





The Next Era of Wind:

An Analysis of Different Wind Turbine Designs

Rocky Chen

A Massanutten Governor's School Research Project

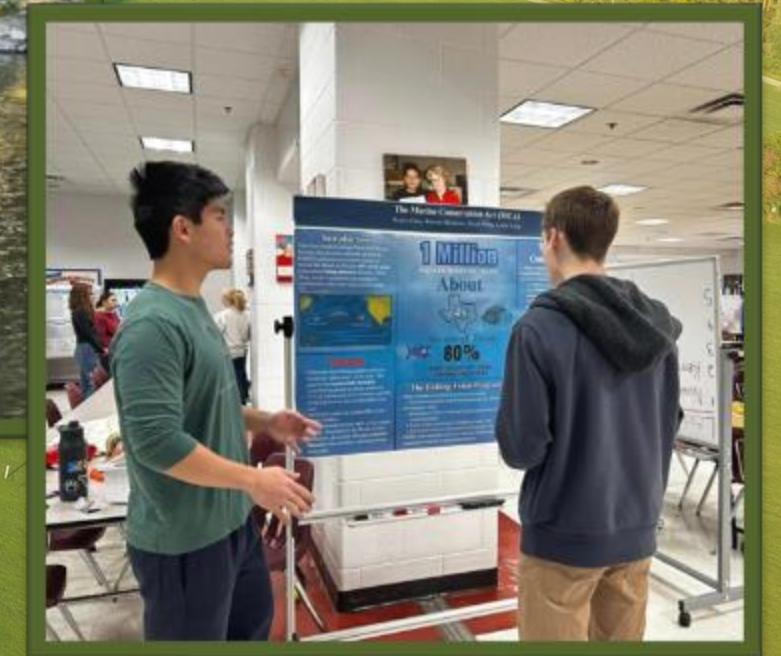
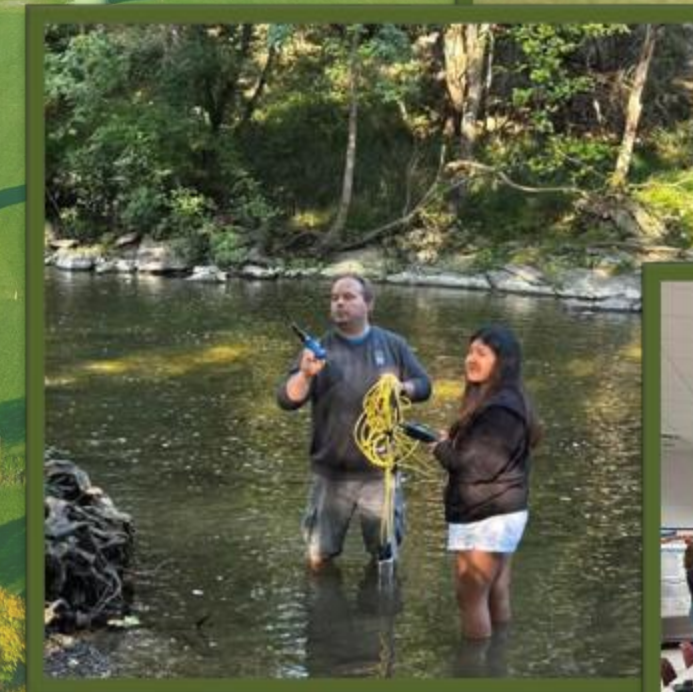
About Me

- **From: Penn Laird, VA**
- **Attend:**
 - Massanutten Regional Governor's School
 - Spotswood High School
- **Passions:**
 - Dealing w. underrated (and cool) technology
 - Helping build a sustainable **now** and **future**
 - Flying!
 - Athletics (track & lifting)



The MRGS Capstone Project

- **Funded (somewhat) opportunity for research**
 - Please reach out & help support the program
- **On anything!***
 - *req., data to show in end-of-year presentation
- **Over-time development of research skills**
- **Dedicated research Fridays**
- **Lots of fun!**



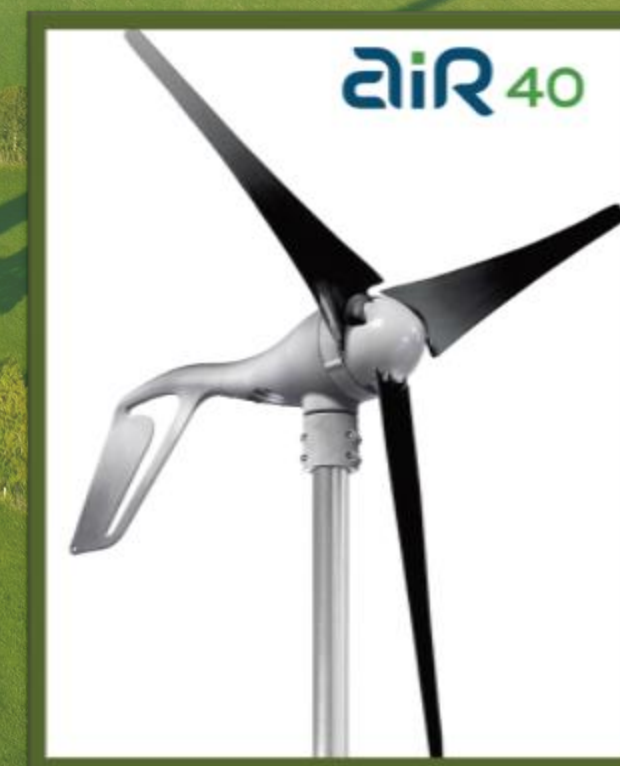
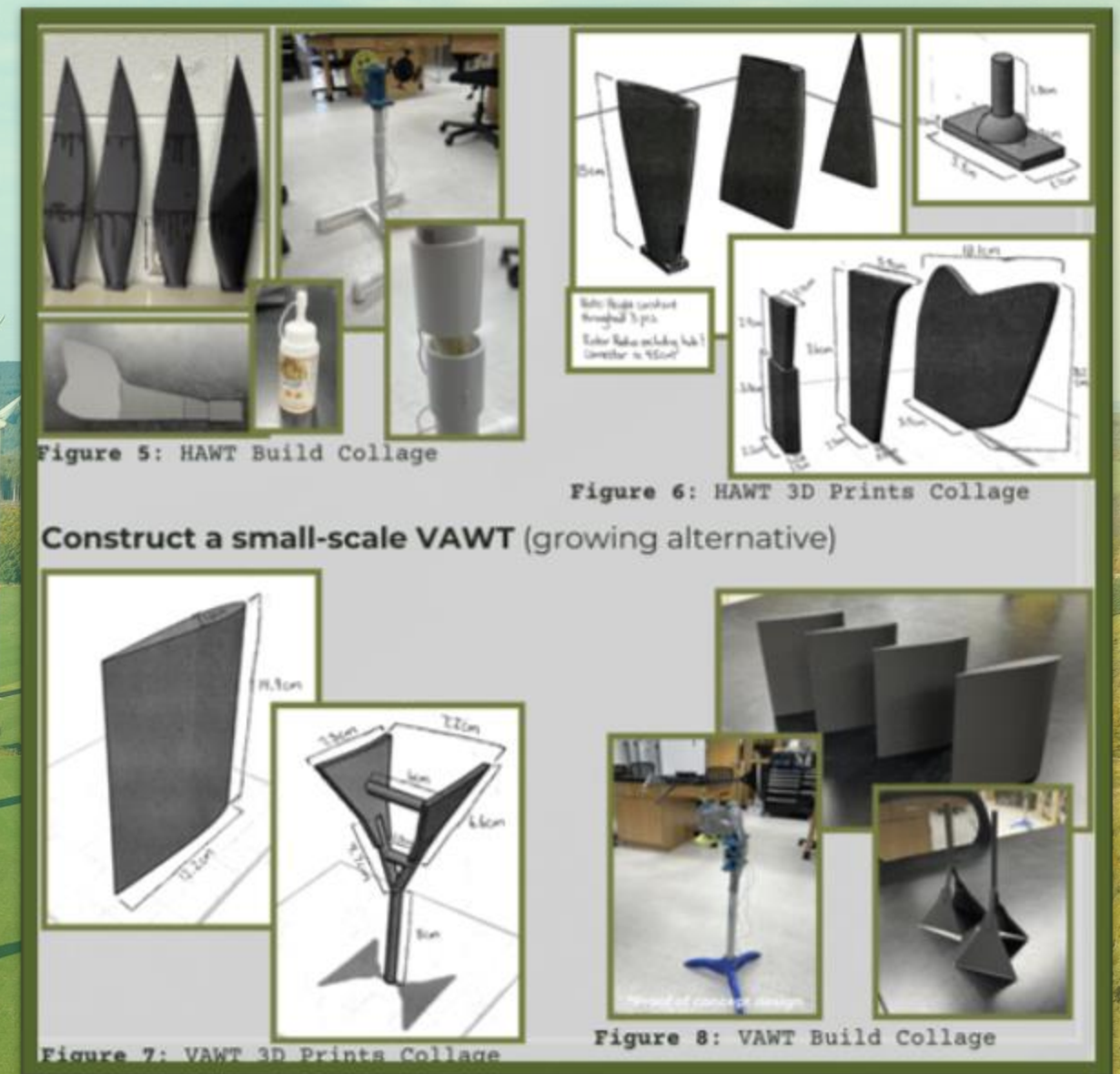
My Research

- **The problem(s):**

- Only one dominant (certified) turbine variant is easily accessible
 - Unappealing looks; out-of-sight & out-of-mind attitude
- Not enough secondary education on distributed wind
 - Very few knew about other turbine variants!

- **My solution:**

- P1. Develop both a miniature HAWT & VAWT
 - Feasibility in a classroom setting
- P2. Build an Air 40 Turbine near MRGS & test against a similar VAWT
 - Raises awareness of D.W.
 - Equation: Kid tell parents = parents become more accepting!



Your Action Steps

- **1. Visit my poster session**
 - Hope to see you there 😊
- **2. Give me ALL your tips**
 - You're the experts... That's why I'm here
 - Say it if my project is stupid wind!
- **3. Reach out w. opportunities**
 - No knowledge is wasted knowledge
- **4. Contact me!**

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