

Names of Students in the group: Alex Gombert, Francisco Balcazar

Exact Title of the Project: Variable Input Constant Output Voltage Regulator

Acronym: vicovr

University login name of each student in the group: agombert, fbalcazar

A brief description of the project:

The Variable Input Constant Output Voltage Regulator (VICOVR) project will consist of a closed loop control system and power electronics to achieve a constant DC output voltage for a wide range of input DC voltages. The VICOVR is intended to provide a constant DC output voltage to charge the battery bank in an electric vehicle during regenerative braking. The control system will increase or decrease the controller duty cycle depending on the generator output voltage during braking to maintain the constant voltage required to charge the battery bank. Without VICOVR a significant amount of energy dissipated during braking will be lost to the air instead of being redirected to the battery. The VICOVR should therefore provide greater distance per charge.