Road Wind Power Generation Using Momentary Air Pressure Difference

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Modern industry is dependent mostly on fossil fuel energy and nuclear power generation. We were concerned about this undue value given on these types of generation and put our heads together to find more safe and environment-friendly energy production. While looking for the most effective alternative, we focused on road wind power generation which can reuse wasted energy produced by cars. Our purpose is to make an efficient road wind generator that can generate electricity by using the instantaneous difference in air pressure as cars passes by. A small model was made using a 3D printer to measure the power generation and for selecting the shape of the propeller for the generator. Finally, a real-sized road generator was built using MDFs and was installed on the road to measure its output, identifying its potential as a road wind generator. Actual road installation of generators manufactured by the team resulted in an electrical output which was strong enough to turn on LED lights.

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