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Wind Turbine Design ELLORIA SHAW, GABRIELA POPA, Ohio University Zanesville — The world runs on electricity: cell phones, lights, and the internet. Without electricity, life would grind to a halt. We rely on nonrenewable resources, such as coal or natural gas, to generate electricity. We need to decrease our dependence on nonrenewable resources and increase our dependence on renewable resources. Renewable resources, specifically wind, will never be depleted. Wind turbines convert the kinetic energy of wind into electricity. During this empirical research study, we tested various configurations of a wind turbine and identified which were most efficient. Each configuration varied in number of blades, size of blades, and wind speed. We found that for a certain wind speed, three blades configuration worked better. Also based on the number of blades, there is an optimal length for the blades. More work is in progress.

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