Solar-Wind Charger

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Charging an electronic device using solar and wind renewable energy was the purpose of this engineering project. Various materials were tested to design the wind turbine blades to satisfy the balanced weight criteria. Different electrical series were tested to satisfy the capture of solar and wind energy criteria. The prototype was tested in a running vehicle at a constant 20, 30, and 40 mph. A phone was used to record a time of 20 seconds for each speed and the voltage indicated on a multimeter. The voltage from a regular wall outlet was recorded as the control with a multimeter. The results recorded showed an average of 4.34 volts for 20 mph, 4.76 volts for 30 mph, 5.16 volts for 40 mph, and 4.97 volts for the control. The results collected indicated that solar and wind energy could be used to charge an electronic device at a certain speed. The minimum voltage needed to charge an electronic device is 4.5 volts and the maximum voltage is 5.0 volts. The speed ideal for this prototype to charge an electronic device was between 30-40 mph.

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