

# Solar car based DC micro grid system

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# Solar Car Based DC Micro Grid System

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In

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Project Advisor

Co-Advisor

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Declaration

**I declare that the work contained in this thesis is my own, except where explicitly stated otherwise. In addition this work has not been submitted to obtain another degree or professional qualification.**

**Signed:** \_\_\_\_\_

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**DEDICATED TO OUR PARENTS WHO WANTED US TO  
BECOME AN ENGINEER SO WE WANT TO MAKE A  
PROJECT THAT THEY CAN BE PROUD OF.**

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# **ABSTRACT**

As electric vehicles becoming more popular, the companies have ideas to feed the grid more electricity, however these vehicles can provide power to the grid when they are parked serve as micro grid systems for grid regulation, thus using a system which based on solar power technology. A design for bidirectional converter and Uni directional inverter, simulations show that designs are capable of bidirectional DC TO DC and Uni directional DC TO AC power transfer to power bank and grid.

# **CHAPTER 1:**

## **INTRODUCTION**

### **1.1 INTRODUCTION TO SOLAR POWER**

**It's certainly clear that today the burning of fossil fuels mangling the climate and emission of carbon by burning these hydrocarbons raises the Earth temperature to high extent. Scientists are agreed that the world needs to reduce greenhouse gases emission by 25 percent up to 2020 and 80 percent up to 2050. Otherwise the emission of hydrocarbons causes severe environment problems. The idea for sun's power usage is simple. Solar collectors convert the solar energy into electrical energy. Solar is best way for energizing the cities and far areas where transmission lines cost much. Solar power, clean renewable energy source which has zero carbon emission, has huge potential of energy. The recent advancement in solar energy system are easily available for domestic and industrial purposes.**