

KEEP THE PUMPS RUNNING. KEEP THE COOLERS COLD.

Continuous backup power for convenience stores and fuel retail sites — built to keep card-payment pumps and refrigeration running through every grid outage.

Fuel cell technology · No combustion · Remote monitoring · Off-grid ready

ONE OUTAGE. TWO WAYS TO LOSE MONEY.

Convenience stores depend on grid power for both transactions and inventory



PUMPS GO DARK

When grid power drops, fuel dispensers lose the network connection needed to authorize credit and debit card sales.



~30-MINUTE REBOOT

Once power returns, pump controllers and card-payment systems can take roughly half an hour to reboot and resync before the pumps can sell fuel again.



COLD CHAIN AT RISK

Coolers, freezers and walk-ins start warming the moment the compressors stop, threatening dairy, deli and frozen inventory.



EVERY MINUTE COUNTS

Lost fuel sales, lost in-store sales and spoiled product all compound for as long as the site stays down.

TWO CLOCKS START THE MOMENT THE GRID DROPS

Flux Home is sized to stop both clocks before they start



THE PUMP REBOOT CLOCK

~30 min

After an outage, pump controllers and card-payment terminals typically need about half an hour to reboot and resync — time the site can't sell fuel by card.



THE SPOILAGE CLOCK

Starts at 0:00

Refrigeration and freezer temperatures begin climbing the instant the compressors lose power — the longer the outage, the greater the risk to perishable inventory.

Flux Home keeps both clocks from ever starting.

THE FLUX HOME SOLUTION

Flux Home is a solid oxide fuel cell that electrochemically converts natural gas into clean, continuous power — with no combustion, no flame, and none of the mechanical wear of a diesel genset.



FLUX HOME 3kW SYSTEM



NATURAL GAS

Fuel supply at the site



ELECTROCHEMICAL CONVERSION

Solid oxide fuel cell stack



CLEAN DC POWER

No combustion, no flame



CONTINUOUS UPTIME

Pumps, POS and coolers stay live

BUILT FOR THE CONVENIENCE STORE SITE

Compact enough for tight forecourts, quiet enough for customers at the pump island

<45

dBa at 10 ft

~1

day installation

2'×2'×5'

footprint (W×D×H)

~0.35

m³/hr fuel use

120 VAC

NOMINAL VOLTAGE

Up to 40 A

CURRENT

~600 lbs

WEIGHT

Indoor / outdoor

LOCATION RATING

Deployed beside the store or at the pump island on a small pad — no new gas service required where natural gas is already on site. Output and fuel consumption vary with site conditions, gas quality and system configuration.

ONE SYSTEM. TWO PROBLEMS SOLVED.

Continuous power removes the reboot cycle and the spoilage window in one move



PUMPS STAY LIVE

- Pump controllers, card readers and site networking stay powered through the outage — no loss of connectivity to reboot from.
- No ~30-minute reboot cycle: dispensers keep selling fuel by card straight through the event.
- Backlit signage and forecourt lighting stay on, keeping the site visible and safe after dark.



COOLERS STAY COLD

- Compressors for coolers, freezers and walk-ins run without interruption — no warming window ever opens.
- Protects dairy, deli, frozen and beverage inventory from temperature excursions and spoilage losses.
- Removes the guesswork of deciding what to discard after an outage of unknown length.

RELIABLE, VISIBLE, IN CONTROL

A dispatchable, standards-compliant asset built for a critical retail site



Remote telemetry

Wi-Fi-based monitoring keeps operators connected to every unit across the store network.



Real-time diagnostics

Continuous performance monitoring flags issues before they cause downtime at the register or the pump.



Dispatchable operation

Operators retain visibility and control of every deployed unit, store by store.

CERTIFICATIONS & COMPLIANCE



UL 1741

Inverter safety for grid support



UL 9540B

Battery safety compliance



EN 50465

Electrical compatibility standard

BEYOND THE DIESEL GENERATOR

How Flux Home compares to conventional forecourt backup power

	DIESEL GENERATOR	FLUX HOME
Power generation	Combustion + moving parts	Electrochemical, no combustion
Noise near pumps & customers	70–85 dBA typical	< 45 dBA at 10 ft
Maintenance	Frequent oil changes, servicing	Minimal moving parts
Fuel logistics	Scheduled diesel truck delivery	Runs on existing natural gas supply
Monitoring across a store network	Manual site checks	Remote telemetry & diagnostics

Quieter operation keeps the forecourt pleasant for customers at the pump — and removes the noise complaints that limit where a genset can run.

SCALING UP FOR LARGER SITES

Truck stops and travel centers carry heavier loads — larger walk-ins, food service, HVAC. **Flux Ember** packages higher-output generation, battery storage and thermal recovery into one transportable 20-ft unit for exactly that scale.



FLUX EMBER — INTEGRATED GENERATION, STORAGE & CONTROLS

27 kVA

PEAK OUTPUT

288 kWh

ENERGY AVAILABLE / DAY

12.6 kW-th

USEFUL HEAT RECOVERED

29.2 days

RUNTIME, 1,000 GAL TANK

Fuel compatible with natural gas, CNG, PNG, Bio-CNG and propane — sized to the mission with tank options from 120 to 1,000 gallons.

RIGHT-SIZED BY SITE. Single-store forecourt → Flux Home. Multi-bay travel center or truck stop → Flux Ember.

WHERE IT FITS

Four deployment profiles across a fuel retail network



SINGLE-SITE C-STORES

Protect one location's pumps, POS and refrigeration with a single compact Flux Home unit.



MULTI-SITE FUEL CHAINS

Standardize backup power across a fleet of stores with the same remotely monitored platform at every site.



HIGH OUTAGE-FREQUENCY REGIONS

Storm-prone and grid-constrained areas see the fastest payback from eliminating repeated reboot and spoilage events.



TRAVEL CENTERS & TRUCK STOPS

Higher-load sites step up to Flux Ember for combined power and useful heat at truck-stop scale.



NEVER REBOOT THE PUMPS AGAIN.

KEEP THE COLD CHAIN COLD.

Let's scope a Flux Home deployment for your site — contact the Flux team to discuss siting, fuel access and remote monitoring.