StartEngine Capital a fee consisting of a 0-3.5% (zero to three and a half percent) service fee based on the dollar amount of securities purchased in each investment.

Information Regarding Length of Time of Offering

- Investment Cancellations: Investors will have up to 48 hours prior to the end of the offering period to change their minds and cancel their investment commitments for any reason. Once within 48 hours of ending, investors will not be able to cancel for any reason, even if they make a commitment during this period.
- Material Changes: Material changes to an offering include but are not limited to: A change in minimum offering amount, change in security price, change in management, material change to financial information, etc. If an issuer makes a material change to the offering terms or other information disclosed, including a change to the offering deadline, investors will be given five business days to reconfirm their investment commitment. If investors do not reconfirm, their investment will be canceled and the funds will be returned.

Hitting The Target Goal Early & Oversubscriptions

- StartEngine Capital will notify investors by email when the target offering amount has hit 25%, 50%, and 100% of the funding goal. If the issuer hits its goal early, the issuer can create a new target deadline at least 5 business days out. Investors will be notified of the

new target deadline via email and will then have the opportunity to cancel up to 48 hours before the new deadline.

- **Oversubscriptions:** We require all issuers to accept oversubscriptions. This may not be possible if: 1) it vaults an issuer into a different category for financial statement requirements (and they do not have the requisite financial statements); or 2) they reach \$5M in investments. In the event of an oversubscription, shares will be allocated at the discretion of the issuer, with priority given to StartEngine Owners Bonus members.
- If the sum of the investment commitments does not equal or exceed the target offering amount at the offering deadline, no securities will be sold in the offering, investment commitments will be canceled and committed funds will be returned.
- If a StartEngine issuer reaches its target offering amount prior to the deadline, it may conduct an initial closing of the offering early if they provide notice of the new offering deadline at least five business days prior to the new offering deadline (absent a material change that would require an extension of the offering and reconfirmation of the investment commitment). StartEngine will notify investors when the issuer meets its target offering amount. Thereafter, the issuer may conduct additional closings until the offering deadline.

Minimum and Maximum Investment Amounts

- In order to invest, commit to an investment or communicate on our platform, users must open an account on StartEngine Capital and provide certain personal and non-personal information including information related to income, net worth, and other investments.
- **Investor Limitations:** There are no investment limits for investing in crowdfunding offerings for accredited investors. Non-accredited investors are limited in how much they can invest in all crowdfunding offerings during any 12-month period. The limitation on how much they can invest depends on their net worth (excluding the value of their primary residence) and annual income. If either their annual income or net worth is less than \$124,000, then during any 12-month period, they can invest either \$2,500 or 5% of their annual income or net worth, whichever is greater. If both their annual income and net worth are equal to or more than \$124,000, then during any 12-month period, they can invest up to 10% of annual income or net worth, whichever is greater, but their investments cannot exceed \$124,000.

EXHIBIT F TO FORM C

ADDITIONAL CORPORATE DOCUMENTS

[See attached]

PENNSYLVANIA DEPARTMENT OF STATE
BUREAU OF CORPORATIONS AND CHARITABLE ORGANIZATIONS

Entity# : 7105961
Date Filed : 08/11/2020
Effective Date : 08/12/2020
Pennsylvania Department of State

☐ Return document by mail to:

Christopher Moore

Name

137 W Patrick Rd,

Address

Hershey

PA

17033

City

State

Zip Code

☐ Return document by email to: _____

Articles of Incorporation-For Profit

DSCB: 15-1306/2102/2303/2702/2903/3101/3303/7102

(rev.2/2017)



01236

Read all instructions prior to completing. This form may be submitted online at <https://www.corporations.pa.gov/>.

Fee: \$0.00

☒ I qualify for a veteran/reservist-owned small business fee exemption (see instructions)

Check only one:

☒ Business-stock (§ 1306)

☐ Business-nonstock (§ 2102)

☐ Business-statutory close (§ 2303)

☐ Cooperative (§ 7102)

☐ Management (§ 2703)

☐ Professional (§ 2903)

☐ Insurance (§ 3101)

☐ Benefit (§ 3303)

In compliance with the requirements of the applicable provisions (relating to corporations and unincorporated associations), the undersigned, desiring to incorporate a corporation for profit, hereby states that:

1. The name of the corporation (corporate designator required, i.e., "corporation," "incorporated," "limited," "company," or any abbreviation thereof. "Professional corporation" or "P.C." permitted for professional corporations):

Harmony Turbines Inc

2. Complete part (a) or (b) – not both:

(a) The address of this corporation's proposed registered office in this Commonwealth is: (post office box alone is not acceptable)

1200 E Main Street, Suite 2 #119

Palmyra

PA

17078

Lebanon

Number and Street

City

State

Zip

County

(b) The name of this corporation's commercial registered office provider and the county of venue is:

c/o:

Name of Commercial Registered Office Provider

County

3. The corporation is incorporated under the provisions of the Business Corporation Law of 1988.

4. Check and complete one:

☐ The corporation is organized on a nonstock basis.

☒ The corporation is organized on a stock share basis and the aggregate number of shares authorized is: 10000000

5. The name and address, including number and street, if any, of each incorporator (all incorporators must sign below):

Name

Address

Christopher T Moore

137 W Patrick Rd , Hershey , Lebanon , PA , United States , 17033

6. The specified effective date, if any 08/12/2020 3:08 PM .
is:

month/day/year hour, if any

7. Additional provisions of the articles, if any, attach an 8½ by 11 sheet.

8. *Statutory close corporation only:* Neither the corporation nor any shareholder shall make an offering of any of its shares of any class that would constitute a “public offering” within the meaning of the Securities Act of 1933 (15 U.S.C. § 77a et seq.)

9. *For Cooperative Corporation Only.*
Check and complete one:

The corporation is a cooperative corporation and the common bond of membership among its members is:

The corporation is a cooperative corporation and the common bond of membership among its shareholders is:

10. *Benefit corporations only:* This corporation shall have the purpose of creating general public benefit.

Strike out if inapplicable: This corporation shall have the purpose of creating the enumerated specific public benefit(s):

IN TESTIMONY WHEREOF, the incorporator(s)
has/have signed these Articles of Incorporation this
11 day of August , 2020 .

Christopher T Moore

Signature

PENNSYLVANIA DEPARTMENT OF STATE
BUREAU OF CORPORATIONS AND CHARITABLE ORGANIZATIONS

Consent to Appropriation of Name
DSCB:19-17.2
(rev. 7/2015)



19172

Pursuant to 19 Pa. Code § 17.2 (relating to appropriation of the name of a senior corporation), the undersigned association, desiring to consent to the appropriation of its name by another association, hereby certifies that:

1. The name of the association executing this Consent to Appropriation of Name is:

Harmony Turbines LLC

2. The (a) address of the consenting association's current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is:

Complete part (a) **OR** (b) – not both:

(a) 1200 E Main Street, Suite 2 #119 Palmyra PA 17078 Lebanon
Number and street City State Zip County
OR

(b) c/o: _____
Name of Commercial Registered Office Provider County

3. The date of incorporation or other organization of the consenting association is: 07/15/2020

4. The association(s) entitled to the benefit of this Consent to Appropriation of Name is(are):

Harmony Turbines Inc

5. The consenting association is (check only one):


- ☐ About to change its name
☒ About to cease to do business
☐ Being wound up
☐ A foreign association about to withdraw from doing business in the Commonwealth

IN TESTIMONY WHEREOF, the undersigned association has caused this Consent to Appropriation of Name be signed by a duly authorized officer thereof this 11 day of August, 2020.

Christopher T. Moore
Signature

CEO
Title

**PENNSYLVANIA DEPARTMENT OF STATE
 BUREAU OF CORPORATIONS AND CHARITABLE ORGANIZATIONS**

<input type="checkbox"/> Return document by mail to: Katie Koehle, Paralegal - Barley Snyder LLP <hr/> Name 126 East King Street <hr/> Address Lancaster PA 17602 <hr/> City State Zip Code <input checked="" type="checkbox"/> Return document by email to: <u>kkoehle@barley.com</u>	Articles of Amendment Domestic Corporation  TFA210716XX0487
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Read all instructions prior to completing. This form may be submitted online at <https://www.corporations.pa.gov/>.

Fee: \$70

Check one: ☒ Business Corporation (§ 1915) ☐ Nonprofit Corporation (§ 5915)

In compliance with the requirements of the applicable provisions (relating to articles of amendment), the undersigned, desiring to amend its articles, hereby states that:

1. The name of the corporation is:

Harmony Turbines Inc

2. The (a) address of this corporation's current registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is:
(Complete only (a) or (b), not both)

(a) Number and Street	City	State	Zip	County
1200 E Main Street, Suite 2 #119	Palmyra	PA	17078	Lebanon

(b) Name of Commercial Registered Office Provider	County
c/o:	

3. The statute by or under which it was incorporated: PA Business Corporation Law

4. The date of its incorporation: 08/12/2020
 (MM/DD/YYYY)

5. Check, and if appropriate complete, one of the following:

☒ The amendment shall be effective upon filing these Articles of Amendment in the Department of State.

☐ The amendment shall be effective on: _____ at _____
 Date (MM/DD/YYYY) Hour (if any)

PA DEPT. OF STATE

JUL 09 2021

DSCB:15-1915/5915-2

6. *Check one of the following:*

☐ The amendment was adopted by the shareholders or members pursuant to 15 Pa.C.S. § 1914(a) and (b) or § 5914(a).

☒ The amendment was adopted by the board of directors pursuant to 15 Pa. C.S. § 1914(c) or § 5914(b).

7. *Check, and if appropriate complete, one of the following:*

☐ The amendment adopted by the corporation, set forth in full, is as follows

☒ The amendment adopted by the corporation is set forth in full in Exhibit A attached hereto and made a part hereof.

8. *Check if the amendment restates the Articles:*

☐ The restated Articles of Incorporation supersede the original articles and all amendments thereto.

IN TESTIMONY WHEREOF, the undersigned corporation has caused these Articles of Amendment to be signed by a duly authorized officer thereof this

9 day of July, 2021.

Harmony Turbines Inc

Name of Corporation

Christopher T. Moore, President

Signature

Christopher T. Moore, President and CEO

Title

EXHIBIT A
to
Articles of Amendment of
HARMONY TURBINES, INC.

Article 1 shall be amended as follows:

1. The name of the corporation shall be: **Harmony Turbines, Inc.**

Article 2 shall be amended as follows:

2. The address of the corporation's proposed registered office in this Commonwealth shall be: **120 North 25th Street, Suite 200, Lebanon, PA 17042, Lebanon County**

Article 4 shall be amended as follows:

4. The aggregate number of shares that the Corporation shall have authority to issue is authorized is Nineteen Million (19,000,000) shares of Common Stock, no par value, and Ten Million (10,000,000) shares of Preferred Stock, no par value. The preferences, qualifications, limitations, restrictions and the special and relative rights granted to, or imposed upon the shares of each class of stock are as follows:
 - i. Common Stock: The holders of the Common Stock shall have and possess exclusively all voting rights of any kind or nature, which shall include the exclusive voting rights for the election of directors and for each and every other corporate matter, except as otherwise may be required by law.
 - ii. Preferred Stock: The Preferred Stock shall be non-voting stock. The holders of the Preferred Stock shall have no voting rights of any kind or nature, including without limitation, voting rights for the election of directors and for each and every other corporate matter, except as otherwise may be required by law. The Board of Directors shall have authority, to the full extent now or hereafter permitted by law, from time to time to issue Preferred Stock as a class without series or in one or more series and to fix by resolution the rights, designation, preferences, qualifications, limitations, restrictions, privileges, options, redemption rights, conversion rights, and other special or relative rights of such class or any series thereof, as the Board of Directors shall determine.

Article 8 shall be removed in its entirety.

Article 10 shall be amended to remove the following text contained in such Article: "This corporation shall have the purpose of creating a general public benefit." In addition the remainder of Article 10 shall be modified by striking out all remaining text under such Article.

Exhibit G to Form C

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As of July 16, 2024, some of you may have landed on this page by trying to reach our investment page with Andes Capital. Due to some unforeseen technology challenges with their raise platform, we decided to cancel the Andes Capital fundraising campaign.

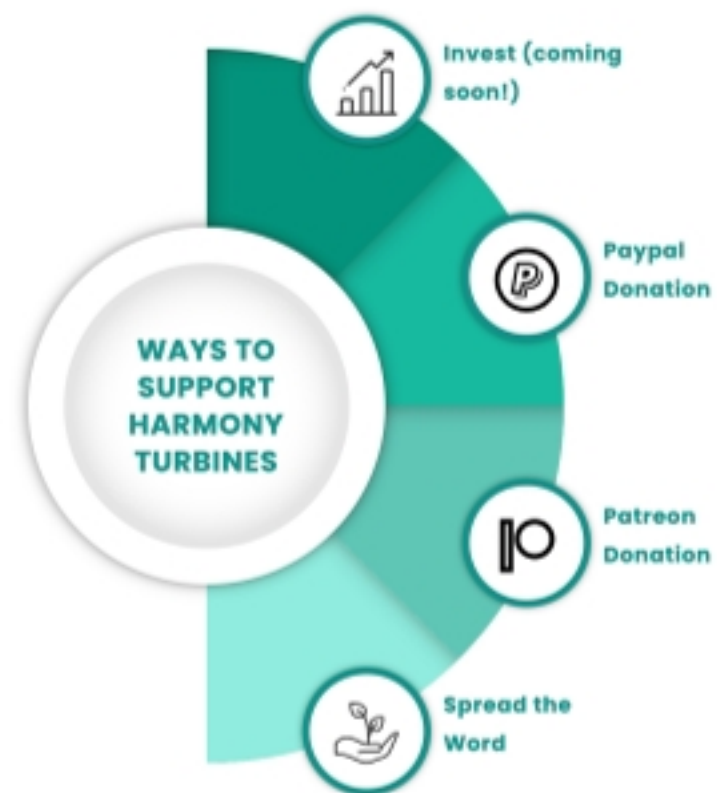
However, we ARE working on opening a crowdfunding campaign very soon with StartEngine, a platform we've used before. Please stay tuned by subscribing to our newsletter below, or use our [contact form](#) to email us, and we'll contact you when the raise is open.

NO MONEY OR OTHER CONSIDERATION IS BEING SOLICITED, AND IF SENT IN RESPONSE, WILL NOT BE ACCEPTED. NO OFFER TO BUY THE SECURITIES CAN BE ACCEPTED AND NO PART OF THE PURCHASE PRICE CAN BE RECEIVED UNTIL THE OFFERING STATEMENT IS FILED AND ONLY THROUGH AN INTERMEDIARY'S PLATFORM. AN INDICATION OF INTEREST INVOLVES NO OBLIGATION OR COMMITMENT OF ANY KIND.

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