

Abstract Submitted  
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**Can Airports be a Green Source of Energy?**<sup>1</sup> DANIEL SOLUS, CHARYSSE ARCHER, BRANDI MALONE, NORRISHA CHESTERFIELD, LAT-ERIA JACKSON, DANIEL ERENDO, Middle Tennessee State University — When Boeing 747 lands its energy (896MJ) is dissipated by friction. Our statistical analysis for commercial aircrafts landing at the Nashville International Airport (BNA) have discovered that nearly 30 average single family households can be powered by the dissipated energy on a monthly basis. It may be possible to land an airplane on a frictionless surface and transform its energy into electrical energy. To demonstrate this we have conducted theoretical and experimental studies using a conducting rod attached to a toy car sliding on a U-shaped conducting wire placed in a uniform magnetic field track. The results concluded that this technique requires a very strong magnetic field. We then used a cylindrical magnet mounted on toy trucks and set to roll on a track inside a solenoid and been able to generate an ac voltage (4-10 volts).

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