REMS

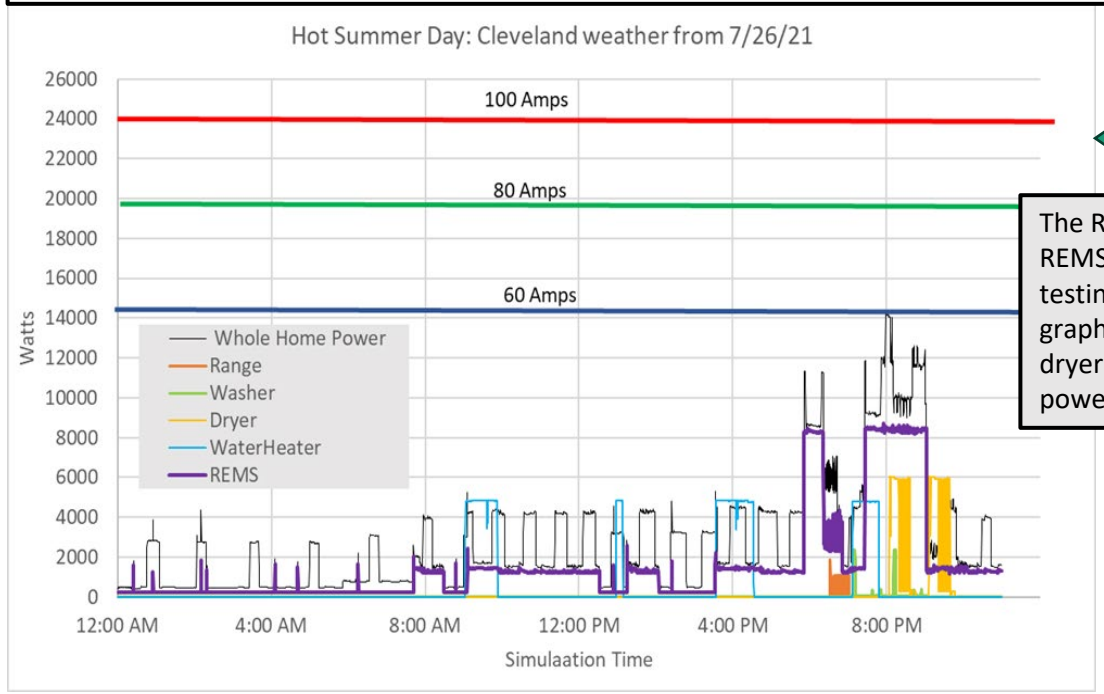
Residential Energy Management System

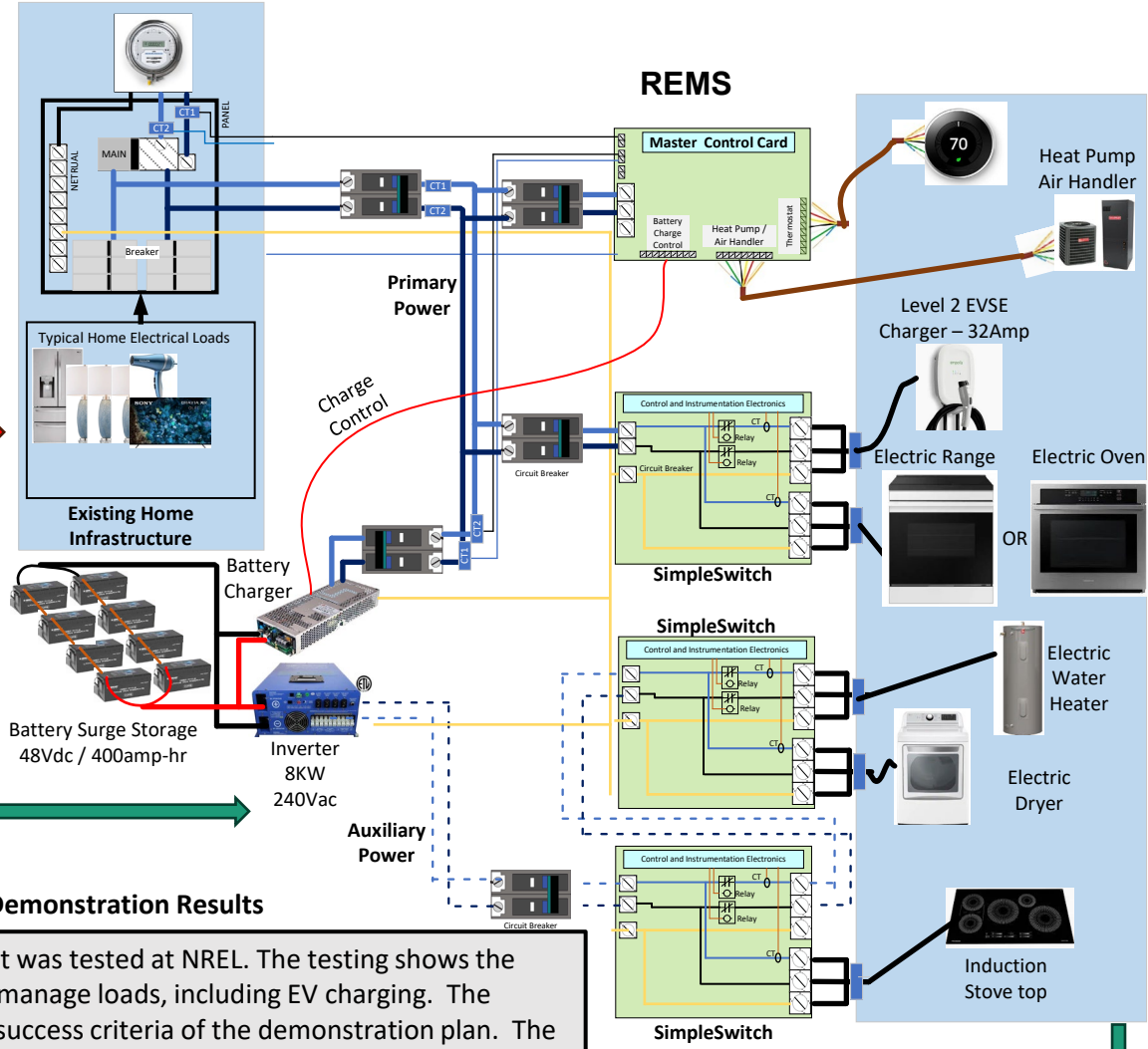
Need/Challenge

REMS technology offers a versatile and fair approach to managing energy consumption throughout entire homes. Its scalability means it can adapt to various home types, ensuring efficient electrification without the need for an electrical panel or service upgrade. Moreover, REMS allows gradual expansion, letting users transition at their own pace and spreading costs over time. This inclusive model empowers lower-income families to join in reducing their dependency on fossil fuels.

Proposed Solution

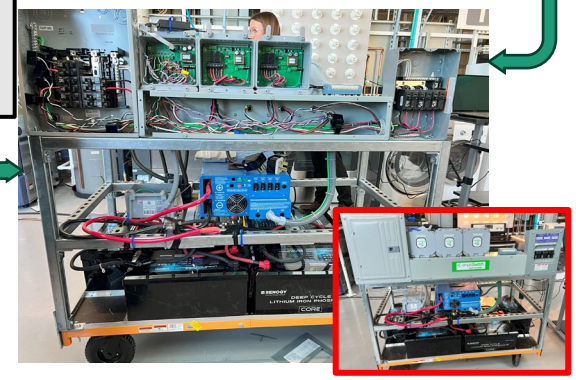
Building upon our simpleSwitch energy management product, REMS effectively addresses the challenge of peak loading through active load management and stored energy mechanisms. Active load management optimizes power usage by either diverting power from appliances during peak demand periods or seamlessly switching between different appliances. REMS incorporates an auxiliary power bus powered by LIPO batteries and a high-power inverter. This auxiliary power bus autonomously supplies electricity to appliances, operating independently from the main electrical panel. Furthermore, the batteries recharge during periods of low power consumption from the main electrical panel, ensuring continuous functionality and energy efficiency.





Demonstration Results

The REMS demonstration unit was tested at NREL. The testing shows the REMS's capability to actively manage loads, including EV charging. The testing met all the goals and success criteria of the demonstration plan. The graph to the left shows various power shares and the water heater and dryer power having zero impact on the whole home power draw. The REMS power illustrates the appliance share between the range and EV Charger



Jytte Bailey
Co-Founder
CEO

Richard Bailey
Co-Founder
CTO

David Graves
Co-Founder
Technical Support

The Team