

MOAS Project: Wind Energy Demonstration

Needs Assessment Product Specifications

Wind Energy Systems Inc.

Members

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In order to begin working on the project, the assignment's outcomes and expectations need to be determined in order to deliver a polished finished product. The list below outlines the needs that have been assessed for the project. The group agreed that each need assessment is necessary in order to produce an acceptable final product, and therefore no one assessment is more important than the other. The group concurs that by completing and fulfilling these needs, the project will fulfill all of the customer's expectations.

Needs Assessment:

- With small children being the target audience, the exhibit will have to be exceedingly safe.
- The project has to be simple enough for children and adults to understand.
- The museum exhibit needs to be capable of withstanding long-term wear and tear caused by the general public.
- The project must be hands-on.
- A final working exhibit must be produced by April 2005.
- Exhibit must look professional; professional fabrication will be used as much as possible.
- The project must remain within a budget of \$5000.
- The design needs to be innovative and attractive.
- The client requires the visibility of all moving parts, and able to view exhibit from a minimum of three sides.
- The museum size requirements must be met.

Next, the group has compiled a list of product specifications. These specifications are the general parameters of the project; thus, without them the product would not be satisfactory. These specifications also lay the groundwork for any design work that is about to be embarked upon. Below is an outlined list of the product specifications for this project.

Product Specifications:

- In order to make the exhibit safe and visible, plastic will be used to encase the exhibit.
- A power meter will be used in order to display output energy.
- An Anemometer needs to be integrated to the design.
- Wind generation fan 18"- 24" in diameter
- Wind turbine generator unit
- Air redirection unit to direct exit air flow vertically
- Flow management/control system
- Measure rpm of wind turbine
- Rough Dimensions of the exhibit 6ft x 3ft x 6ft
- Ideally the exhibit needs to be powered discretely
- All non-purchased parts need to be made in the COE Machine shop