



breathe easy

EV Charging at Hotels Delivers Competitive Advantage and Boosts Revenue

An electric vehicle charging station primer for hotel owners, general managers & sustainability managers.

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Executive Summary

This white paper is for hotel professionals who want to understand how offering charging station amenities to electric vehicle (EV) drivers will benefit their company. It is written to give you a fundamental understanding of this topic and to help you determine if deploying EV charge stations would deliver the return on investment to make it worth your while.

This paper begins by discussing how and why implementing charging stations will help you attract guests. Next, you'll learn how green initiatives in general, and charging stations in particular, can help differentiate your hotel in a competitive environment. And while these topics are essential to an EV charge station amenity primer, no discussion would be complete without touching upon the costs and potential revenues they could bring to your hotel(s). Finally, we suggest viable next steps to help you answer the question, "Is a hotel-branded network of car battery chargers an amenity I should offer, and if so, how do I economically implement one?"

Electric Vehicle Constituents Are Good for Your Hotel

The implementation of green programs has taken root in the hospitality industry. Initiatives to reduce laundry service (linens and towels), water usage, and alternative renewable energy (e.g. solar) have become commonplace at hotel chains around the world.

And just as the green revolution has found a home in your industry, it has permeated the consciousness of many of your guests and prospective guests. That passion has filtered its way down to their choice of transportation, whether travelling on business or for pleasure. Increasingly, that choice includes the purchase or rental of a plug-in hybrid or electric vehicle. And in order to conveniently use these vehicles, drivers need access to EV chargers.

Other names for EV charge stations:

- car battery charger
- car battery charging
- electric vehicle charger
- charger for electric car
- EV charger
- electric vehicles charging stations
- EV charging station
- electric car charger station
- automotive battery charger
- EV charge stations

Still, why should you care or bother to implement

electric vehicle charging stations? Because, quite simply, this amenity is valued by your hotel's stakeholders (see Table 1 below).

You are a hotel...	Your constituents are...	Your benefits are...
Property/Franchise Owner, General Manager or Sustainability Manager	<ul style="list-style-type: none"> • Guests/prospects • Partners (rental car agencies, travel entities) • Media 	<ul style="list-style-type: none"> ✓ Boost guest satisfaction ✓ Increase occupancy rate and/or visitations ✓ Differentiate your hotel from your competitors ✓ Increase RevPAR (boost receipts of bar/lounge/restaurant/spa) ✓ Enhance & promote a positive brand image

Table 1: Hotel EV charging station program constituents and benefits.

Use EV charge stations to lure guests for initial and repeat stays

It's no secret to you that the downturn in the economy lingers. You see it in your receipts and your executives pressure you to do something about it. Perhaps you've been subject to conversations urging you to beef up your marketing and to find creative ways to boost occupancy and RevPAR.

One creative solution to these challenges is to deploy electric vehicle charging stations. As you'll see below, this amenity is attractive to guests and potential guests, as well as valuable partners that can refer guests to your location(s). And of course, the positive media attention this green amenity can garner is a very low-cost way to promote your hotel(s).

This is not an academic exercise. There are real benefits and potential revenues that can come from the installation of car battery chargers as the section titled [“Charging Stations Make Dollars and Sense for Your Hotel and Green Strategy”](#) below explores.

EV driver demographics and opinions are great for your hotel

A recent national survey of consumer attitudes toward, and usage of, electric vehicles revealed favorable demographics for hotel operators.

Demographic	EV Survey Respondents	U.S. National Statistics
Median Household Income	\$108,624	\$51,914
4-year degree or higher	77%	28%
Median Age	46	37

Table 2: Electric Vehicle Survey Panel demographic summary.¹

Moreover, the majority of respondents stated that “either global issues [90%], like oil dependence or environmental factors, or personal benefits [81%], like convenience and fuel cost savings, were what initially piqued their interest in EVs.”²

From this we can draw a number of conclusions. A median household income in excess of \$100,000 suggests that respondents are working professionals who, at the least, may travel from time to time on business. Moreover, that level of income hints at prospective guests who are more likely to have disposable incomes available to enjoy vacation stays at your hotel(s.)

Given that “global issues” were cited by 90 percent of respondents as a motivation for their interest in EVs, it’s logical to conclude that this demographic is quite green- and eco-minded. A Travelocity survey sheds some light on how “green-minded” travelers decide which hotels to patronize.

Percent of Respondents	Say that...
69%	...they are very likely to participate in a green hotel’s green program.
65%	...green ratings influence their selection (travel) when prices are the same.
11% [motivated by green!]	...green ratings influence their selection (travel) when prices are not the same.
n/a	...have average annual household income of \$50,000+.
75%	...have a bachelor degree or higher.

Table 3: Green Travelocity customers and their attitudes toward green hotels.³

Those customer insights support the conclusion that a hotel’s green rating influences actual booking behavior by eco-minded travelers. There’s also anecdotal evidence to suggest that the deployment of car battery chargers can sway the hotel choice of EV owners. The following forum post by a Tesla Model S owner captures this sentiment:

“The people currently buying the Tesla Model S are a fairly affluent (and probably influential crowd). So the question I have is what can we do as early adopters to encourage hotels (and preferably entire hotel chains) to install more EV charging stations?

The main point I would like to impart on them [hotel managers] is that they will lose my business if another hotel in their area offers EV charging, and they don’t [emphasis added].”⁴

¹ Electric Vehicle Survey Panel: “A national Study of Consumer Attitudes Toward & Usage of EVs,” Electric Vehicle Information Exchange, November 2012, p. 9. Summary report last accessed 04-11-13 at <https://evix.com/files/EVIX%20Survey%20Panel%20-%20Topline%20Report%20November%202012.pdf>.

² Ibid, p. 11.

³ “Green Travelers by the Numbers, Demographics of the Travelocity Eco-Friendly traveler.” Last accessed 04-11-13 at <http://www.where.ca/blog/check-in/travelocity-betting-on-green-travel/attachment/travelocity/>.

⁴ Posted by “PureAmps” on Tesla motors forum site, posted: 12-05-2012, 08:32 PM. Last accessed on 03-21-13 at <http://www.teslamotorsclub.com/showthread.php/11625-Hotel-EV-Charging-Station-Installations>.

Another example of earning loyalty by providing an EV charging station comes from a CNN article:

“Andy Wood, who bought an electric vehicle, or EV, to help the environment, makes a special effort to support businesses that provide him ‘free gas.’”

“I go out of my way and plan my trips around public charging stations. You’re helping me ... so I’m paying you back with my loyalty and spending my business there.”⁵

Green program initiatives differentiate your hotel

The Travelocity survey cited above showed that being a green hotel is important and influential in the decisions of potential guests. They are not alone in this belief.

Travelweekly.com observed that the trend in travel buyers’ green consciousness had become so pervasive as to motivate Sabre (largest operator of global distribution software) to launch its Eco-Certified Hotel Program.⁶ Thus, prospective guests can use “eco-friendly” as a search parameter on Sabre booking systems.⁷

Travelocity has its own Green Hotel Directory filled with 4,700 eco-friendly hotel listings.⁸ Interestingly, the same article noted that hotels listed on Travelocity’s Directory receive a 94 percent customer-satisfaction rating compared to 83 percent for other hotels.

So clearly, a green rating helps to differentiate your hotel among your peers in terms of not just bookings, but potentially, in terms of your all-important customer-satisfaction ratings.

EV charge stations can help cross-sell your other amenities

Even if EV-driving guests don’t book a night with you, there’s support that EV charge stations can earn revenues in indirect ways. Specifically:

“Because public EV charging station locations show up on the internet and on devoted mobile apps, touring *EV owners can make use of a hotel’s bar or restaurant [or spa!, emphasis added] during the three to four hours it takes to charge the vehicles.*”⁹

This amenity holds particular promise for hotels with local EV owners. By giving them low-cost “gas” you’ll earn good will from them. And by delivering a fine service experience to them at your bar/restaurant/spa, their first-time visit could turn into repeat business and ultimately, a local “staycation” booking or two at your hotel or chain.

EV charge stations let you to partner with entities that can funnel guests to your hotel

Many American enterprises have aggressively bought into the green culture growing worldwide. And your hotel can take advantage of that by partnering with these entities. Take the case of rental car companies. Household brands like Hertz, Avis and Enterprise all offer plug-in hybrid electric vehicles and/or electric vehicles to their customers. Thus, they have expanded their fleets to appeal to drivers’ desire to save money on gas, to try out the new EV technology¹⁰ (non-EV car owners), and to be more environmentally conscious.¹¹

Hertz in particular has bought into EV technologies, going so far as to throw its considerable resources behind its EV program. To date, it has expanded EV fleets to ten cities across three continents.¹² And the firm’s EV

⁵ Holly Yan, CNN, “[Public charging stations fuel desire for electric cars](#),” updated 9:52 AM EDT, Wed October 24, 2012.

⁶ King, Danny, “Hotel operators step up their green initiatives,” March 6, 2012, travelweekly.com. Last accessed 03-20-13 at <http://www.travelweekly.com/Travel-News/Hotel-News/Hotels-step-up-green-initiatives/>.

⁷ Ibid.

⁸ Ibid.

⁹ Myers, Peter (Reuters), “Electric car charging stations are the new, new thing for hotels,” Dec 26, 2012 5:37 am.

¹⁰ Berman, Brad, “A Guide to Hybrid Car Rentals,” hybridcars.com, September 4, 2008. Last accessed 03-21-13 at <http://www.hybridcars.com/car-rentals-go-hybrid/>.

¹¹ Electric Vehicle Survey Panel, *ibid*, p. 11.

¹² <http://www.hertzlivingjourney.com/smart-mobility/smart-mobility-choices>. Last accessed 04-12-13.

program has become a crucial part of Hertz' commitment to sustainability as exemplified in its green vision, titled *Living Journey*TM.¹³

Hertz executives recognized early on that their customers require car battery charging to make their EV/hybrid rentals a positive experience. Consequently, they instituted a program to partner with hotels that offer electric vehicle charge stations. As early as 2010, for instance, Hertz entered a partnership agreement with Starwood Hotels & Resorts Worldwide, Inc.¹⁴ That's good news for hotels because it's clear that Hertz executives view these partnerships as a strategic imperative.

"Hertz's partnership with Starwood is a natural step in the development of our Global EV program [emphasis added]," said Mark P. Frissora, Hertz Chairman and Chief Executive Officer. "As we expand our EV network, we are providing drivers with point-to-point access to EVs and EV charging stations. Our relationship with Starwood provides guests from all over the world with access to the future of mobility."¹⁵

Implementing charge stations at your hotel may give you the opportunity to team up with valuable partners who will add you to their list of trusted EV-friendly locations.

EV charging stations get good media coverage to promote your hotel and brand

There's no denying that "green" is a hot buzzword right now. And whatever is hot and important to readers is what journalists write about. If your hotel has already deployed green initiatives, you've probably experienced this effect personally with mentions in your local, or even possibly, the national media.

Hence the deployment of EV charge stations is a great opportunity to pitch stories to your local newspaper/TV stations or to your national PR contacts if you have multiple properties. Green articles about you are a low- to no-cost way to deliver more brand impressions to your guest prospects.

Hoteliers are already taking advantage of this. Marriott, for example, is not shy about touting its commitment to sustainability in general and charging stations in particular.

"... we want to support our guests who are making electric vehicle choices," said Rob Bahl, Marriott's vice president of engineering and facilities for the Americas. "*Adding EV charging stations is just one of Marriott's initiatives supporting our 'Spirit To Preserve' environmental efforts* [emphasis added]."¹⁶

Here are just a few of the story headlines that journalists wrote about Marriott's deployment of charging stations:

- "[Marriott Waikiki Beach Hotel Gets EV Commercial Charging Station](#)," at Softpedia.com.
- "[Nearly 25 electric vehicle charging stations available at Marriott hotels...](#)," at Hospitalitynet.org.
- "[Electric Vehicle Charging Stations Available at Marriott Hotels](#)," at Exectravel.com.

Add to that the many references cited in this publication and you can see that this topic is popular among journalists.

¹³ <http://www.hertzlivingjourney.com/>. Last accessed 04-12-13.

¹⁴ "Hertz and Starwood Hotels & Resorts Partner on Electric Vehicles: Partnership Accelerates the Buildout of the EV Network and Delivers the Future of Mobility to Consumers Today," Hertz Press Release, Monday, December 6, 2010. Last accessed 04-12-13 at http://phx.corporate-ir.net/phoenix.zhtml?c=205461&p=irol-newsArticle_Print&ID=1504589&highlight=.

¹⁵ Ibid.

¹⁶ "Marriott Gets the Power!," Marriott Press Release, September 1, 2011. Last accessed 04-12-13 at <http://news.marriott.com/2011/09/marriott-gets-the-power.html>.

EV-Friendly Hotels are Becoming the Norm

While the implementation of charging stations is currently a differentiator in the marketplace, the trend toward widespread deployment is strong. We see a time in the not-too-distant future where it will be offered as a standard amenity in locations where it makes sense.

We are of that opinion because beyond private corporations, a significant economic driver for the deployment of electric vehicle charge stations is the U.S. federal government. Specifically, it offers generous tax credits for businesses deploying chargers via the Alternative Fuel Vehicle Refueling Property Credit. (More on that below.)

U.S. state departments of transportation are also joining the push to enable EV drivers. Drawing from American Recovery and Reinvestment Act funding, the states of Washington and Oregon have begun installing car battery charging stations along what they call “[The West Coast Electric Highway](#).” The project follows 550 miles of I-5 from the Canadian border in the north to the California state line in the south.¹⁷ Dozens more charging stations are planned for California, which will complete the entire Electric Highway from Canada to Mexico.¹⁸

The Electric Highway is the most recent project demonstrating the U.S. west coast’s commitment to electric vehicles. Previous to that Washington state already had an installed base of 1,000 charge stations, while Oregon boasted 800 chargers—both funded and deployed via the EV Project.¹⁹

What’s of note to hoteliers like you is that many tourism-related businesses along the Electric Highway, including hotels, have installed charging stations to tap into the flow of electric vehicle drivers.²⁰

With significant federal, state, corporate and citizen support, electric vehicles—along with their attendant charging stations—are likely to become the norm in transportation life.

Still, just because something is ubiquitous doesn’t mean that you should adopt it as an amenity for your hotel. The following section discusses why offering electric car charging makes sound financial sense.

Figure 1: Fox News Partial List of Hotels with Charging Stations:

- **Sheraton Waikiki**, HI, Apr. 2011, 5 stations.
- **Residence Inn** Chattanooga, TN, Oct. 2011, 2 stations.
- **The Meritage Resort & Spa**, Napa, CA, Jan. 2012, 1 station/more to follow.
- **Marriott**—23 stations in at least five states and Denmark.
- (2) **Hampton Inns**, Knoxville, TN, Jan. 2012, 2 stations.
- (2) **Holiday Inns**, Knoxville, TN, Jan 2012, 2 stations.
- **Lenox Hotel**, Boston, MA, 1 station.
- **Hotel Monaco** (Kimpton), Portland, OR, Oct. 2011, 2 stations + 50% discount for hybrid vehicle parking.
- **Comfort Suites**, Palm Bay, FL, 1 station.
- **Grand Geneva Resort & Spa**, Lake Geneva, WI, Apr. 2010, 1 station.
- **The Verdanza Inn**, San Juan, PR, 1 station.
- **The Fairmont Hotel** + The Fairmont Waterfront , Vancouver, Canada, Sept. 2012, 2 stations.

Source: “[Are electric car-charging stations the new must-have hotel amenity?](#),” January 31, 2012, (Fox News), Budget Travel. Last accessed 03-18-13.

¹⁷ <http://westcoastgreenhighway.com/education.htm>, last accessed 04-12-13.

¹⁸ Chambers, Nick, “The Electric Vehicle Road-Trip Test: High-Speed Charging Stations Help EVs Explore the Northwest, Ease Range Anxiety,” July 20, 2012. Last accessed 03-22-13 at http://www.motortrend.com/features/consumer/1207_the_electric_vehicle_road_trip_test/.

¹⁹ See http://westcoastgreenhighway.com/images/WCEH_infrastructure.pdf. last accessed 04-12-13

²⁰ Chambers, Nick, “The Electric Vehicle Road-Trip Test, *ibid.*”

Charging Stations Make Dollars and Sense for Your Hotel

In order for you to make an informed decision about adding charge station amenities you need to understand the costs associated with implementing them along with the potential revenues they could generate after their deployment.

How much do EV charge stations cost?

EV charging station costs may be broken down into *initial deployment* costs (hardware plus installation), and *ongoing* costs (management and maintenance) as shown in Figure 2 below. These costs can be offset by a number of things, such as government tax incentives as well as potential income your charging station(s) could earn.

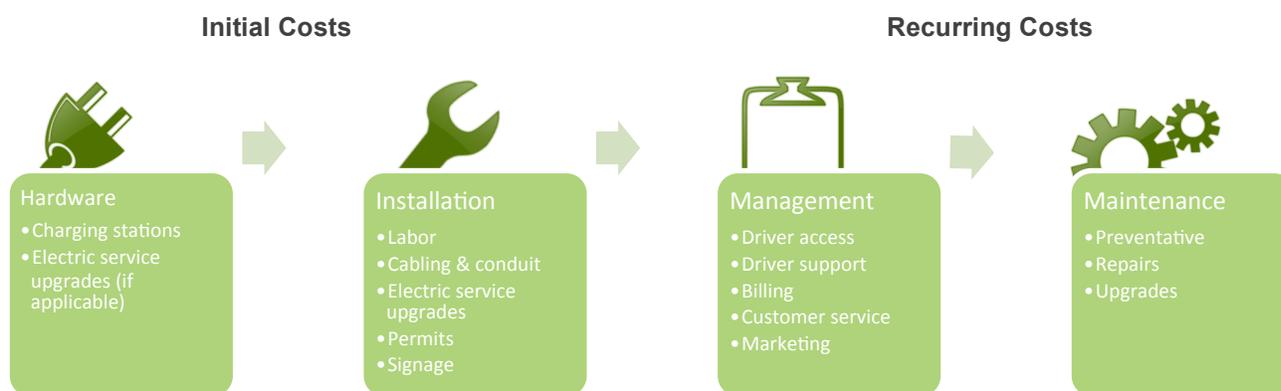


Figure 2: Charge station program cost elements.

Hardware

Charging stations range in price from as low as \$1,500 for a stand-alone unit (not networked with other stations) and go up to \$5,000 for a smart, networked unit. Hotels purchasing multiple units would qualify for volume pricing.

Installation

Installation fees often include labor conducted by certified electricians, necessary conduit, wire, panel upgrades, electric service upgrades, and breakers, plus taxes and fees associated with any required permits. These costs can vary widely depending upon the physical citing of the charging station(s).

Management and maintenance

Once EV charge stations have been deployed, they incur ongoing operational costs. In addition to electricity costs, these may be divided into management and maintenance functions. Management activities include day-to-day customer service actions such as managing driver access, billing (if you charge users), providing driver support and uptime monitoring. Marketing also falls into this category as the promotion of your charging stations to your constituents (potential guests, EV drivers, partners and the media etc.) is an essential part of your success.

A maintenance regimen is likewise essential to ensure the safe and uninterrupted performance of your amenity. This includes such activities as preventative hardware/software maintenance as well as repairs and upgrades as

needed. A good third-party electric vehicle supply equipment (EVSE) vendor can provide these core services through a multi-year contract for just a few hundred dollars per charging station, per year.

Potential cost offsets-government credits and other incentives

Your hotel may qualify to receive credits and other tax incentives from federal, state and city governments. For example, the US federal government has authorized legislation to promote the use of alternative fuels. One such incentive is the Alternative Fuel Vehicle Refueling Property Credit. Its provisions allow for a tax credit of 30 percent (up to \$30,000 *per business location*) of the cost of hardware and installation for alternative fueling equipment, **including charging stations**, which are covered under the provisions of this credit.²¹

Potential income sources from amenity EV charge stations

Potential income related to your EV charging station amenity may come from the following categories:

- Retention of guests who re-book due to your EV amenity (earned loyalty + “only this hotel has it”).
- Eco-centric EV drivers who learn about your charging station(s) through your marketing initiatives.
- EV drivers who learn of your EV-friendly hotel via partner channels like rental car companies.
- EV drivers who learn of your EV-friendly hotel via eco-centric entities such as Sabre, Travelocity and other green travel sites.
- EV drivers who learn about your EV-friendly hotel from media stories.
- EV drivers who discover your hotel on EV charge station maps like the one on the US Department of Energy website (http://www.afdc.energy.gov/fuels/electricity_locations.html).
- Hotel amenity sales (restaurant, bar, spa) transacted while non-guest EV drivers use your charging station to “fuel” up.

To help inform your decision about an EVSE program, it may help to do your own ROI worksheet

For “New Revenues” in Table 4, consider the various incremental revenue sources your hotel(s) may realize from EV drivers. For “Costs”, contact EV Connect or the vendor of your choice to get cost estimates based on your specific situation and needs. Keep in mind that you may also want to weigh the cost of managing your EV charging program completely in-house versus hiring a full-service program like EV Connect’s Management Services.

New Revenues	\$	Costs	Initial	Recurring
New & repeat hotel stay nights due to EV drivers		Charge stations		
Eco-centric EV drivers who book in response to marketing initiatives		Installation		
EV rental car customers referred to your hotel by a) rental car companies, b) Travelocity and other sites		*EV Connect Management Services		
EV drivers who book after seeing you in print/media		**Electricity per station (if not covered by EV drivers)		
Hotel amenity sales to EV drivers stopping by to fuel up.		***Staff resources		
Total:				

Table 4: EV charge station amenity ROI at your hotel.

*Contact EV Connect for a personal quote.

** Average electricity costs per charge station can be estimated at 260 days per year for 8 hours each day at 3.3 kWh (average \$0.12 per kWh).

*** With EV Connect’s Management Services, your staff does not have to operate or maintain your charge stations, nor do they have to provide support to drivers.

²¹ Source: <http://www.law.cornell.edu/uscode/text/26/30C>.

What are My Next Steps?

There are many variables that factor into a decision to offer an EV charging station amenity. And while electric vehicles have been around for over a century, the deployment of a modern and efficient EV charging network can be complex.

For that reason, we suggest that you enlist the help of firms with EV-industry expertise and experience. That includes companies with a proven track-record of working with EV-certified installers, regulatory agencies, and various EV charging station vendors. Such companies can assist you with every step of establishing an electric vehicle charge station program. That includes helping you plan your EV charge station program, identifying the charge stations that are right for you, and simplifying the installation process - and then being able to manage the whole program for you so you don't have to give it another thought.

Ideally, your chosen vendor would be EV-hardware agnostic. That means that they are not contractually obligated to sell any specific brands of equipment. Consequently, they are free to recommend the charge stations that are right for you.

At a minimum, these firms should offer a free site assessment and quote. The assessment can include information about your site(s), some information about products being offered, and pricing for what it will cost to implement, operate, and maintain your charging stations. With this valuable information in hand, you'll be able to make an informed decision about implementing your hotel's branded EV charge station network.

"... [EV charge stations are] not just an amenity. It's what the customer is looking for. It's convenient for them and gives them another reason to come to our hotel rather than go to another one."

Alex Attia, General Manager, Charles Hotel, Cambridge, Mass

Source: Harriet Edleson, "[Automobile charging stations are starting to make an impact at hotels.](#)" Wed January 02, 2013.

EV Connect, Inc, is the Full-Service, One-Stop Shop for Your Hotel EV Charging Needs

Hotels turn to EV Connect for a simple and cost-effective way to provide turn-key, customer-owned and branded EV charging programs for their electric-vehicle-driving employees and constituents.

EV Connect offers:

- Professional EV program design,
- Hardware consultation, procurement, installation and maintenance,
- EV charge station network management,
- EV driver support,
- Monitoring and maintenance,
- Driver and site support,
- Software platform upon which to build customer-specific features and applications.

When you work with us, you won't get a one-size-fits-all public charge station. Rather, you get a professionally-executed, private EV charge station network that allows you to "own" the EV driver, not turn them over to a third party. Your private network is also branded with your logo to reinforce your hotel's image.

Our networked charging solutions make administration a breeze, allowing centrally-managed, trouble-free oversight of charge station assets, performance, and usage at a single hotel or across multiple facilities. To ensure a positive guest experience, our solutions leverage user-friendly software applications and interfaces. Moreover, your guests' convenience comes first with features that make it easy for them to reserve time on your hotel's charge stations. When their vehicle is "full" they are notified by text or email. These, plus other customer "touches" support your goal of delivering an excellent guest experience.

With nearly four decades of collective knowledge and leadership in the electric vehicle industry, we have unmatched experience in the design, installation and management of EV charging programs. Our project managers sweat every detail—from helping you select the right charge stations to permitting, inspections and working with your utility if necessary. All that translates into a hassle-free and cost-effective installation and operating experience for you.

Contact one our specialists today for more information and to request a free site assessment and quote. There's no obligation and you'll get the information you need to make the best decision for your hotel.

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