Appendix A:

Sample Funding Proposal Letter

Real Time Renewable Energy Display
c/o ASCE, Engineering Bldg. Rm E-219
500 W. University
El Paso, TX 79968

October 14, 2008

Dear Sir or Madam,

Subject: A senior design project has been proposed to construct a real-time solar energy display for placement in the College of Engineering Lobby, wherein it will be visible to an engineering student body of approximately 3000 students, as well as faculty and staff. The cost of this project is approximately $5,000, which includes the cost of a weather station and pyranometers, and a touch screen display.

As the cost of using fossil fuels increases and the environmental impacts of carbon emission becomes more apparent the importance of renewable energy sources has become almost universally accepted. As a regional leader in the implementation of important social and economic developments, UTEP has a need to enhance its involvement in the vital field of sustainable energy sources.

A student senior project has been proposed to tackle this shortfall. The project will involve the placement of a real-time renewable energy display in a highly visible area of engineering building lobby. The display will be composed of an eye-catching display of the potential uses and savings possibly provided by the renewable energy sources that are available and easily utilized. Major renewable energy sources readily available to El Pasoans include solar and wind power. The design project will measure, in real-time, the incoming solar radiation at the engineering building, which will allow for a live calculation of the amount of energy that would be produced by a given hypothetical area of solar panels. The calculation of energy savings will be cumulative and provide a clear and immediate understanding of the potential uses of solar energy.

Another important energy source is wind power. West Texas is quickly becoming an important center for wind power. The display will also make the use of this energy source apparent. By measuring the wind speed, the energy that could be provided by wind turbines will be easily extrapolated and displayed in real time.

The equipment required to measure and display the data is readily available. Solar radiation is measured with a pyranometer. The pyranometer provides a live data feed of the amount of solar radiation being received on site. The energy and cost savings provided by solar energy can be calculated through the use of the pyranometer data. The use of widely available weather stations provides information on wind speeds. The wind speed data will be used in

much the same manner as the solar radiation data to calculate and display the benefits of wind energy. All of the calculations and manipulation of the real time and historical data will be accomplished through the use of a PC. The PC will also provide the required signal and connection to the display screen. To provide the maximum impact possible for all who visit the kiosk a touch screen display will be used. This type of display will allow the user to customize the calculations to display the information that is desired. For example if the user wants to find out the amount of energy savings provided by a larger, smaller or more efficient solar panel array, then the customization will be easily accomplished through the use of the touch screen. Software for interfacing between the measuring equipment and the PC will also be required.

The visual impact of the live display of potential cost savings provided by sustainable energy sources will be a great asset for UTEP. The display will also make the benefits easily understandable and appreciable by even casual observers. The clear quantification of the potential benefits the will boost interest in renewable energy, and help to cement UTEP's place as a leader in the field.

Itemization:

17A2 Touch Computer System 17" LCD All-in-One Desktop	$1,750.00
WeatherHawk Model 232 Weather Station Provide real-time wind and solar radiation data	$1,685.00
Weatherhawk WH-IP IP Server Module Serves real-time data from weather station	$495.00
Weatherhawk COM-CBL-25 Communications Cable	$129.00
Virtual weather Station Software-XP/X Weather station management, data display, data export and internet interface software	$129.00
Weatherhawk SP2-KT Solar panel to recharge weather station	$199.00
Weatherhawk TP1 Mounting Mast	$85.00
Total	$4,472.00

Our senior design group is requesting your assistance in funding this vital facility improvement project. Your contributions will allow us to provide real time renewable energy information and educate an engineering student body nearing 3000. Thank you for your consideration.

Sincerely,

Crystal Arellano
Brian Ibarra
Colleen Martindale
Philip Romike