

Solar Powered Automobile with Energy Storages-2021-2022 Capstone Project

Summary: Canada has recently committed to net-zero emissions by 2050, as part of its Strengthened Climate Plan, joining over 120 countries in the effort to reduce the impact on global climate change and the environment. Solar Power and Electric Vehicles are the key to significantly reducing our dependence on fossil fuels and is the natural evolution of our energy infrastructure. The project is to design a solar powered electrical automobile. It contains mainly the following tasks:

- Design and build a small-size automobile with DC motor (Motor Selection)
- Design and build the motion and speed control panel for automobile, AVR microcontroller
- Solar Panel Selections
- Solar Panel Control Module: DC-DC Converter
- Battery Selections
- Battery EMS Module: Bidirectional DC-DC Converter (Charging with solar energy/Discharging), AVR microcontroller

Skills required: AVR Programming and Board Design, Solar System, Motor Control

Number of Students: 5-6

Contact Information:

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