

MOAS Project: Wind Energy Demonstration

A large white wind turbine is the central focus, standing in a field. The background features a range of blue mountains under a cloudy sky. The foreground shows a green field with a fence line.

Members

Nicholas Bembridge Victor Fontecchio

Bradley Kroger Michael Sheehan

Suzanne Shepherd

Since Last Update

- Met With Museum
- Exhibit Casing Revisions
- Pulley System
- Electronic Revisions
- Testing of Power Generation
- Control Panel Design
- Budget Revisions

Exhibit Casing Revisions

- 80/20 – Aluminum Frame Manufacturer
 - Metal Frame
 - Formica Wood panels
 - Leveling supports
 - Wire Mesh for air flow

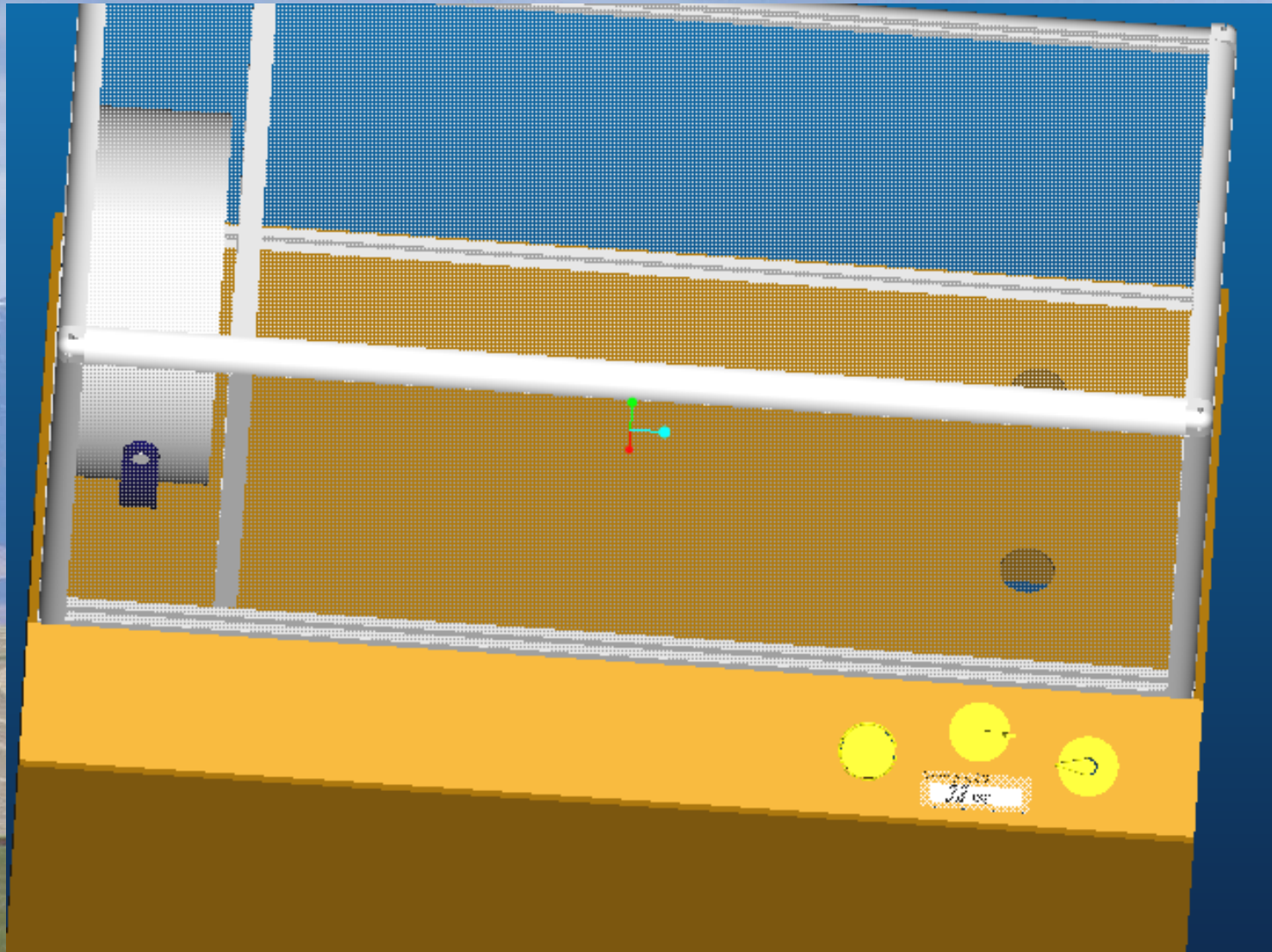


The Multi-Energy Exhibit



Cost = \$18,000

Concept Design

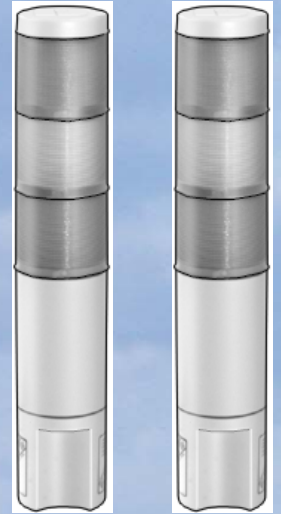


Pulley System

- To turn the wind turbines simultaneously a pulley system will be used
- **NICK INSERT PICTURE OF PULLEY SYSTEM!!!!**

Electronic Revisions

- Power meters
 - Light Towers from McMaster still as primary idea
 - Will Use an Analog Voltmeter as a back-up
- Insert a Start Button in to the exhibit

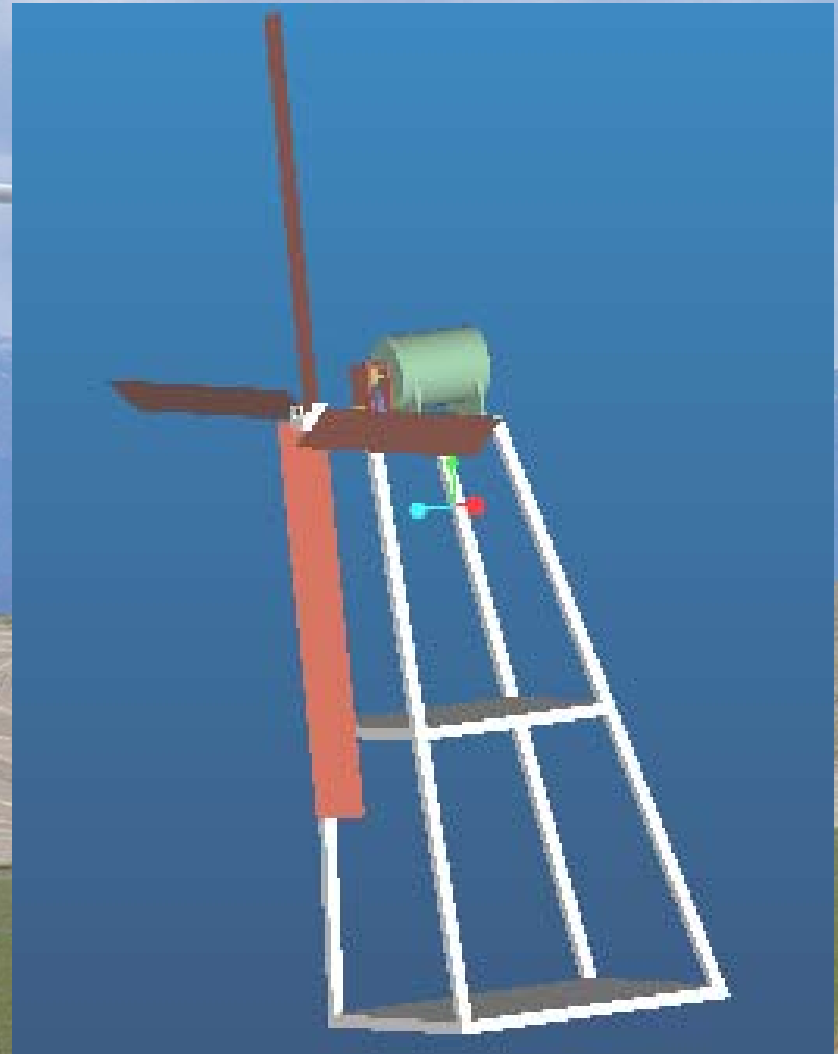
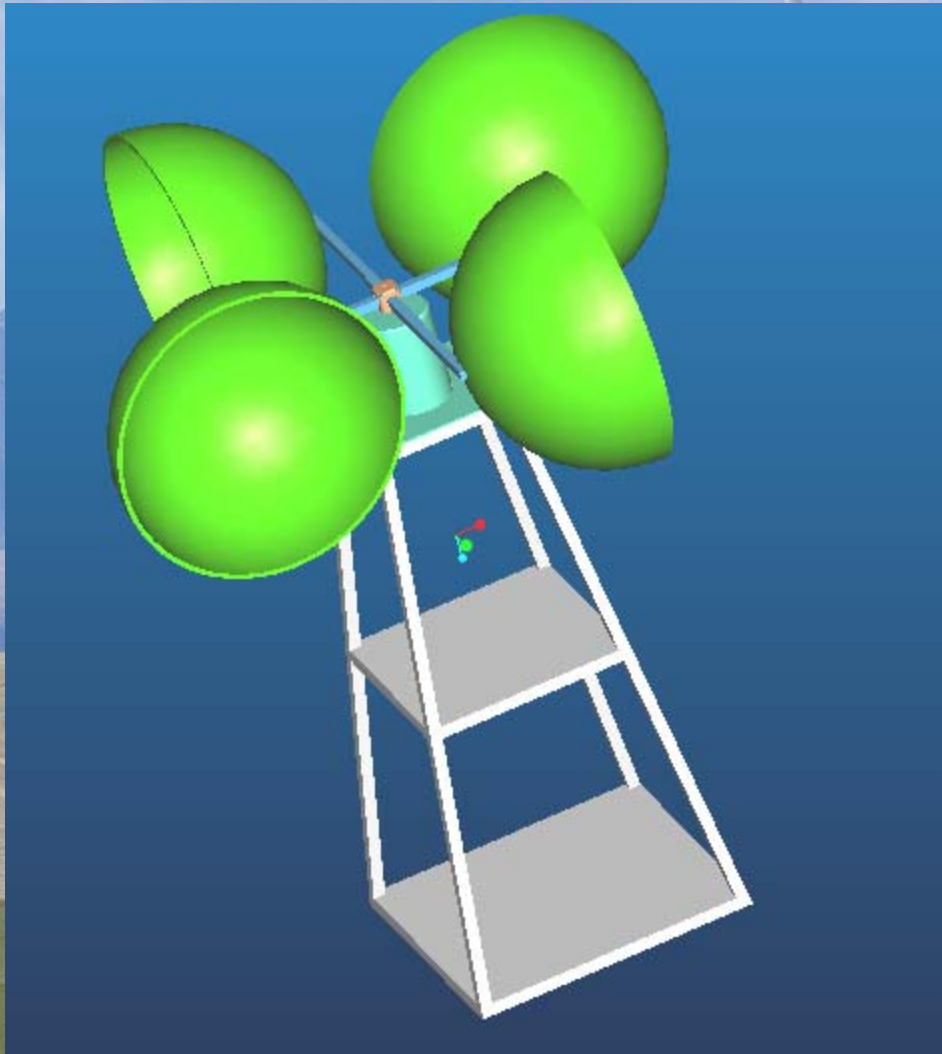


Power Generation Selection



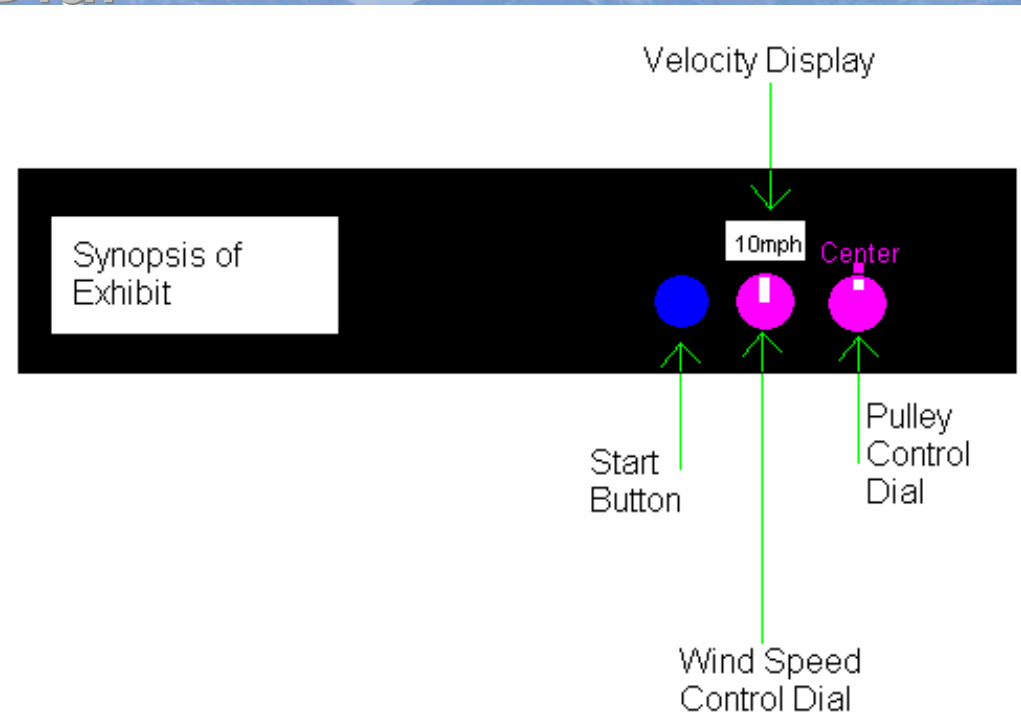
- Turbines, Gearing, frame work, and windmill can all be purchased from Hobby Town USA and can be easily constructed
- **INSERT PIC OF TEST MODELS**

Power Generation



Control Panel

- Start Button
- Wind Speed Control
- Wind Speed Display
- Pulley Control Dial
- Synopsis of Exhibit



Budget Revisions

If the Budget of \$5000 is exceeded then it will be the museum's decision to increase the budget or to cut any extra costs.

Wind Generation	\$450
Power Generation	\$550
Exhibit Casing	\$1,500
Electronics	\$1,650
TOTAL	\$4,150

Direction of Future Work

- Formal Written Proposal for MOAS
 - Present Proposal to the museum to approve of our design concept, budget, and schedule of completion
- Complete Pro/E Design
- Write Final Report for Senior Design
- Start to order parts for next semester