

Restep Power System

Statement of Purpose

In the past, intelligent power monitoring and control were reserved for high power and high cost systems. Today's technology offers powerful functionality in relatively low-cost integrated circuits. The Restep Power System leverages these integrated circuits in a modular, flexible, and intelligent power system tailored to a 100-Watt power level. Offered as completely open source, this system serves as an approachable practical utility and educational tool.

The original application for the Restep Power System is FarmBot. The concept is to power a FarmBot with renewable energy and have insight as to how much power is available, the state of charge of the battery, and provide other monitoring and control. With this functionality, the entire system can be optimized through data processing to maximize efficiency or another user-defined parameter. This power system can in fact be used for many other applications where a user cares to have such a level of insight and control. Examples of other loads and systems include, but are not limited to LED lighting, remote telecom or wifi, small DC appliances, phone & laptop charging, water pump & filter, and remote camera.

As open source, this system is intended to be used and modified for many applications, and for the user to have control at all levels. It is tailored for harnessing renewable energy and operating with efficiency and sustainability in mind. The 100-Watt power level aims to provide a low-cost and practical infrastructure, and design for reliability ensures a low environmental impact.

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