

Verdant Energy Management Solution

Smart Energy Management
for Hospitality



Case Study: Hilton Hotel Charles de Gaulle Airport, Paris, France

Trusted and installed in 12,000 hotels, multifamily buildings, and other commercial facilities, Verdant energy management thermostats combine smart occupancy sensors with patented software to reduce energy consumption while maintaining guest comfort.

About

Hilton Paris Charles de Gaulle Airport

The Hilton Paris Charles de Gaulle is a 4-star hotel located just a few steps from Paris-CDG Airport in Roissy-en-France. The hotel features approximately 400 rooms and suites, as well as a wide range of amenities, including restaurants, a bar, a fitness center, and numerous meeting spaces. Its strategic location makes it a preferred destination for business travelers and guests in transit. Like many large-capacity hotels, the Hilton Paris CDG must ensure optimal comfort at all times while keeping costs under control.

Energy Consumption Challenges

Since it opened in 1992, the hotel had never undergone a major renovation of its technical systems. Consequently, there was no remote management or effective control of the heating and air conditioning systems.

Faced with rising energy prices and the requirements of the BACS Decree, the goal was twofold: to achieve regulatory compliance and significantly reduce energy consumption in the guest rooms through remote management.

The hotel management was already familiar with the **Verdant thermostats**, having successfully implemented it at other properties within the group in Canada. Rather than going through a testing phase, the hotel opted for a full-scale rollout without a prior pilot phase.

Solution

The installation was completed by our **certified partner, Energywell** in August 2024, **right in the middle of the Paris Olympics**, when the hotel was operating at 100% occupancy. Despite these demanding conditions, 400 rooms were fully equipped in just four weeks. Since the installation took only 15 minutes per room, there was minimal disruption to guests and no floors had to be closed.

The hotel uses *4-pipe fan coil units*, a standard system that allows for simultaneous heating and cooling as needed. To manage the system, the establishment opted for simplicity, avoiding complex integration with central management software.

In this configuration, the Verdant solution operates in parallel with the air handling unit (AHU). While the AHU ensures air exchange and maintains conditions in common areas, the Verdant system intelligently controls room temperature within the guest rooms.

In Detail



Number of Rooms
400



Location
Paris CDG Terminal 3



Installation Date
August 2024



Hotel Type
4-Star Hotel

"The hotel needed a straightforward solution for its guest rooms and lounges, which, until now, had no regulatory controls. With Verdant by Copeland, we found a solution that addresses all our challenges by focusing on the essentials: efficient remote management, quick installation without a pilot phase, and significant savings starting from the very first month."

*- Bertrand Caillet
Technical director*

This zoned management allows for maximum responsiveness and increased energy efficiency, with each system focusing on its specific function without overburdening the hotel's IT infrastructure.

Between **September 2024 and September 2025**, the hotel achieved significant savings on its energy costs and a measurable reduction in overall energy consumption in the guest rooms despite a very high occupancy rate.

The hotel reduced its electricity bill by an **average of 7,184€ per month**. The system has **reduced the HVAC system's operating time by an average of 31%**. This optimization is made possible by automatic temperature adjustments when rooms are unoccupied, without any impact on guest comfort.

The estimated **return on investment is 24 months**.

Results:

On average, hotel guestrooms are unoccupied more than 60% of the time, even when rented, wasting energy heating and cooling empty rooms, and unnecessarily inflating electricity costs.

That's where we come in. Our smart thermostats solve this problem by using advanced occupancy sensing technology to continuously scan the room for motion and body heat.

When guests are present, they're given full control over room temperature.

When guests leave the room, Verdant thermostats enter 'setback mode', allowing room temperatures to drift naturally by a few degrees, reducing HVAC runtimes by up to 45%.



31%
average reduction of
HVAC runtime



24 Months
ROI



7 184 €
average monthly
savings



93 390 €
in annual savings



Contribution to the BACS,
Tertiary Decree, ESG, and
decarbonization goals



Customer comfort is
maintained, without
any intervention



Measurable results: up
to a 45% reduction in
HVAC run time



Quick return on investment
12-24 months*

Energy Savings in Detail

September 2024-September 2025

13 months [€]
cumulative savings
93 390 €

13 months [kWh]
cumulative savings
429 492 kWh

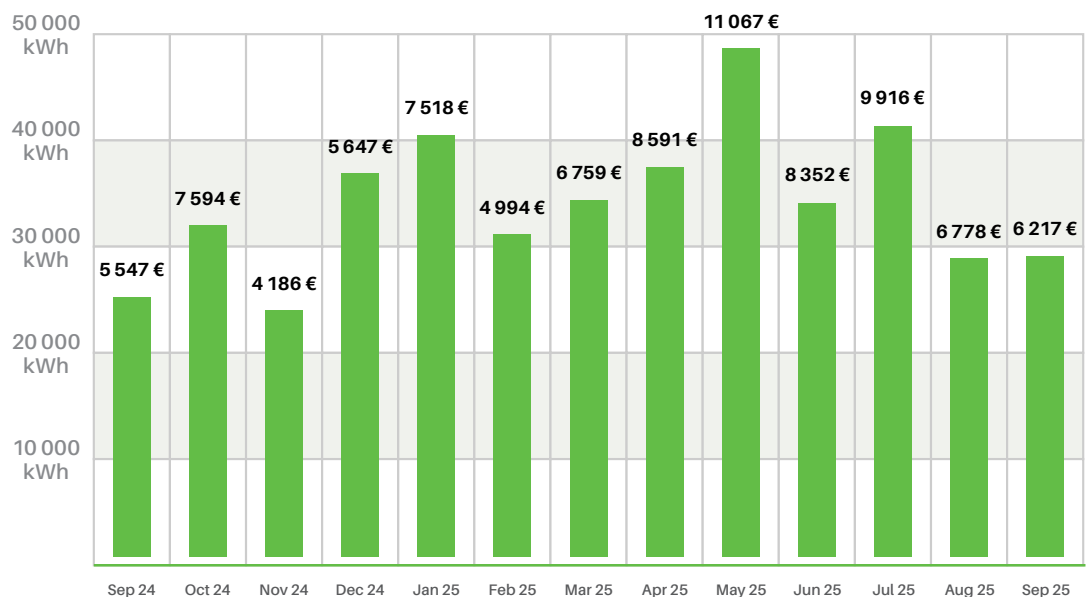


Equivalent to
**2.5 million
kilometers
in an electric
vehicle**



Equivalent to
**24 metric
tons CO₂
emissions
avoided**

**average consumption = 17
kWh/100 km



*Savings are calculated based on 1 kWh for heating and air conditioning, using an electricity rate of 0.27€ and a Tier 2 heating rate of 0.114€.

*The average payback period for Verdant systems in the hospitality industry typically ranges from 12 to 24 months. However, actual results may vary depending on factors such as property type, weather conditions, management practices, and other variables.

Our Software

Web-based Platform

Verdant Thermostat Manager is a web-based platform and energy management app that gives you a comprehensive overview and full control over your entire property portfolio, all from a single screen, at any time and from any device.

Track the performance of each property in real time: kWh savings, ROI, payback period, room status, and occupancy rates. Thermostat Manager provides you with concrete data to identify optimization opportunities—and the tools to take immediate action, without having to leave your desk.



Our Hardware

Verdant ZX Series Thermostat

The ZX is Verdant's flagship thermostat: real energy savings, without ever compromising occupant comfort.

Its patented night mode suspends temperature adjustments while you sleep, its flexible adjustments automatically restore the desired temperature upon your return, and its humidity sensor protects rooms even when unoccupied

Zigbee-compatible and available in wired, wireless, or hybrid versions, it installs in under 10 minutes and can be monitored remotely 24/7.



Automatic set back mode



Smart occupancy detection



Wired & wireless offerings



Compatible with most HVAC types



Quick installation



Verdant Smart Energy Management

Timothy Touchot

Sales Manager France

Timothy.Touchot@copeland.com

06.49.77.86.23



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