



SmartFlow by Four Seasons HVAC

AI-Enhanced Energy Management for UK Hotels

The Challenge Facing UK Hotels

66% Wasted HVAC Energy

Guests leave air conditioning running when they leave the room – 54% never turn it off, wasting an average of 11.1 hours per day per room.

60% of Hotel Energy

HVAC and pumping systems account for up to 60% of a hotel's total energy consumption – the single largest cost line on the bill.

30% Lost to Inefficiency

Undetected faults, leaks, and system drift waste 30% of building energy – most hotels don't notice until it's far too late.

Rising Regulatory Pressure

Tightening UK energy regulations and ESG reporting requirements demand measurable, auditable action – not estimates.



What is a Hotel Energy Management System (HEMS)?

A HEMS automatically monitors and controls energy use across a property — going beyond reporting to actively controlling energy in real time, room by room. Our **SmartFlow** system integrates seamlessly to deliver optimal comfort and efficiency.



Beyond Reporting, Real-time Control

SmartFlow actively manages energy, moving past passive data collection to dynamic, room-by-room optimization that reacts to real-world conditions.



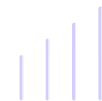
Occupancy-Driven Loads

Hotel energy demands are dictated by hourly occupancy patterns, necessitating precise, non-intrusive automation tailored for each individual room.



Intelligent Presence Detection

Advanced presence detection determines true occupancy (not just keycards), ensuring conditioning only when a guest is present, for precise comfort and pre-conditioning.



Seamless System Integration

Wireless sensors and controllers easily retrofit onto existing HVAC, with quick installation (~10 minutes per room) and options for whole-room control (lighting, outlets, curtains).



Direct ROI & Value

Energy savings directly boost Net Operating Income (NOI) and enhance asset value. These savings compound monthly, independent of rate changes.



Proven Energy Reduction

Hotels typically experience a significant **20–30% reduction** in guest-room HVAC energy consumption, translating into substantial operational cost savings.

Why SmartFlow's HEMS Approach Delivers Results

SmartFlow by Four Seasons HVAC isn't just about saving energy; it's about intelligent, verifiable optimization that enhances guest comfort and your bottom line. Here's how our Hotel Energy Management System (HEMS) works in practice:

Whole-Room Control, Not Just HVAC

SmartFlow orchestrates **all energy loads** – lighting, power outlets, and curtains – for comprehensive optimization and a superior guest experience.

Beyond Flawed Keycard Systems

SmartFlow uses **intelligent presence detection** for true occupancy-based control, eliminating wasted energy from cards left in slots or unoccupied rooms.

Intelligent Pre-conditioning

Rooms are brought to optimal comfort temperature **before** guests return, ensuring energy is only expended when it truly enhances the guest experience.

Metered kWh Savings, Not Estimates

Our system delivers **real-time, metered kWh savings** per room with auditable before-and-after data for transparent, verifiable ROI.

SmartFlow HEMS at a Glance

A quick overview of how SmartFlow by Four Seasons HVAC delivers intelligent energy management for UK hotels.

Category	Details
What it is	Occupancy-driven automation of guest-room energy loads.
Where savings sit	Guest-room HVAC — accounts for ~60–70% of a typical hotel's energy use.
Typical result	20–30% reduction in guest-room HVAC consumption.
Proof standard	Metered kWh before and after implementation, independently verified.
Installation	Wireless retrofit, no rewiring. ~10 minutes per room for HVAC-only (SmartREM), ~90 minutes per room for full-room control (SmartARC).
Configurations	HVAC-only (SmartREM) or whole-room control including lighting, curtains, & keyless entry (SmartARC).
Commercial model	SmartREM: low upfront fee plus monthly payment. SmartARC: modular pricing based on room scope.
Regions served	Southeast Asia, Middle East, Europe (including UK).

SmartFlow vs. Other Hotel Energy Solutions

Understanding the key differences between various energy management approaches helps UK hotel operators make informed decisions for efficiency and guest comfort.

Criterion	SmartFlow by Four Seasons HVAC	Building Management System (BMS)	Keycard Energy Switch	Staff Policy / Housekeeping Checks
Controls energy in each individual guest room	Yes (per room, continuously, occupancy-based)	Rarely – typically plant and common areas	Yes, but crudely (on/off)	No
Knows whether a room is genuinely empty	Yes – intelligent presence detection	No room-level occupancy input	No – a card left in the slot defeats it	Only at the moment of checking
Typical guest-room HVAC saving	20–30%, measured kWh	Limited inside guest rooms	Variable, commonly lost to workarounds	Not sustained
Compatible with keyless / mobile key	Yes – occupancy replaces the card	Unaffected, adds no room control	No – removing the slot removes the cutoff	Unaffected
Installation impact	Wireless retrofit, rooms stay open (~10 min/room HVAC-only, ~90 min/room full-room)	Major works, often rewiring	Requires physical keycard slot	None
ESG room-level data	Yes – per-room kWh and comfort telemetry	Plant-level only	No	No
Upfront cost	Low fixed fee (SmartREM) or modular per-room pricing (SmartARC)	High capital expenditure	Low, but tied to legacy hardware	None – cost is in labour

It's important to note that SmartFlow and a Building Management System (BMS) are complementary, not competing. SmartFlow operates as a standalone room-level layer for granular energy control and does not require an existing BMS.

Proven Results: Anantara Mai Khao, Phuket

A real-world case study showcasing SmartFlow's verified performance at a premier luxury resort.

28%

HVAC Energy Reduction

Average sustained reduction over 21 months.

995K+

kWh Saved

Total energy saved from September 2024 to May 2026.

\$94,486

Cost Savings

Total cost savings to date, approximately \$54,000 annually.

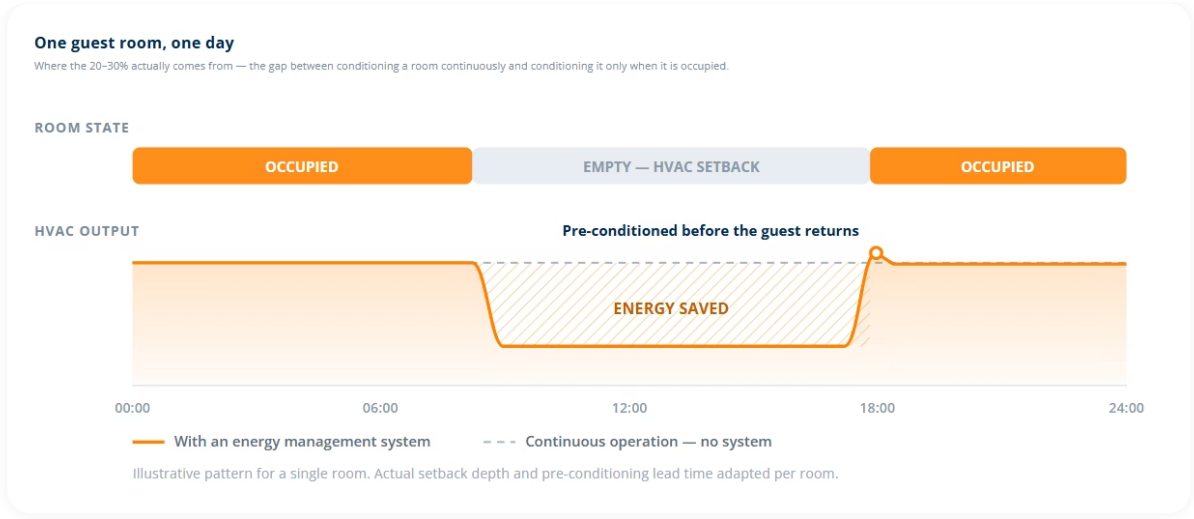
495

Tonnes CO₂ Avoided

Significant reduction in carbon emissions.

The Anantara Mai Khao property is a 151-key luxury resort, including 93 two-bedroom pool villas, utilizing VRV/VRF systems for climate control.

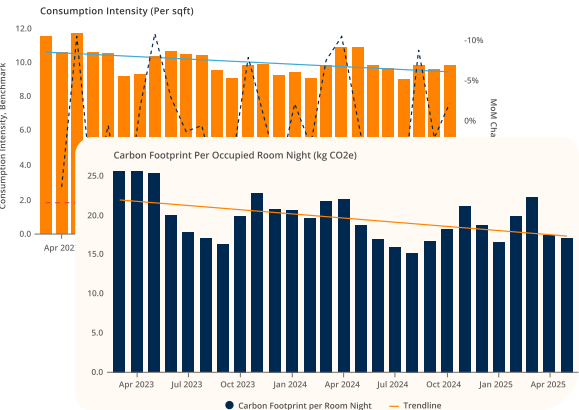
One Guest Room, One Day – Where the 20-30% Actually Comes From



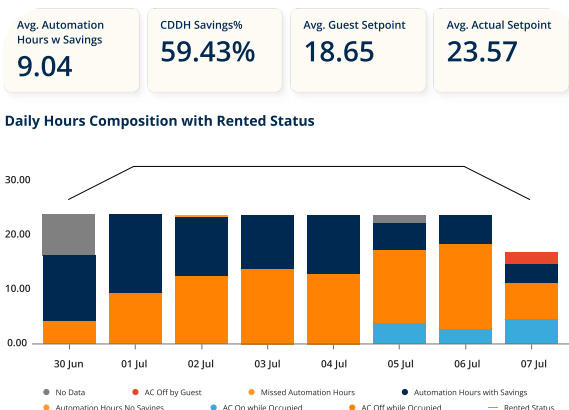
The gap between conditioning a room continuously and conditioning it only when occupied is where the saving lives. SmartFlow detects true occupancy in real time, eases back HVAC the moment a room empties, and pre-conditions before the guest returns — so comfort is never compromised and energy is never wasted.

“After implementing SmartFlow, we achieved a **28% savings** — approximately 552,000 kWh or USD 54,000 annually — without impacting guest comfort. SmartFlow helped us support our overall sustainability goals without compromising on our high standards.”

— Jittraporn (Jang) Sukjaimit, Hotel Manager, Anantara Vacation Club Mai Khao Phuket



Monthly HVAC reduction across 21 months of live operation — 28% verified average



SmartFlow room performance dashboard — automation hours, savings %, guest setpoints and daily usage breakdown

What to Ask Any Supplier

When evaluating energy management solutions, ask these critical questions to ensure transparency and verifiable results:

- Is the savings figure **metered or modelled**?
- Who has **verified the methodology independently**?
- What happens if **savings decline in year two**?
- Will you **prove it on our rooms** before we commit?
- How many rooms leave **inventory during install**?
- Does it work once we **remove the keycard slot**?

Frequently Asked Questions

Q: What is a hotel energy management system and how does it work?

A hotel energy management system uses occupancy sensors to automatically adjust HVAC, lighting and other loads when a room is empty, while maintaining comfort when a guest is present. The result is 20–30% HVAC energy savings with no change to guest experience.

Q: How much energy can a hotel realistically save?

Measured results across SmartFlow's installed base show a 20–30% HVAC reduction — at Anantara Mai Khao, 28% was confirmed by real metered kWh across 21 months of live operation. A free on-site proof test measures actual savings at your property first.

Q: Will it affect guest comfort or reviews?

Done right, no — the room is pre-conditioned before guest arrival and returns to the guest's set point on entry after being left unoccupied. Settings are configured on a property or room basis to ensure comfort is never compromised.

Q: HVAC-only vs whole-room — what's the difference?

HVAC-only (SmartREM) controls air conditioning, the highest-impact load, proven across 20,000+ rooms. Whole-room (SmartARC) adds lighting and outlets using the same platform; the choice depends on renovation scope and goals.

Q: Does installation need construction, rewiring or closing rooms?

No — it's a wireless retrofit with no rewiring, and rooms stay operational throughout. SmartREM installs take as little as 10 minutes per room; SmartARC takes 90 minutes to 4 hours depending on the depth of control required.

Q: How do I know savings are real, not projected?

SmartFlow uses energy meters to record actual consumption rather than general estimates, with independently verified methodology. Everything is proven on site before full installation — if you're not happy with the results, the equipment is removed.

See How Much Your Hotel Could Save

We prove it on your property first.

Two units of each room type installed at our own cost, calibrated against your real consumption, validating the savings target before any property-wide rollout. No commitment required until you're satisfied with the results.

[Book a Demo — contact us at \[info@fourseasons-hvac.co...\]\(mailto:info@fourseasons-hvac.co...\)](#)

[Estimate Your Savings — visit \[www.fourseasons-hvac.co...\]\(http://www.fourseasons-hvac.co...\)](#)

If you're not happy with the results, the equipment is removed. Zero risk to your property.



Introducing SmartFlow: Your Complete Hotel Energy Platform

SmartFlow by Four Seasons HVAC is an AI-powered hotel energy management platform that seamlessly reduces energy consumption, enhances guest comfort, and increases profitability — with a fast return on investment.

- Savings independently audited and verified by third-party auditors
- Trusted by Hilton, Hyatt, Accor, Shangri-La and more
- Designed for UK hotel operators of all sizes

11,636t

CO₂ Saved

23M+

kWh Saved

10M+

Efficient Guest Nights



Our Product Suite

Four intelligent products. One seamless platform. Built for UK hotels.

01

SmartAuto

Intelligent guest room HVAC automation

02

SmartGrid

Whole-property utility monitoring

03

SmartRoom

Whole-room automation without rewiring

04

SmartAnalyse

Free energy analytics dashboard



SMARTREM

Intelligent Guest Room HVAC Automation

SmartAuto makes any UK hotel a genuinely energy-saving property – cutting HVAC waste by up to 30%, room by room, automatically. Zero disruption. Fast to install. Measured, not estimated.

- Wireless IoT sensors installed in **under 10 minutes per room** – zero disruption to operations
- AI automation engine adjusts HVAC in real-time based on occupancy, temperature, and door/window state
- Remote HVAC control – manage every room's climate from anywhere, instantly
- **Up to 30%** reduction in in-room HVAC energy costs, without compromising guest satisfaction



SmartAuto — How It Works

Occupancy Sensor

Ultra-sensitive motion detection — knows when a room is truly empty, not just assumed to be.

Door Sensor

Wirelessly detects open doors or windows to pause HVAC automatically, preventing wasted conditioning.

Smart Thermostat

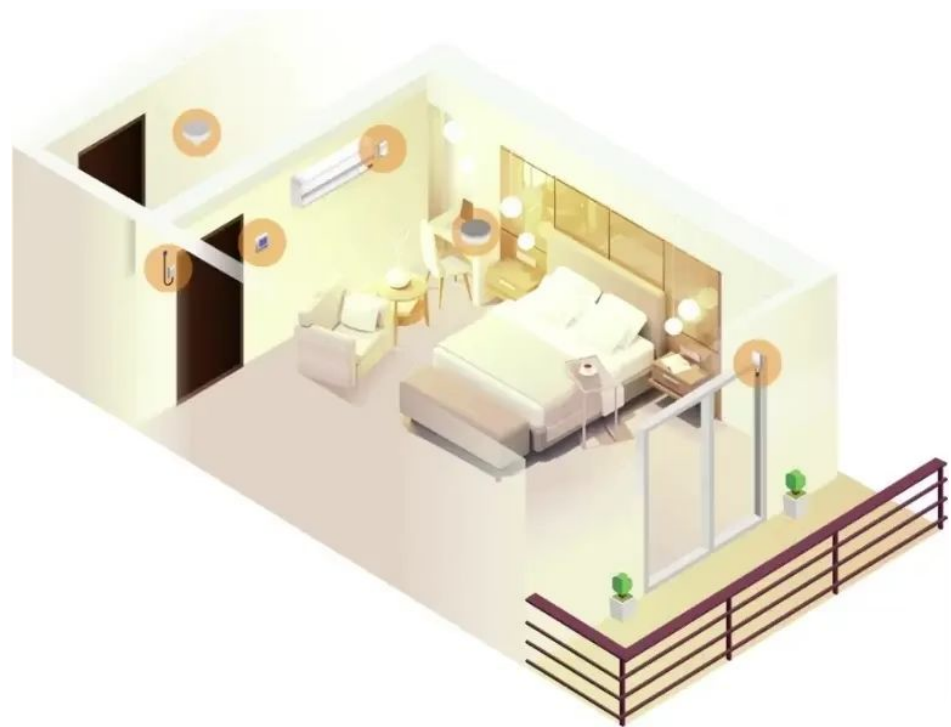
Monitors environmental changes and automates HVAC response for optimal comfort and efficiency.

Energy Monitor

Measures real-time consumption per room for granular reporting and verification.

Gateway

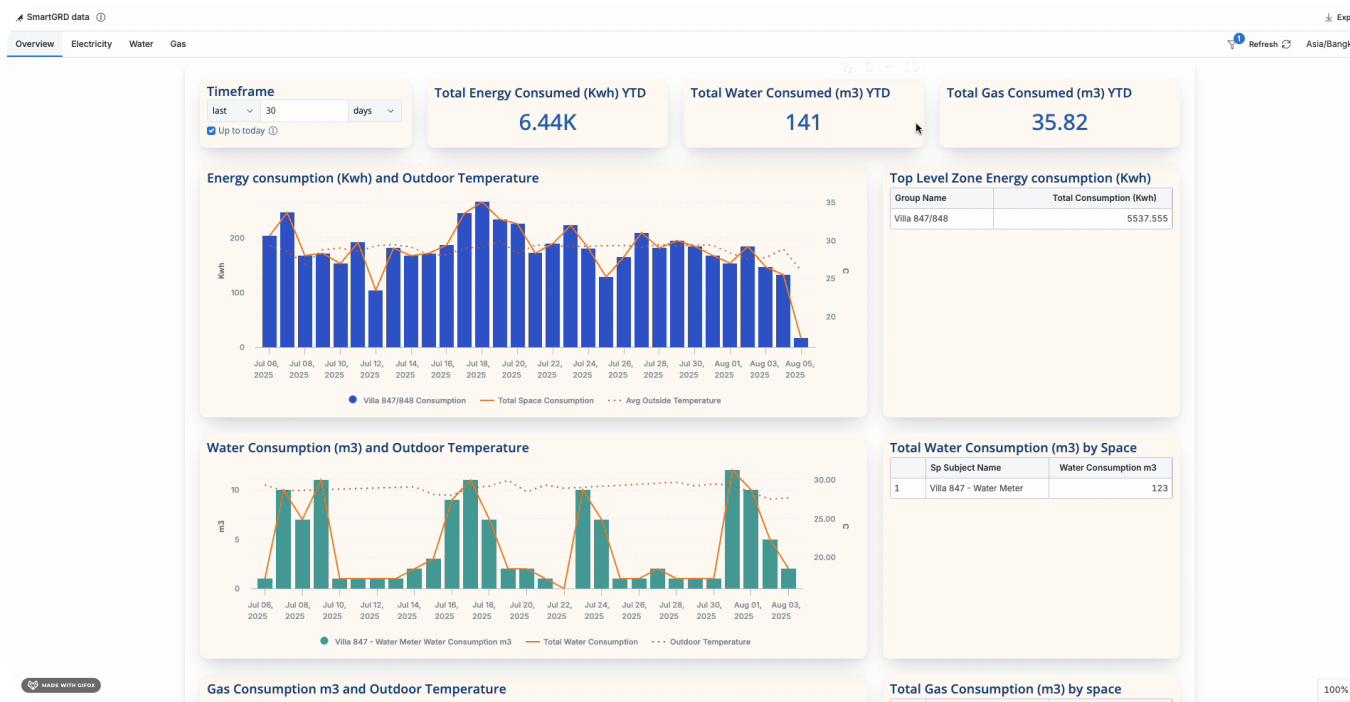
Sends and receives signals across all nodes and sensors seamlessly — the connective backbone.



Whole-Property Utility Monitoring

SmartGrid gives engineering and sustainability teams the live data they need to spot inefficiencies, justify action, and drive real impact across your entire building.

- Real-time visibility across **electricity, gas, and water** — across every area of your property
- Instant anomaly detection — spot a water leak or electricity spike the moment it happens
- Buildings with real-time monitoring save **10–20% more** than those using monthly data alone
- ESG-ready reporting: track, prove, and share your sustainability progress effortlessly

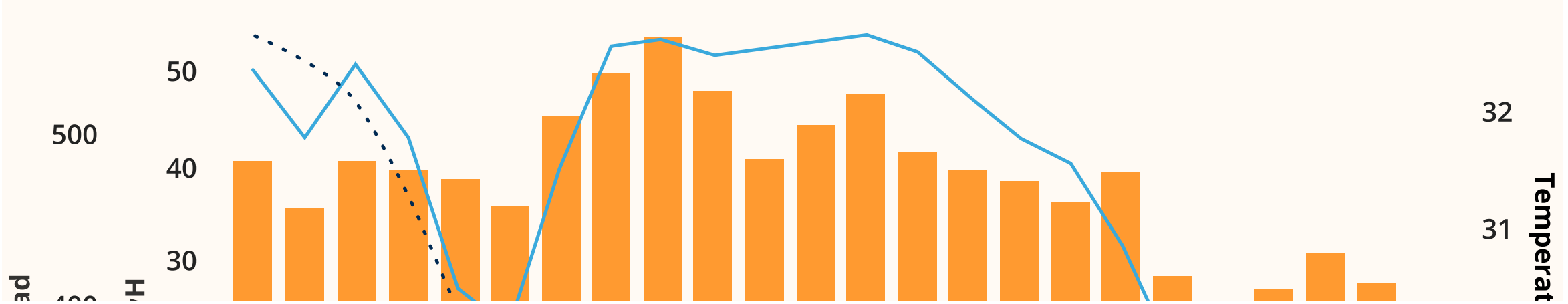


Whole-Room Automation Without Rewiring

SmartRoom delivers full guest-room control — HVAC, lighting, and curtains — using the wiring already in your rooms, avoiding floor closures, contractor escalation, and renovation disruption.

- Unifies HVAC, lighting, curtains, and keyless entry into one automated system — using your **existing wiring**
- No wall hacking, no floor closures, no major rewiring — ideal for UK hotel refurbishments
- Occupancy and door-state logic drives automated room behaviour, cutting standby waste
- Designed for existing hotels, conversions, and retrofit projects across the UK





SMARTBEA

Free Energy Analytics Dashboard



No New Hardware Required

Upload your existing electricity, water, gas, and waste consumption records and immediately begin surfacing actionable insights – no installation needed to get started.



Smart Outlier Detection

Trendlines and anomaly detection highlight exactly when and where things go off course – so your team acts on evidence, not guesswork.



Completely Free to Use

The simplest way for UK hotels to take control of their energy data today – with beautifully visualised, instantly readable insights at zero cost.

SmartFlow for Your Team

The right case for every stakeholder.

FOR FINANCE & ASSET MANAGERS

Maximize Profitability, Minimize Risk

SmartFlow delivers tangible financial benefits for hotel owners, asset managers, CFOs, and finance directors. Drive bottom-line growth and enhance asset value with transparent, verifiable savings.

GOP Uplift & Zero CapEx

Achieve a 10–15% GOP uplift from reduced HVAC costs, dropping straight to the bottom line. No upfront capital expenditure required — get started without board approval.

Verifiable Savings & Audit-Ready Reports

Savings are independently verified by EarthCheck, with optional blind audits via AQUILA.is. Access monthly, audit-ready reports detailing kWh and £ saved, GOP impact, and occupancy-adjusted projections.

Secure, Data-Backed Decisions

Benefit from data-backed budget forecasts and real-time anomaly alerts that identify underperforming assets. Our SOC 2 certified platform ensures secure, hotel-dedicated data protocols, compounding savings monthly.



FOR GENERAL MANAGERS

SmartFlow: Operational Excellence & Enhanced Guest Experience

SmartFlow empowers General Managers to elevate guest satisfaction and streamline operations, all while significantly reducing energy costs without compromise.

Elevated Guest Comfort & Efficiency

Seamlessly optimize HVAC and room environments to eliminate energy waste while maintaining unparalleled guest comfort.

Proactive Operations & Alerts

Gain real-time insights into energy usage and equipment status to detect irregularities early and protect your KPIs.

Non-Disruptive Implementation

Quick, non-invasive installation respects your hotel's aesthetics and operational flow with no front-office involvement required.

Data-Driven Decisions & Reporting

Intuitive dashboards and verified reports translate energy savings directly into clear, actionable property performance metrics.

Sustained Value & Zero CapEx

Achieve guaranteed, independently audited savings with zero upfront capital expenditure and a dedicated Customer Success Manager.





FOR ENGINEERING TEAMS

SmartFlow: Optimize Building Performance & Save Time

SmartFlow provides Directors of Engineering, Chief Engineers, and Facilities Managers with the tools to gain granular control over building systems, optimize performance, and streamline operations.



Real-time Monitoring & Control

Gain instant visibility into room conditions, equipment performance, and guest comfort across all zones, accessible from any device. Set intelligent thresholds to balance guest comfort with waste reduction.



Proactive Anomaly Detection

Spot temperature issues or energy spikes early with real-time anomaly alerts. Address issues before they impact guests or escalate to costly repairs, preventing surprises on utility bills.



Verify & Report Savings

Track the impact of operational changes on energy, gas, water, and waste. Leverage clear dashboards with historical comparisons and independently verified savings for audit-ready reports.



Streamline Operations

Consolidate building performance views, prioritise hotspots, and reduce unnecessary room checks. SmartFlow works reliably even in low-connectivity environments, saving valuable engineering time.

SmartFlow: Drive Sustainability & Achieve ESG Goals

Empower your sustainability initiatives with real-time data and actionable insights across your entire property portfolio, ensuring transparent reporting and verifiable impact.

Comprehensive Monitoring

Gain real-time visibility into energy, water, gas, and waste consumption across all properties for a holistic view of your environmental footprint.

Certification & Compliance

Streamline adherence to major certifications including BREEAM, GRESB, LEED, Green Key, and your brand's specific sustainability programmes.

Audit-Ready ESG Reporting

Generate clean, auditable ESG reports aligned with internal targets and external reporting requirements, simplifying compliance.

Verified Impact

Access room-level kWh data and precisely calculated avoided-emissions figures directly traceable to metered consumption, not modelled estimates.

UK Net-Zero Support

Directly support UK net-zero commitments and proactively address tightening ESG reporting requirements at the board level.



What UK Hotels Achieve with SmartFlow

30%

HVAC Cost Reduction

Measured, independently verified — not estimated.

66%

Waste Eliminated

In-room HVAC waste cut through real-time automation.

10M+

Efficient Guest Nights

Optimal comfort maintained without energy waste.

Fast

Return on Investment

Flexible commercial models tailored to your property size and budget.

Guest Satisfaction

Optimal room temperature maintained at all times — fewer complaints, higher review scores, and guests who return.

Carbon & ESG Commitments

Significant, measurable reduction in carbon footprint — supporting UK net-zero targets and auditable ESG reporting for your portfolio.

What Hotel Leaders Say

"SmartFlow is helping us achieve our energy reduction goals and lower our carbon footprint."

— **Andreas Kahl**, General Manager, Resort

"SmartFlow provided critical insights, helping us reduce electricity consumption and prevent mould effectively."

— **Allen Khoo**, General Manager, City Hotel

"SmartFlow's ESG dashboard offers compelling insights for sustainability and operational efficiency."

— **Michael Patrick Slevin**, Director of Engineering, Resort





Get Started with Four Seasons HVAC

Ready to reduce energy costs, meet your sustainability targets, and deliver a better guest experience? Our UK team is here to help you find the right SmartFlow solution for your property.

Contact Us

Book a free consultation and demo with our UK energy specialists. No obligation — just a clear conversation about what SmartFlow can do for your hotel.

-  **Email us:** support@fourseasons-hvac.co.uk
-  **Visit:** www.fourseasons-hvac.co.uk
-  **Call us** on 01252 265399

-  Speak to one of our SmartFlow specialists today — and take the first step towards a measurably more efficient hotel.