

Islanded Backfeed

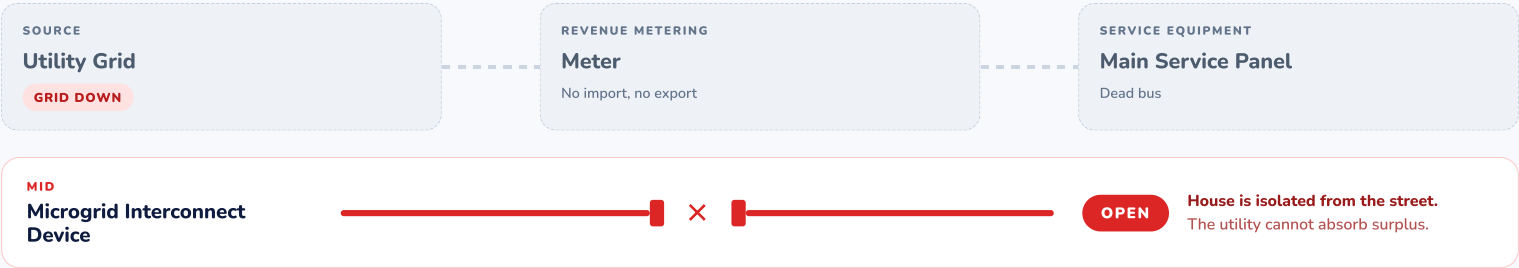
Grid down. Battery full. Nowhere for the surplus to go.

● GRID DOWN

● BATTERY AT 100% SOC

● ARRAY PRODUCING

UTILITY SIDE: DE-ENERGIZED



THE ISLAND: ENERGIZED BY THE BATTERY INVERTER



POWER BALANCE AT MIDDAY



TWO DEAD ENDS

- ✗ Battery is full, so it cannot charge
- ✗ MID is open, so it cannot export

WHY IT DOES NOT RESOLVE ITSELF

01

Nowhere to store it

The bank is at 100% SOC. The inverter has to dump the energy, curtail it, fault, or overvoltage its DC bus.

02

Frequency shift is a blunt tool

It does curtail, but the array hard-trips near 62 Hz, then sits out a five minute lockout and a five minute ramp before returning.

03

The array has no idea

It sees valid 120 V and 60 Hz, so anti-islanding never trips. No CT, no comms, no way to learn the battery is full.

SCOPE GAP

UL 3700 covers grid-interactive operation only. Nothing in the standard tests, lists, or contemplates a plug-in array operating inside a battery backup island, an off-grid system, or a circuit fed by a generator.