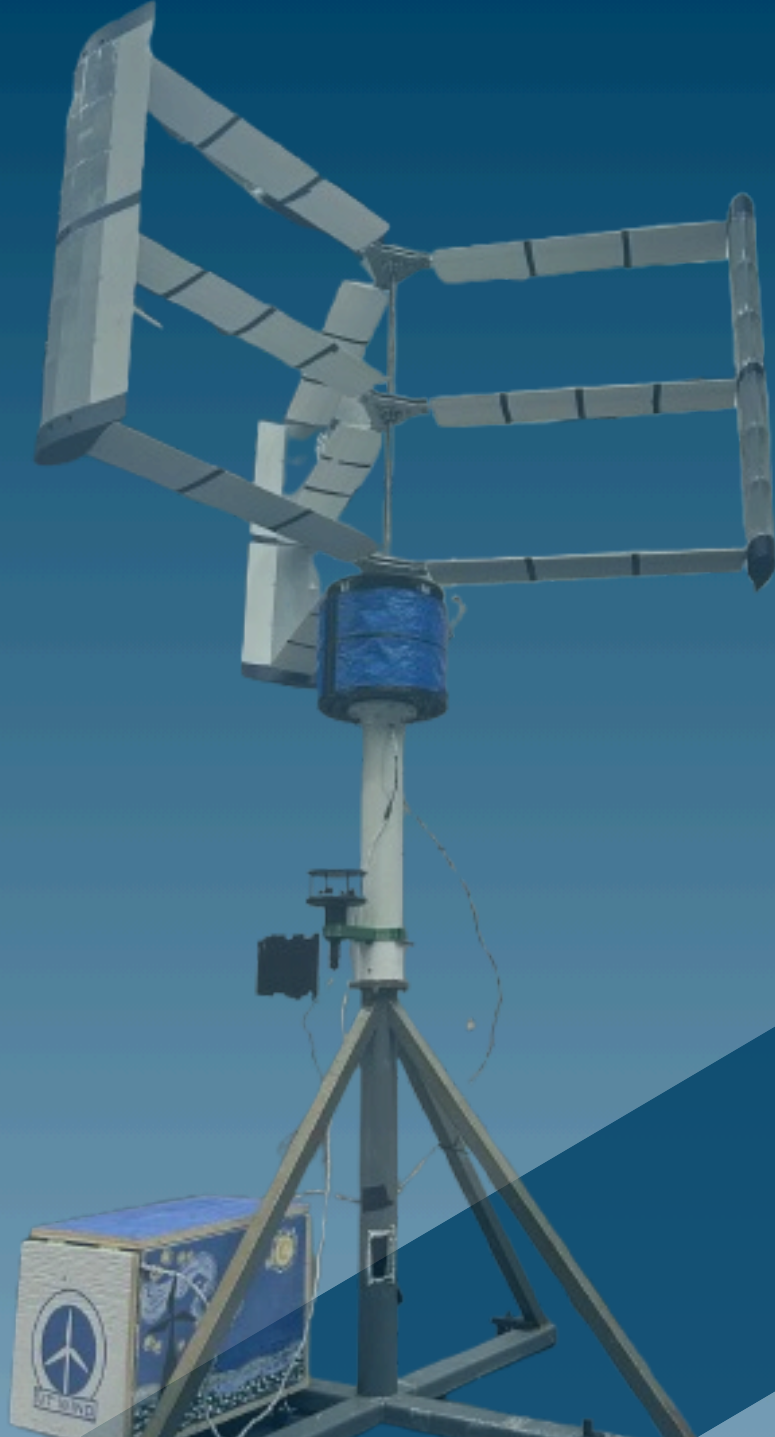




SPONSORSHIP PACKAGE

UNIVERSITY OF TORONTO
WIND TURBINE DESIGN TEAM

2026-2027 DESIGN CYCLE

✉ sponsorships@utwind.skule.ca | 🌐 utwind.com

UT WIND

ABOUT UTWIND

The University of Toronto's Wind Turbine Design Team (UTWind) is a student-led engineering team that designs, builds, and tests small-scale wind turbines to compete in the International Small Wind Turbine Contest (ISWTC) in Europe.

We've grown to over 100 members spanning multiple disciplines at U of T. Our five technical subteams and one business division bring together students working in aerodynamics, mechanical design, power electronics, control systems, manufacturing, sustainability, finance, and project management.

COMPETITION

UTWind competes annually in the ISWTC against other universities. Evaluation is based on the design report, team presentation, sustainability, and overall performance in the wind tunnel.

100+
ACTIVE MEMBERS

5
TECHNICAL
SUBTEAMS

1
TURBINE BUILT
ANNUALLY

5
YEARS OF
COMPETITION



OUR ACHIEVEMENTS

UTWind made its international competition debut in 2022 and placed 1st overall. Since then, the team has continued to advance both the performance and sustainability of its turbines.



BEST OVERALL (1ST PLACE)

International debut and first-place finish.



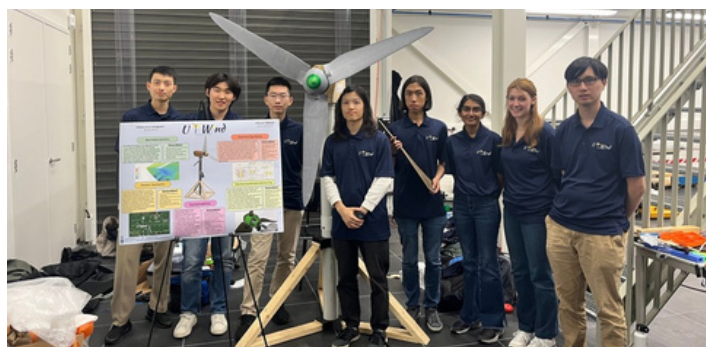
MOST SUSTAINABLE

Recognized for sustainable turbine design.



BEST OVERALL (1ST PLACE)

Demonstrated continued performance improvements across the turbine.



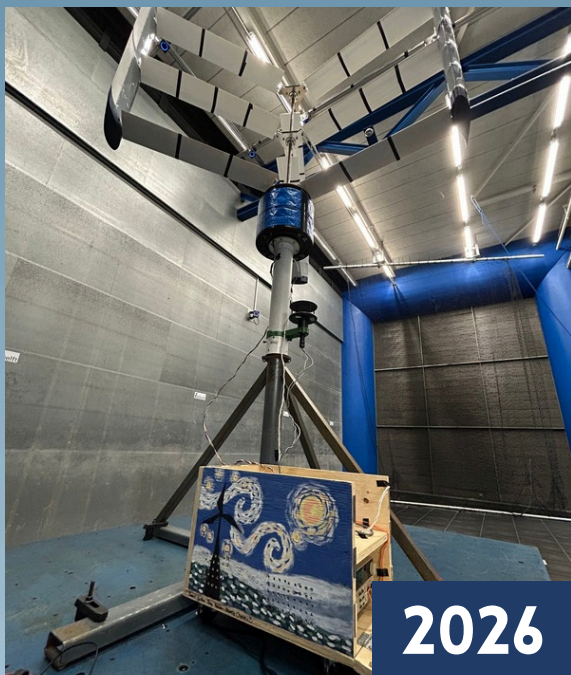
HAWT → VAWT

After three seasons of success with horizontal-axis wind turbine (HAWT) development, UTWind transitioned to a vertical-axis wind turbine (VAWT) architecture in 2024–2025.



FIRST-GENERATION VAWT

Designed and competed with UTWind's first vertical-axis wind turbine.



SECOND-GENERATION VAWT

Featured our lightest blades and lowest cut-in speed to date.



THIS YEAR

The 2026–2027 season marks UTWind’s third vertical-axis wind turbine development cycle. With two complete VAWT iterations, the team is moving beyond establishing the architecture and focusing on performance, active control, and system integration.



ACTIVE BLADE-PITCH SYSTEM

UTWind is developing a mechanically actuated pitch system that will allow the turbine to adjust its blade position for different wind conditions. The system will integrate a mechanical transmission with sensors and software developed by Control Systems.

Aerodynamics will use QBlade and computational fluid dynamics to evaluate turbine geometries, airfoils, and pitch conditions. Mechanical will translate the selected design into a manufacturable assembly and validate it through computer-aided design (CAD), finite element analysis (FEA), prototyping, and physical testing.

INTEGRATED POWER ELECTRONICS AND MAXIMUM POWER POINT TRACKING (MPPT)

The turbine’s electrical output varies continuously with wind and rotor speed. Power Systems is developing a custom conversion and control system to regulate this output and keep the turbine operating near its maximum power point.

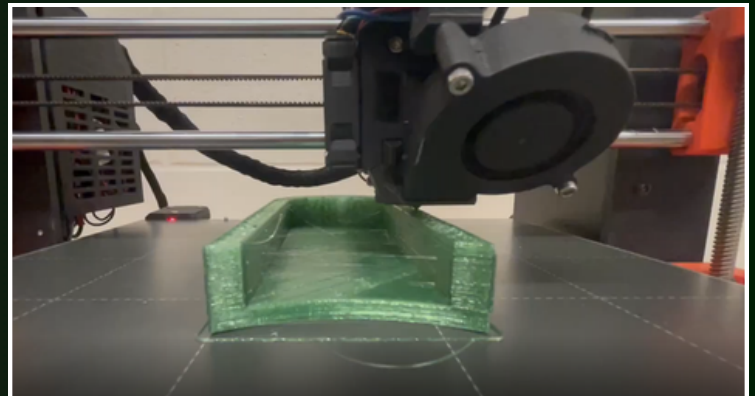
Voltage and current sensors will provide real-time data to a Raspberry Pi, which uses a refined Perturb and Observe algorithm to adjust the duty cycle of a buck-boost converter. The rectifier, low-voltage power supply, sensing circuits, and load-control electronics will be integrated onto a single custom printed circuit board (PCB), creating a more compact and coordinated power system.

SUSTAINABLE INITIATIVES

SUSTAINABLE DESIGN AND DEPLOYMENT

UTWind will conduct a complete life-cycle assessment comparing our turbine with a conventional small-scale wind turbine. The study will examine material selection, manufacturing, transportation, operation, and end-of-life impact.

The team will also investigate local implementation, economic feasibility, and community needs. A wildlife-monitoring project will explore methods of detecting and deterring birds and bats near the turbine, extending the project beyond competition performance into responsible real-world deployment.



PET PLASTIC BOTTLE RECYCLING

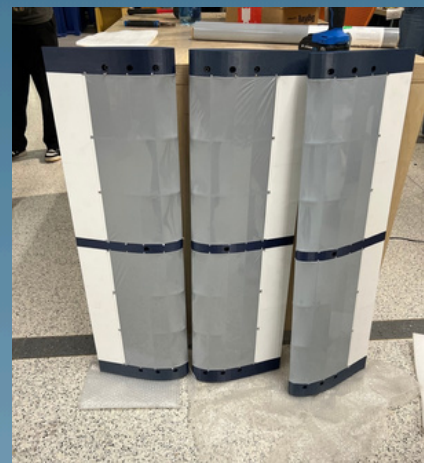
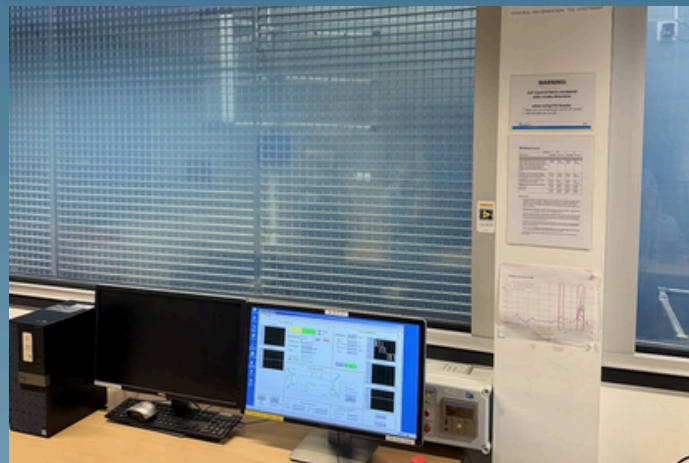
The PET recycling program has been a long-running project. The team collects used plastic bottles across campus and converts them into 1.75 mm filament for in-house 3D printing. After successfully using recycled PET to manufacture the nose cone of our 2024 competition turbine, the team is working to produce longer, more consistent filament spools, improve material strength, and expand its use across future turbine components.

OUR TEAMS

Each season, our members take the turbine through a full development cycle. This includes early research and simulation, design iteration, manufacturing, and wind-tunnel testing. This gives members practical experience applying engineering principles to a working renewable-energy system.

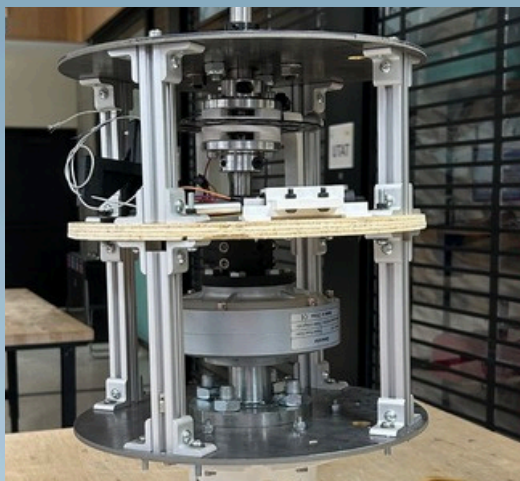
AERODYNAMICS

Aerodynamics defines and optimizes the turbine's aerodynamic architecture. The team selects the VAWT configuration and airfoils using QBlade, validates performance with ANSYS Fluent, and develops the blade geometry for prototyping and manufacturing.



MECHANICAL

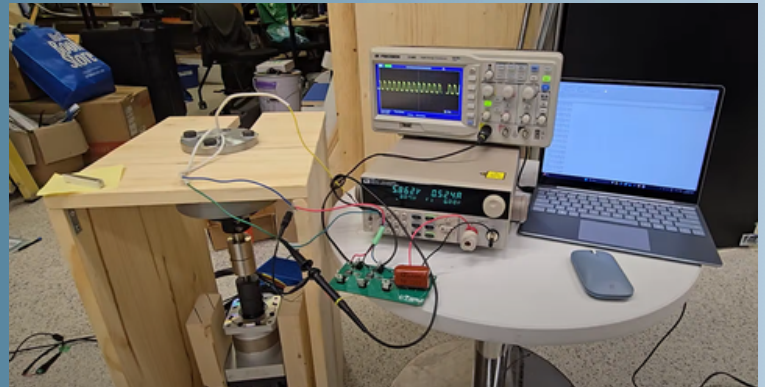
Mechanical transforms the aerodynamic design into a complete physical structure. Current projects include a new drivetrain, structural supports, the nacelle, the tower assembly, and the blade-pitch system.



OUR TEAMS

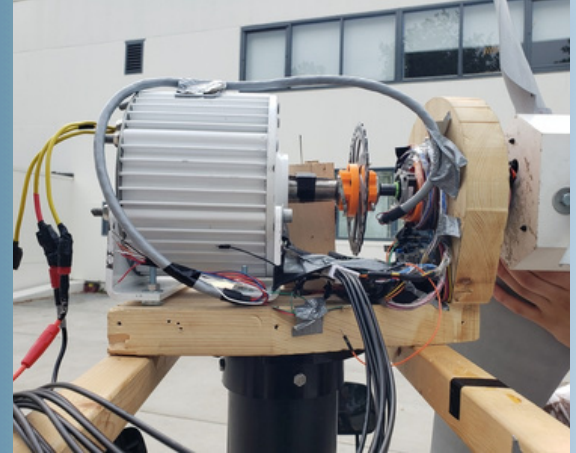
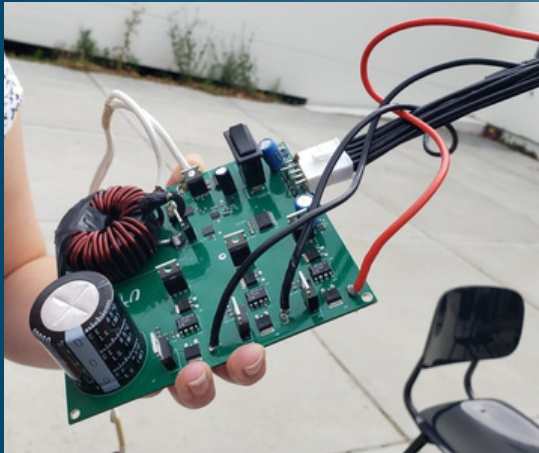
CONTROL SYSTEMS

Control Systems develops the turbine's sensing, monitoring, and actuation systems. Current work includes shaft-speed and vibration monitoring, real-time data logging, autonomous braking, pitch control, and integration with Power Systems for maximum power tracking.



POWER SYSTEMS

Power Systems develops the electrical conversion chain from the generator to the load. The team designs the active rectifier, sensing circuits, load control, maximum power point tracking system, and a custom PCB.



SUSTAINABILITY

Sustainability evaluates the turbine's environmental, social, and economic performance. The team conducts life-cycle assessments, studies local implementation and financial feasibility, and develops solutions to reduce risks to birds and bats.

WHY SPONSOR US

Partnering with UTWind connects your organization with an award-winning community of more than 100 University of Toronto students advancing practical, sustainable wind-energy technology. Sponsor support helps transform ambitious ideas into tested systems while building meaningful relationships with emerging engineering talent.

A TEAM THAT COMPETES GLOBALLY

UTWind is one of three North American teams competing at ISWTC. Bring your brand in front of an international field of engineering talent.

OUR SUSTAINABILITY RECORD

Our turbines have incorporated recycled PET filament and flax-fibre blades, contributing to Best Overall and Most Sustainable awards.



RECRUIT TOP ENGINEERING TALENT

Meet our members through a sponsor-only recruitment event. These students have strong technical fundamentals and hands-on experience building a renewable-energy system.



RECOGNITION AT EVENTS

UTWind is often showcased at high-profile university events, including the Dean's Dinner, university-wide club fairs, and the ISWTC symposium.



BRAND VISIBILITY

Your logo appears on the turbine, our team apparel, and our website and social media, putting your brand in front of our growing community of 1,000+ followers.

SPONSORSHIP TIERS

We offer customizable partnerships through technical expertise, financial contributions, and in-kind support. These contributions fund critical components, materials, research, competition expenses, and team operations. In return, sponsors gain direct access to skilled engineering students while advancing their ESG priorities. This support enables UTWind to design, build, test, and compete with innovative clean-energy technologies.

	Diamond \$10,000+	Platinum \$5,000+	Gold \$2,500+	Silver \$1,000+	Bronze \$500+	Technical Partner Products, services, or technical support
Invitation to team events & showcases	✓	✓	✓	✓	✓	✓
Invitation to annual sponsor networking and recruitment event	✓	✓	✓	✓	✓	✓
Sponsor job postings shared with members	✓	✓	✓	✓	✓	By agreement
Logo on team apparel	✓	✓	✓	—	—	By agreement
Access to team résumé book	✓	✓	✓	—	—	By agreement
Team attendance at sponsor event ¹	✓	✓	By agreement	—	—	By agreement
Logo on website (linked for all)	Featured profile	Featured profile	Secondary feature	Logo only	Logo only	By agreement
Logo on banners & competition displays	XL	Large	Medium	Small	Name listing	By agreement
Logo on turbine	XL	Large	Medium	Small	By agreement	By agreement

All sponsorship amounts and equivalent contribution values are stated in Canadian dollars (CAD). We are always open to discussing sponsorship opportunities outside the above ranges.

¹ Subject to member availability and mutually agreed travel arrangements.



UT WIND

CONTACT US

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