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Solar Mini-Blinds with DC-DC Converter for 5V DC Charging Applications

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CPET 491 Senior Design Project II

Solar Mini-Blinds with DC-DC Converter for 5V DC Charging Applications

Final Project Report

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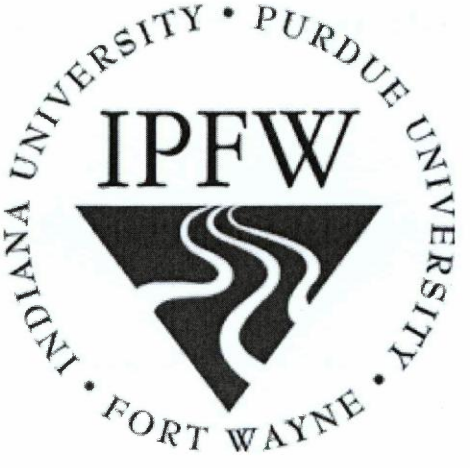

Submitted to:

Paul I. Lin, Professor of CPET 491 Senior Design Phase II

Department of Computer, Electrical, and Information Technology

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Abstract:

With ever increasing energy needs and the adoption of new technologies such as smartphones, it is important to realize how the energy we utilize is being produced. In 2015, 67% of electrical energy was supplied by the burning of fossil fuels (Energy, 2017). This puts unwanted carbon dioxide into the atmosphere and has been linked to the cause of climate change. If we were to continue down this path climate change and natural disasters will only become worse with the passing years. Currently smartphones are the one thing no modern human can live without. We use smartphones for everything and charge them daily putting an even greater strain on the power grid to constantly supply more energy. This prototype is designed to mitigate some of that strain on the grid, removing a small amount of power that would be used to charge portable devices from the grid and instead these devices will be charged with the renewable energy source in the form of photovoltaic energy.