Clip-On Fireplace Thermo Power - Written Entry & Diagram

My invention is a clip-on **thermoelectric generator kit** for wood fireplaces that turns wasted heat into **stored electricity** for later use. In Tumbarumba, many homes keep fires running all winter, so a huge amount of heat disappears up the flue. My kit captures a little of that heat and converts it into electricity that charges a small battery.

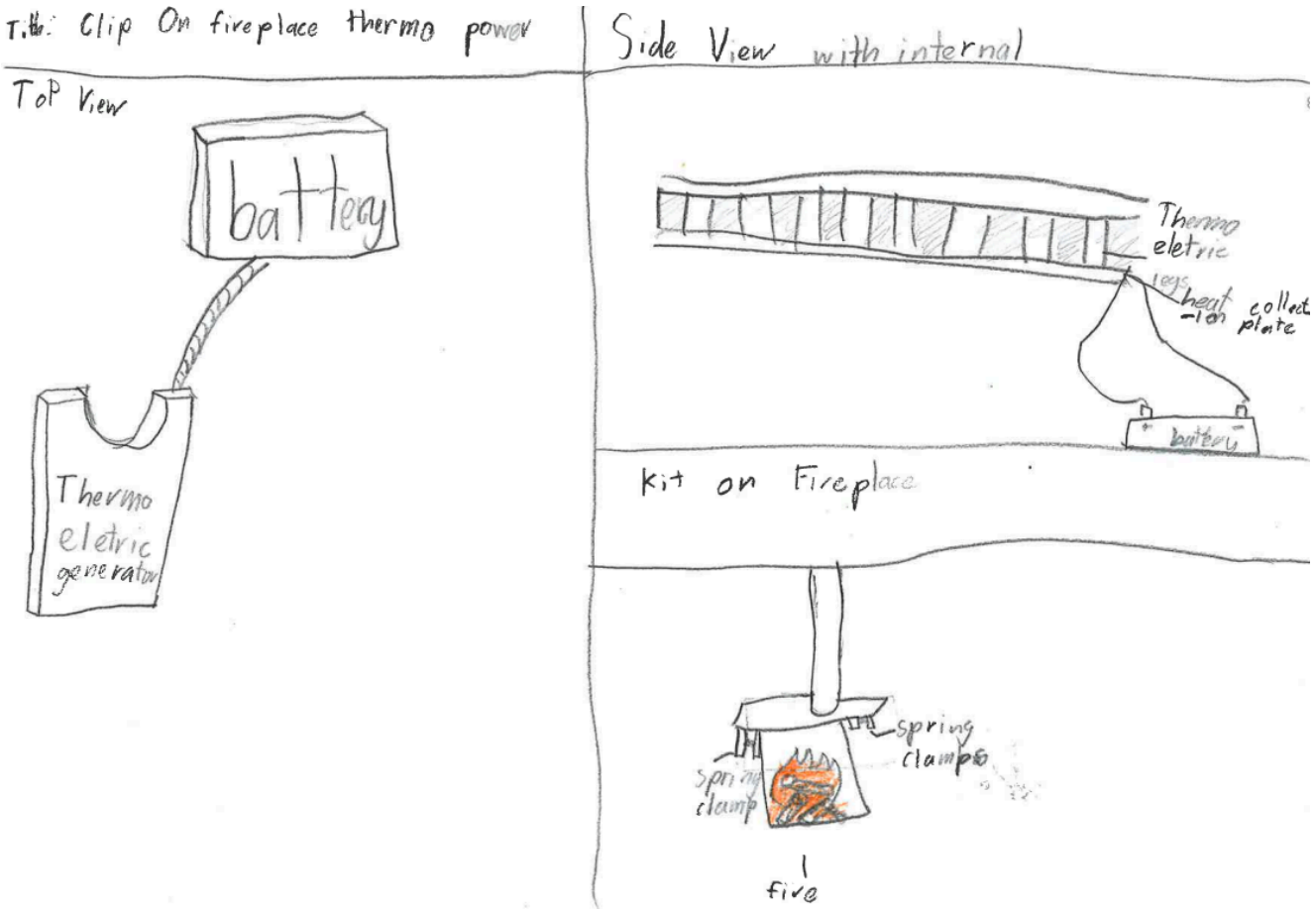
The kit uses a thermoelectric plate sandwiched between a warm metal pad on the fireplace side and a finned heat sink on the room side. The temperature difference makes electricity with no moving parts. A small circuit boosts the output to a steady electric current which safely charges the battery while the fire is on. Later, the stored energy can charge a phone, laptop or small kitchen appliances.

This reduces emissions because it **replaces grid electricity**, which still comes partly from fossil fuels. Every hour we charge the battery from waste heat is an hour we don’t need grid power.

The design focuses on **easy installation and safety**. A spring clamp grips a standard metal surround and thermal pads improve contact. The electrical side is plug-and-play: a single USB cable runs to the power bank.

This kit fits our community because it works **when people already have the fire on**. By storing electricity made from waste heat and using it later, Fireplace Thermo Power helps **reduce emissions** during the cold months, one living room at a time.

Design


Title: Clip On fireplace thermo power
Top View
battery
Thermo eletric generator
Side View with internal
Thermo eletric
legs
heat collect plate
battery
kit on Fireplace
spring clamps
spring clamp
fire