Registration Form

TEAM INFORMATION

Team Name/Project Title: Tiny House Renewable
Department: Electrical Engineering
Faculty Advisors: Dr. Fernando Mancilla-David
Team Members: Joshua Moyers, Walter Emery, Julia Redmond, Jeff Redmond

PROJECT INFORMATION

Description:
Creating a net-zero tiny house that will run off solar power. A GUI will perform load flow analysis and load shedding to maximize efficiency.

Abstract:
Renewable electricity is an intermittent source; i.e., not available on demand. Minimum daytime load for solar tends to coincide with maximum production. Additionally, generation during peak load is difficult to determine. Our GUI will reduce standby by a load management system. The user will have full control over all power systems in the house with an Arduino and Raspberry Pi. The system will also autonomously maximize efficiency in the absence of user input to keep power consumption to a minimum. We will program models in PSCAD to show the backdrive onto the grid and our system with additional generators and loads.