

# The Business Case for Appliance-Level Control on Construction Sites

## The Problem:

### Plug Power Is the Blind Spot Costing You Thousands

Temporary buildings are powered like permanent ones – and left running like no one's paying the bill.

On a typical construction site ▶

## The Result?

High fuel spend.  
CO<sub>2</sub> drift. Fire risk.  
No audit trail.  
Weaker tenders.

Plug power is the biggest uncontrolled cost on site – **and the easiest to fix.**



1

Up to 95% of cabin energy use comes from plug-load appliances

2

30–67% of that is pure **waste** from heaters, fridges, and laptops

3

None of it is visible to BMS, meters, or dashboards

4

Generator sites burn **more diesel than needed** because plug load runs unchecked

5

Behavioural reminders fail on rotating crews

# Why Manual Control Can't Fix It

Traditional methods fall down because plug-load waste is **behavioural, inconsistent, and invisible.**

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## The limits of manual audits

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- ▶ Too slow
  - ▶ Too infrequent
  - ▶ Produce recommendations, not savings
  - ▶ Can't track background or after-hours power use
  - ▶ Can't verify impact
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## The limits of baselining

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Baselines drift with:

- ▶ Weather
  - ▶ Occupancy
  - ▶ Shift patterns
  - ▶ Equipment behaviour
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You end up managing energy with **assumptions**, not reality.

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## The limits of BMS / circuit-level tools

BMS and meters only show **total cabin load**. They **cannot** see individual appliances or shut off waste.

To fix plug-load waste, you need **appliance-level visibility and automatic control.**

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# The measurable. energy Solution

AI-powered smart sockets + automated shut-off + real-time data = Guaranteed savings with zero behavioural overhead

This is energy control that actually controls energy.

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## What it delivers

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- ✔ Automatic switch-off for all plugged-in appliances and equipment
  - ✔ Real-time appliance identification (by energy signature)
  - ✔ Verified savings in £, kWh, and CO<sub>2</sub>
  - ✔ Overload protection + fuse alerts (reduced fire risk)
  - ✔ Rapid install (minutes per cabin; no rewiring)
  - ✔ Works alongside existing generators, meters, and welfare cabins
  - ✔ No behaviour change needed
  - ✔ No maintenance burden on site teams
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## The impact

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- ▶ **30–67% reduction** in plug-load energy use
  - ▶ **4-month ROI** (with quickest ROI achieved in 2 weeks)
  - ▶ **24–36%** cut in CO<sub>2</sub> from plug-load waste
  - ▶ Lower generator runtime
  - ▶ Quantifiable reduction in electrical and heater-related fire risks
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# Savings You Can See in Weeks

Sites lose thousands per month to unmanaged plug-load waste – often without knowing where it’s coming from.

With measurable.energy:

- ▶ **Energy reduction:** 30–67%
- ▶ **Fuel reduction:** up to 20% generator runtime avoided
- ▶ **Payback:** from 4 months

Where the subscription cost is offset by:

- ▶ Reduced energy and fuel use
- ▶ Lower fire-risk exposure
- ▶ Fewer maintenance callouts
- ▶ Better ESG reporting
- ▶ Stronger tender evidence

**The investment pays for itself mid-project and often sooner.**

# Why This Matters

## Commercial Directors

**Lower temporary work costs. Clear progress reporting. Faster payback. Stronger margins.**

## Sustainability Leads

**Real, auditable CO<sub>2</sub> savings. Appliance-level insight for Scope 2. Evidence aligned to net-zero targets and client expectations.**

## HSE Managers

**Lower heater/fire risk. Overload + fuse monitoring.**

## Bid Teams

**Quantified savings that strengthen framework submissions and client proposals.**

**Appliance-level control can be a project-wide competitive advantage.**

# Deployment Pathway

**1** **Select cabins**  
(10–30 to start)

**2** **Install sockets**  
(only minutes per cabin; no rewiring)

**3** **Enable automation policies** (out-of-hours, idle timeout, safety rules)

**4** **Monitor weekly exceptions**

**5** **Review ROI results**

**6** **Scale across the site or portfolio**

A full site can be under control **within XX hours.**

# Get Your Custom ROI Report

Want your exact savings?

Use the measurable.energy ROI calculator to see:

- ▶ Energy reduction
- ▶ Fuel savings
- ▶ Carbon impact
- ▶ Payback period
- ▶ Scenario comparisons

**One input: number of cabins. Output? A compelling business case.**





measurable·energy

# Trusted by the UK's leading construction organisations:

**Kier • Premier Modular  
RO Group • Major contractors**

With consistent results across  
all deployments:

- ▶ 30–67% reduction in  
plug-load waste
- ▶ Lower fire-risk profiles
- ▶ Verified CO<sub>2</sub> and fuel savings
- ▶ Improved tender performance

**The fastest decarbonisation  
win on any site is at the socket.**

**Ready to Stop Wasting Energy?**