

Safeguarding Hospitality Service When the Unexpected Happens

Lessons Learned from the Blackout of '03

by ROBERT J. KWORTNIK

The blackout of '03 took many hoteliers in the north-eastern United States and Canada largely by surprise. Hotel managers found themselves scrambling to serve guests overnight in darkened hotels, many of which did not have running water, let alone expected amenities. Despite the challenges, hoteliers responding to a postblackout survey reported that their staff members were up to the task of providing hospitality for guests—often by devising creative processes for check-in and checkout, food service, and the like. For their part, guests were mostly understanding about the power failure and appreciated hotel employees' efforts on their behalf. However, guests were surprised that hotels often did not have backup power to maintain critical systems after emergency power failed. Service quality and the guest experience typically suffered at those hotels that lost power and were ill prepared to deal with disruptions in the service sys-

tem. This article examines these problems and provides insights for how to safeguard service when the unexpected happens.

Keywords: disaster planning; blackout of 2003

The hospitality industry has faced considerable recent adversity due to human and natural forces that have disrupted vital inputs to the service-delivery system, notably, electrical power. In the late summer of 2004, thousands of hospitality providers in the southern United States were without power for days after hurricanes Charley, Frances, Ivan, and Jeanne burst ashore. A year earlier, Hurricane Isabel interrupted power along the mid-Atlantic coast for a week or more.¹ Although wide power outages were not

recorded in the winter of 2003-04, ice storms have knocked power out in the past.² There is also the rising incidence of man-made threats to the power system, from mismanagement of electricity supply and demand, as illustrated by the California energy crisis in 2001 that led to rolling blackouts, to terrorism, as vividly and tragically exposed by the events of September 11, 2001.³

Hospitality companies continue to take for granted the safety of their surroundings, the reliability of their systems, and the ability of their employees to make up the difference.

This study focuses on an event that, though fortunately not tragic, was still unsettling in its suddenness and scope: the blackout of August 14, 2003. The largest power failure in North American history left some 50 million electricity customers across the northeastern United States and southern Canada without power for as long as two days. Despite a better understanding of the causes of the blackout of '03 and improvements in coordination across the power transmission system, energy researchers and industry leaders have concluded that the power grid remains vulnerable and that reliability is not certain.⁴ Although some viewed the blackout as an isolated event, the frequency of power loss due to other forces suggests that hospitality managers should reconsider their risk perceptions and ability to tolerate sudden and sometimes extended losses of inputs such as electrical power that are critical to the hotel operation.

This study is an effort to develop a better picture of what happened during

the blackout and what its impact was on hotels' service quality and the guest experience. More broadly, this study speaks to the need and ability of companies in the hospitality industry to prepare and deal with significant disasters or disruptions in the basic elements required to provide service (e.g., electricity, gas, water). Analyses of responses from nearly 150 hotel managers suggest that the hospitality industry coped with the blackout, but not always well. Though lodging was almost always provided to guests and even to nonguests, a lack of basic amenities—from emergency lighting to functioning toilets—was all too common, especially as the duration of the power outage extended beyond a few hours. Despite the efforts of hotel personnel to recover from service failures, overall service quality was compromised by shortcomings in the physical dimension of the hotel service offering and associated processes. Many facilities failures could have been mitigated, if not avoided entirely, with better planning. The result would be a significant improvement in service reliability and assurance—key dimensions of service excellence expected all the more by travelers in a post-9/11 world.

In the next section of this article, I briefly review research on service quality to provide a context for analyzing hotel performance on this key construct. I then introduce the methods used to examine what happened to hotel service during the blackout. Subsequent sections of the study describe data analysis and findings across four main areas: (1) effects of the blackout on the service-delivery system, (2) contingency planning before the blackout and management action during the event, (3) service recovery and guest satisfaction, and (4) the impact of the blackout on the bottom line. I close the article with discussion, implications, and recommendations

for hospitality managers for how to better safeguard service when the unexpected happens.

Conceptual Review: Service Quality

Service quality is an ambiguous construct, one that has only recently received rigorous treatment by researchers.⁵ Development of a clear picture of service quality in the hospitality context is important to more precisely identify the “whats” and “hows” of service-quality improvement, both in everyday and extraordinary contexts. In the review that follows, I outline the main concepts that form a framework for understanding service quality. This discussion is augmented by research that examines service quality and that sheds light on the service quality issues of relevance to the blackout of '03.

Service versus Customer Service

The distinction between *service* and *customer service* is subtle, and the two constructs are often confounded by customers and managers alike. For example, when a hotel manager states that a hotel has “4-star service,” the aspect of the hotel product this label evokes is the personal service provided by staff. However, a service represents the total experience a customer receives from a service provider, of which customer service is but one element. For a hotel, everything the guest experiences, from the physical evidence (e.g., room decor) to the processes (e.g., check-in) to the performance of people (e.g., a friendly greeting) constitutes the service offered in fulfillment of the promise of a safe, comfortable, enjoyable stay. The key point is that customer service is only one aspect of the broader service construct—a distinction that is particu-

larly important for the assessment of service quality.

Service Quality

Researchers generally agree that service quality is not a unidimensional construct that simply reflects whether a firm's customer service is excellent or poor.⁶ Instead, service quality represents a composite of factors that determine customers' perceptions about the service offering. In a seminal work on the topic, Parasuraman, Zeithaml, and Berry conceptualized service quality not as objectively measured according to technical standards but instead as subjectively perceived by customers and measured relative to customer-determined standards.⁷ Thus, service quality was defined as the gap between perceived service delivered by a firm and the expected service that excellent that firms should offer. This “user-based approach” to studying service quality continues to guide much research and is especially appropriate for analyzing services due to their intangible and heterogeneous nature.

The Parasuraman, Zeithaml, and Berry study suggested that customers perceive service quality in terms of ten potentially overlapping dimensions. Subsequent analysis of the dimensions of service quality led to a five-factor model and accompanying scale, SERVQUAL, that has become the gold standard of service-quality measurement.⁸ Descriptions of the five dimensions of service quality (known as the “RATER” dimensions) are shown in Exhibit 1. Research conducted in non-hospitality contexts showed that reliability is the most important factor in determining service-quality perceptions; the dimensions of empathy and tangibles tended to have the least influence, though these factors remained important.⁹ This

Exhibit 1:**Service Quality Dimensions Identified by Parasuraman, Zeithaml, and Berry (1988)**

<i>Dimension</i>	<i>Description</i>
Reliability	Delivering the promised service dependably and accurately (e.g., reserved hotel room is cleaned and ready by guest check-in time).
Assurance	Ability of employees to inspire trust and confidence through their knowledge and courtesy (e.g., guests feel safe at the hotel and staff has the knowledge to answer questions).
Tangibles	Appearance of the service facilities, equipment, personnel, and marketing communications (e.g., the hotel facility is visually appealing and employees are appropriately dressed).
Empathy	Personalized attention and caring given to customers (e.g., hotel staff have the guests' best interests at heart).
Responsiveness	Willingness to help customers and provide prompt service (e.g., staff are never too busy to respond to guest requests).

Source: A. Parasuraman, Valarie Zeithaml, and Leonard L. Berry, "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing* 64 (Spring 1988): 12-40.

suggests that customers may assess the quality of a service provider positively as long as a reliable outcome is provided (e.g., a fast-food order is fulfilled accurately), even if performance on other dimensions is lacking (e.g., service is unfriendly). By the same logic, perceptions of service quality are most likely to suffer if the service outcome is not as promised (e.g., the food order is wrong) regardless of how the service is delivered (e.g., by a smiling worker).

Service Quality in Hospitality

Research in the lodging industry has revealed a distinctive pattern of factors underlying guests' service-quality perceptions. For instance, a study of business customers found that "conviviality" of service (e.g., staff attitudes and attention to guests) was the dominant factor. However, a combined reliability-tangibles factor also influenced service quality, which suggested that customers considered these two elements to be related.¹⁰ Thus, unclean

facilities (tangibles) would reflect a lack of reliability. Research on older travelers' service-quality perceptions produced a similar finding: that is, reliability was one of the more important factors, but items intended to measure tangibles, specifically that hotel staff should be well dressed and neat and that hotel facilities should be visually appealing, loaded on the reliability factor.¹¹ Fick and Ritchie likewise reported that reliability, assurance, and tangibles (in that order) were the most important to hotel service-quality expectations, whereas tangibles, assurance, and reliability (in that order) were the most highly rated dimensions of perceived service performance.¹² In a study of hotels in Korea, responsiveness (e.g., speed of check-in and checkout and employee courtesy) and tangibles (e.g., guest room cleanliness, quietness, and comfort) were the most important indicators of service quality.¹³ In a study of hotels in Greece, guests gave the highest mean service-quality scores on the tangibles and

assurance dimensions.¹⁴ Finally, in a study of business travelers in Norway, the tangible aspects of housekeeping and intangible aspects of reception were the key explanatory variables for overall guest satisfaction.¹⁵ In one of the few hotel-based studies that did not find a strong effect for tangibles on service quality, Knutson and colleagues, using an adapted version of SERVQUAL, which they dubbed LODGSERV, reported that the order of importance of the factors determining hotel service quality across lodging sectors was reliability, assurance, responsiveness, tangibles, and empathy.¹⁶

Conceptual Implications

Findings from these studies support several key ideas. Most relevant to the present study is that service quality is best conceptualized as customer defined and multidimensional. This means that hospitality managers should attend not only to customer service but also to other factors that influence service quality, such as tangibles and assurance. Though research in nonhospitality contexts generally shows that tangibles constitute the least important service-quality dimension,¹⁷ the opposite is true in the lodging context. Elements of the tangibles and reliability dimensions were confounded in some studies, which suggests that lodging customers perceive reliable service to depend in part on the quality of tangible service features. Also notable is that the “people” factors of responsiveness and empathy were generally the least important service-quality dimensions. In none of the hotel studies was empathy a main determinant of service quality, though it did emerge as having influence. This is not to say that hospitality managers should ignore or downplay emphasis on empathetic service. However, it does suggest that relying on customer service at the expense of

other factors is a misguided strategy for improving guest perceptions of service quality. It was this conceptual framework for service quality that guided data collection and analysis for this study.

Method

Starting with a database of 1,495 hotels in the area affected by the blackout (i.e., Connecticut, Massachusetts, Michigan, New Jersey, New York, Ohio, Pennsylvania, Vermont, and the province of Ontario),¹⁸ I derived a sample of 667 e-mail contacts for hotels that were directly affected by the blackout.¹⁹ Responses were received from 93 hotel managers, for a response rate of 13.9 percent.²⁰ The largest clusters of responses came from managers in Detroit (17), New York City (15), and Toronto (10). The frequency of these responses relative to the overall response set is consistent with news reports about areas that were most affected by the blackout.

Exhibits 2, 3, and 4 provide additional information about the hotels in this study. Comparison of these characteristics with the North American hotel population as tabulated by Smith Travel Research (see the first column of each table) reveals that the sample overrepresents chain-affiliated hotels at the upper end of the quality scale, hotels in urban locations, and hotels with more than seventy-five rooms. In consideration of this overweighting, the findings and conclusions presented in this study are *conservative* and likely underestimate the severity of the impact of the blackout. This is because hotels that are underrepresented here (e.g., small, high-way, economy properties) tended to fare worse during the blackout than did hotels that are overrepresented.

Exploratory interviews with hotel managers suggested that the impact of the blackout and management’s response to it

Exhibit 2:

Survey Responses Categorized by Hotel Scale and Chain Affiliation

<i>STR Scale and Chain Affiliation</i>	<i>Percentage of Hotel Census</i>	<i>Blackout Survey Responses</i>	<i>Percentage of Blackout Responses</i>
Upper-upscale chain	3.5	17	18.3
Upscale chain	4.7	20	21.5
Midscale with F&B chain	9.7	12	12.9
Midscale without F&B chain	14.0	22	23.7
Economy chain	20.5	5	5.4
Independent	47.7	17	18.3
Total	100.0	93	100.0

Note: STR = Smith Travel Research; see note 18. F&B = food and beverage.

Exhibit 3:

Survey Responses Categorized by Hotel Location

<i>STR Location Category</i>	<i>Percentage of Hotel Census</i>	<i>Blackout Survey Responses</i>	<i>Percentage of Blackout Responses</i>
Urban	11.4	22	23.7
Suburban	38.0	37	39.8
Airport	6.8	9	9.7
Highway	39.1	23	24.7
Resort	4.7	2	2.2
Total	100.0	93	100.0

Note: STR = Smith Travel Research; see note 18.

Exhibit 4:

Survey Responses Categorized by Room Count

<i>Number of Rooms</i>	<i>Percentage of Hotel Census</i>	<i>Blackout Survey Responses</i>	<i>Percentage of Blackout Responses</i>
Less than 75	57.7	10	10.8
75 to 149	29.9	43	46.2
150 to 299	9.1	28	30.1
300 to 499	2.3	6	6.5
More than 500	1.0	6	6.5
Total	100.0	93	100.0

varied greatly. To enable respondents to provide descriptions of their experiences during the event, a Web-based survey was developed that had fourteen open-ended questions, as well as “comments” dialogue boxes appended to many of the forty-plus closed-ended questions. This mixed-question design netted considerable detail (more than sixty pages of single-spaced text data) in the stories, examples, and insights provided by respondents.

Respondents were recruited for the study via an e-mail sent five weeks after the blackout, with a follow-up e-mail sent to nonresponders one week later. The e-mail explained the purpose of the study and provided a hyperlink to the online survey and a password for each respondent. Data analysis used summary statistics, frequencies, cross-tabulations, and statistical tests of differences between categories of respondent hotels. In addition, comment data were content analyzed, most often by grouping similar comments into categories to determine the frequency of certain events, actions, and opinions. These data were also examined for patterns of responses that indicated shared meanings and experiences. Finally, comment data were explored for enlightening examples of the effects of the blackout and how managers responded to it.

Findings

A hotel’s service-delivery system consists of the physical plant, processes, and people who provide the hospitality service to guests, as well as the guests themselves, who coproduce their experience. Because these elements form a system, failure of one element to perform up to standard affects other elements of the system and the service experience overall. The blackout underscored these interrelationships

and how fragile the system is when faced with the loss of a critical and taken-for-granted input—in this instance, electrical power.

Power Problems

Hotel managers reported power outage durations ranging from 30 minutes to as long as 52 hours, with an average of 16 hours and a median of 13.5 hours. The power failure occurred shortly after 4:00 p.m., and the sun set in the blackout region just before 8:00 p.m. Thus, for half of the hotels, power was out through the night. Roughly one-quarter of the hotels were without power for 24 hours or more, and 10 percent of the hotels had to deal with a second night without power.

Emergency power. Provisions in the National Electrical Code (NEC) aim to ensure that emergency systems such as elevators, fire detection and control, and egress lighting for stairs, hallways, and exit signs are operable long enough to prevent panic and facilitate a safe exit.²¹ The general standard is that emergency power should be supplied for a minimum of two hours. For example, if a hotel uses storage batteries for emergency power, these must be able to support a full emergency-system power load for at least ninety minutes before voltage to the load drops below 87.5 percent. If a generator is used, there must be at least a two-hour on-site fuel supply.

The NEC was intended to ensure that hotels have minimal power for emergency systems in the event of a fire, flood, or some other disaster for which life safety is a concern. The code was not written to ensure sufficient power for emergency systems in the event of an extended electrical outage. Thus, hotels that abide by NEC standards are unlikely to have func-

Exhibit 5:

Nature of Emergency Power System by Type of Hotel

<i>STR Scale and Chain Affiliation</i>	<i>Battery-Only</i>	<i>Generator (or Generator and Battery)</i>
Upper-upscale chain	2	15
Upscale chain	11	9
Midscale with F&B chain	6	6
Midscale without F&B chain	19	3
Economy chain	5	0
Independent	2	15
Total	45	48

Note: STR = Smith Travel Research; see note 18. F&B = food and beverage.

tioning emergency systems within a few hours of a blackout—despite the safety issues this presents.

Nonfunctioning emergency systems were a major problem during the blackout. Nearly half of the hotels (48 percent) did not have emergency power for the duration of the outage. Analysis showed a relationship between the type of emergency-power system used—battery versus generator—and whether emergency systems were functional throughout the event. Only 16 percent of battery-backup emergency systems lasted, whereas 85 percent of generator-driven systems remained powered. Significantly, too, only half of the hotels had emergency systems powered by generators. These hotels were far more likely to be upper-upscale chain hotels or independents (see Exhibit 5). Analysis also revealed that generator-backed emergency systems were most likely to be found in urban hotels and hotels with more than two hundred rooms.

Standby (auxiliary) power. A distinction was made in the survey between emergency backup power and standby or auxiliary backup power. Whereas emergency power is that needed to keep essen-

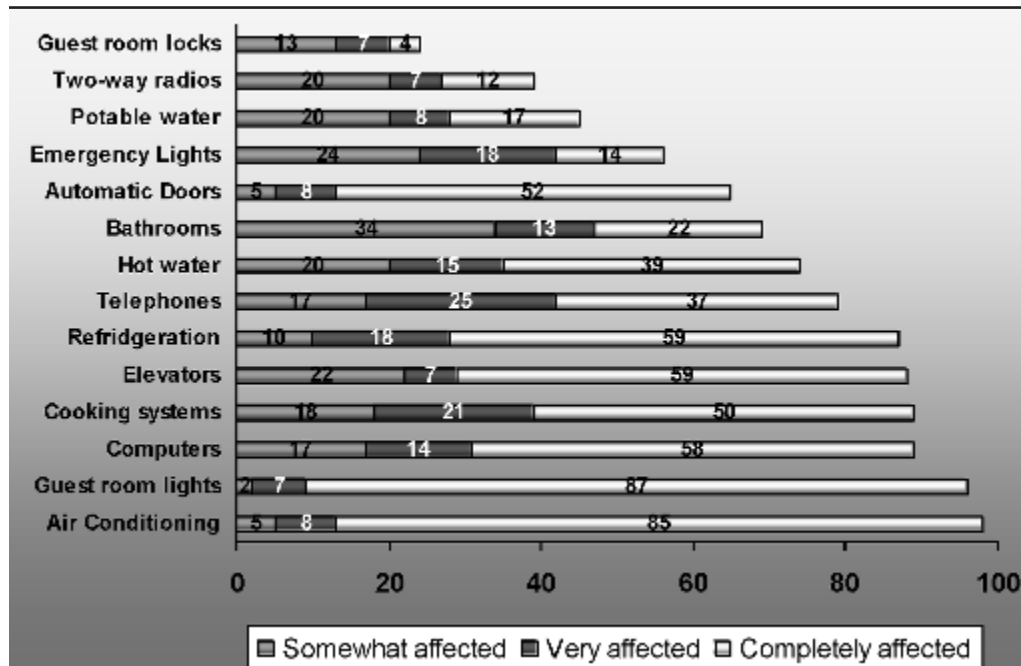
tial emergency systems operational, auxiliary power runs presumably nonessential systems, such as guest room lighting and air-conditioning or heating.²² Only one out of four hotels had available standby power. In most cases, when standby power was available, it was part of an automatic transfer system that went live almost immediately after primary power failed. However, even well-designed auxiliary systems were far from foolproof. In fact, in the hotels that had standby power, 24 percent of the systems failed to last for the duration of the blackout.

Facilities Failures and Service-Process Challenges

All of the hotels in this study were able to provide accommodations in guest rooms, and some even accommodated guests and nonguests in public areas within the hotel. One sold-out hotel set up cots in two meeting rooms, “one for guys and one for gals,” for people arriving without reservations. Another hotel took in a high school group that was unable to get back to its reserved place of lodging, letting the visitors sleep in the restaurant at no charge. None of the managers reported having to ask guests to vacate their rooms

Exhibit 6:

Effect of the Blackout on Hotel Facilities and Processes



Note: Numbers represent the percentage of managers responding that the systems in their hotel were affected. Percentages do not add to 100 because “no response” or “not affected” percentages are not shown.

during the blackout. This finding may, however, reflect nonresponse bias; managers at hotels that did not permit guests in darkened rooms may have chosen not to participate in this study. Even allowing for this possibility, though, the data suggest that media reports of people being forced to sleep on the street outside the hotel likely reflected unusual circumstances and not the norm.

Although most hoteliers did their best to make sure there was “room at the inn,” they often found it difficult to provide much else. Managers were asked to describe the extent to which hotel facilities and systems were affected by the blackout (*not at all, somewhat, very, or completely*). The findings, summarized in Exhibit 6, reveal just how pervasive the effects of the blackout were. In the next several sec-

tions, these problems are examined using managers’ comment data that reveal how they handled specific problems—or were unable to do so.

Air-conditioning. Given the power demands of the typical HVAC system, the blackout’s severe effect on the air-conditioning systems is not surprising. Managers at 85 percent of the hotels reported a complete shutdown of AC. According to comment data, lack of AC was a top source of guest dissatisfaction, as afternoon temperatures in the region ranged from the mid-80s to low 90s (Fahrenheit). One manager noted that keeping doors and windows open was a problem because it was a humid night and there were mosquitoes out. Another manager commented, “Due to lack of ventilation,

the wedding guests in our penthouse found it very warm.”

Lighting. All but a few managers reported at least some lighting problems, and 87 percent of them stated that lights were completely out. One manager said, “We didn’t have enough emergency lighting. Once the batteries drained in our hallway lights, the hotel literally went black.” Insufficient lighting was also a source of guest dissatisfaction. Another manager said, “While most [guests] understood that we could not provide air conditioning and were thrilled to still have hot water, they wondered why more lighting was not on emergency generators.”

The most common management response to the lack of lighting was to provide flashlights, if these were available or obtainable. One hotel had a supply of penlight key chains with the hotel’s logo that had been bought for another purpose, which were given away during the blackout. Another manager described an approach to the lighting problem:

Emergency lighting failed within two hours. All guest rooms were completely black. I purchased flashlights at a Home Depot that was open as they had a generator. I distributed flashlights to all guests. . . . I called in a security guard for extra safety as there was such uncertainty with [the length of] time we would be down. Guests were understanding of the situation and were surprised that we distributed flashlights free and then told them to keep them at check out as a souvenir that they survived blackout.

Hotel managers also distributed glow sticks, battery-operated lanterns, and even candles. That last option, though, was used by only a few managers and was a cause for concern among others due to the potential fire hazard.

Elevators. Another frequently cited source of guest dissatisfaction was limited elevator service, a problem in nine out of ten hotels. This meant that guests and employees had to use the stairs, even when carrying luggage. No emergency situations were reported as a result of grounded elevators, though the blackout revealed the potential for such an eventuality. One guest was locked in an elevator but was extricated by the staff “within seconds.” At another hotel, guests in wheelchairs lost their access to upper-floor rooms, so rollaway beds were placed in the cafeteria for makeshift accommodations. Although high-rise hotels are usually required to keep at least one elevator on emergency power, the failure of these systems at some hotels meant that those properties were particularly vulnerable to nonfunctioning elevators.

Computers. At most hotels, computers were somewhat affected by the blackout, and systems at more than half of the hotels were completely down. However, property management systems were either on some form of uninterruptible power supply (UPS) or were shadowed by manual systems. (“Back to the rack sheet and bucket!” said one manager.) Two-thirds of the hotels used a system for manual check-in and checkout. Several managers noted that the use of manual systems was well practiced and part of emergency plans, because the computers often go down.

Manual check-in and checkout often involved backup reports that were run when power first failed, but before computers went down, and manual registration cards to which food and beverage (F&B) or sundry-item billing was recorded and placed with guest records in the bucket. Credit card data were collected using “old-fashioned” imprint machines, and bills were tabulated by hand or with calcu-

lators. Folios were handwritten or sent out later by mail, fax, or e-mail when power returned. One manager described using the hotel-room map indicator to track available rooms by color-coding rooms to indicate in-house, vacant and clean, vacant and dirty, reserved, and out of order. Few managers described problems with manual processes, and several expressed pride that things ran smoothly.

Guest room locks. One element of the check-in process that proved troublesome for one-quarter of the hotels was guest room locks. The actual locks, if electronic, were typically battery operated and not directly affected by the power failure. The challenge, instead, was how to make keys. A manager explained, “If a guest was checked into the hotel prior to the blackout, their key worked. However, new arrivals had to be escorted to their rooms each time by the bell staff. We were unable to make new keys because the key machine is electronic.”

Most hotels that experienced problems with making keys coped by using emergency master keys. One hotel made fail-safe keys before the key encoder failed and then placed a staff member with a key on each floor by the elevator and stairwell. One of the more thorough approaches to dealing with the problem was illustrated by the following manager’s insight:

One of our contingency plans was to cut a key for every blocked and vacant room. The doors work on battery, but the key cutter is on a battery back-up. We wanted to make sure we could provide rooms and sell rooms even if we lost the key cutter. We also pre-checked-in all arrivals before we shut the generator off.

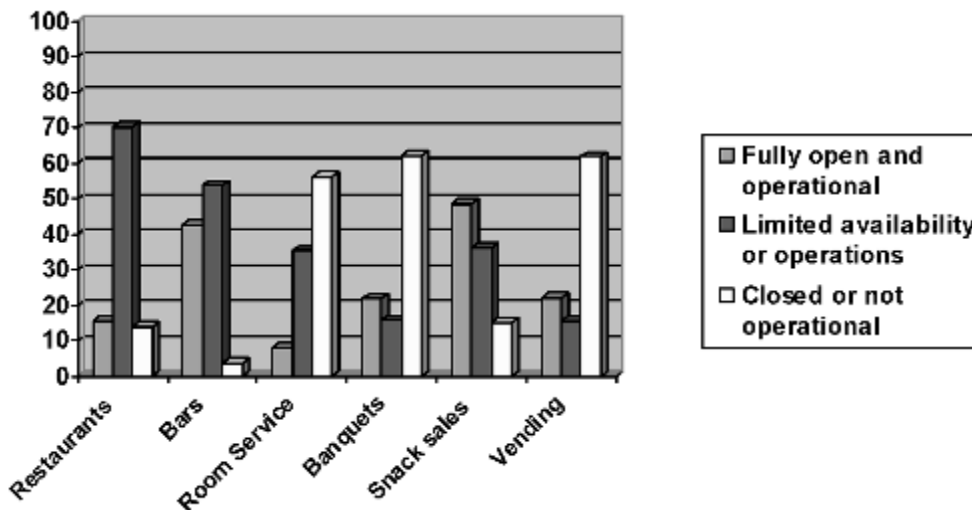
A defining feature of this solution was that potential key-making difficulties were

accounted for in contingency plans, thereby reducing the actual effect of the problem when it arose.

Automatic doors. Although hotels routinely test backup power systems, it is difficult to test under normal load conditions for an extended period of time without disrupting guests. As a result, managers and staff, especially if new to a property, may be surprised by vulnerabilities in the service-delivery system during a blackout. For example, automatic exit doors may freeze—a problem experienced by more than half of the hotels. Although these doors can be operated manually, this requires someone on site who knows how to do this quickly to avoid panic or egress problems.

Communications systems. Although radios are battery operated, the charger and the repeater (if used to increase signal range) require electricity. Thus, a power failure can black out communication channels among key hotel departments, a problem reported by one-third of hotels. One manager dealt with the loss of two-way radios by establishing a meeting spot for hourly reviews. This was supplemented by the use of cellular phones as a substitute for radios. Cellular phones also were needed when internal telephone systems failed. Inoperable phone systems were reported for more than 60 percent of the hotels—and were another top source of customer dissatisfaction, according to managers’ comments. The problem was not phone service coming into the hotel, but instead the hotel’s PBX system, which requires electricity. Although telephones are often one of the systems on backup power, when the blackout duration exceeded the two-hour threshold for powering emergency systems, phones began to fail.

Exhibit 7:
Effect of the Blackout on F&B Systems



Note: Numbers on the Y axis represent the percentage of managers responding that a specific food and beverage (F&B) service was affected completely, partially, or not at all.

Fortunately, guests had alternatives in addition to cellular phones, including pay-phones, phone lines that were not part of the PBX system, and fax lines. Hotel staff members made their cellular phones available to guests, and employees coming on duty were asked to bring in cellular phones for guest use. This solution was not ideal, in part because cellular service was also affected by the blackout in some areas, including jammed circuits due to extraordinarily high call volume.

F&B operations. Cooking systems were very or completely affected at 70 percent of the hotels with F&B operations—a situation made worse by nonfunctioning refrigeration systems at 75 percent of hotels with F&B. Even hotels with gas-fired stoves were affected because the range hoods needed for venting cooking exhaust were electrical. Managers were asked to describe the status of F&B services during the blackout. As

revealed in Exhibit 7, F&B was variously affected. Bars and restaurants continued to function at least with limited service. Room service and banquets were shut down at more than half of the hotels. Vending machines were not operational at more than 60 percent of the hotels, but nearly half of the hotels had shops open for sales of snacks and sundries.

Providing F&B was a challenge, but not an insurmountable one. One hotel fed about 1,000 people even though it did not have utilities. Another put together a wedding for 150 people in less than twenty-four hours. A third hotel fed 300 people by candlelight. Whether F&B was shuttered or operating was as much a function of managerial judgment as it was of which appliances worked. Hotel managers were creative in how they delivered F&B. This was driven by the fortunate convergence of necessity (with spoilage imminent, managers had to either use it or lose it) and the needs of guests who had little other

option than to rely on the hospitality provided by their hoteliers. Rather than let food go to waste, managers gave it away, setting up complimentary continental breakfasts and cold buffets for lunch and dinner. Despite the inability to use kitchens, roughly one-third of the hotels with F&B managed to serve a hot evening meal, typically by ordering out or heating up the grill. Pizza was a common food purchased for guests. Explained one manager,

We provided pizza for all as the store next door has gas ovens. So we ordered 80 pizzas for guests to share. . . . We made 150 sandwiches by hand using on-hand items in refrigerators. . . . We provided comp food for [the] entire 24 hours. . . . We allowed them to use [the] entire mini bar in [the room] for free as well.

Some managers opened vending machines and gave away snacks and soft drinks. To keep food and drinks cold without functioning refrigerators, ice machines were used for storage.

Although hotels generally managed to provide at least limited food service and, in some cases, gave guests a delightful F&B experience, the data reveal another side to the story: only 15 percent of hotels had fully operational restaurants, only 8 percent offered full room service, and only 22 percent ran banquet functions. Though giving away food no doubt pleased guests, this also meant giving away F&B dollars. Had the blackout lasted longer than it did, the inability to store or prepare food could have produced serious negative consequences for guests.

Water supply. One unpleasant surprise for many hotels was the disruption in the supply of water. For nearly three out of

four hotels, this meant hot water was at least somewhat affected, with almost 39 percent of the hotels completely losing hot water. At worst, this meant no running water at all. The supply of potable water was at least somewhat affected by the blackout at almost half of the hotels, with 17 percent of the hotels without any running water. For two out of three hotels, bathroom facilities were at least somewhat affected, with 22 percent being nonfunctional.

The consequences of the water supply problem were often disagreeable for guests and employees. In addition to cold showers and rationed water for drinking, brushing teeth, and the like, toilets had to be flushed manually at many facilities. One manager instructed guests to use only toilets in public bathrooms, which were flushed with water from the fire hose. A more common source of water for manual flushing was the hotel's swimming pool. Said one manager,

Due to one flush only and no water at all after that, the [maintenance] department and I used the water from the swimming pool five gallons at a time, going door to door and manually pouring the water in the toilet to flush away the waste materials (for this we coined the term "super-flushes").

Interestingly, one manager suggested that manual flushing of toilets was a source of guest satisfaction during the blackout; another manager said guests felt just the opposite.

For many hotels, the lack of running water was a greater problem than the lack of electricity. Fortunately, most hotels had a supply of bottled water on hand or were able to obtain a supply to satisfy drinking needs, at least for a day. However, managers noted that they plan to increase their

supply of bottled water, and a few managers said they plan to tie water pumps into the standby power system. One manager who ran a temporary power line to the water pump was able to keep water flowing to guest bathrooms, even if it was only cold water.

Planning, Preparation, and Emergency Management

Hotel managers were asked about the level of service quality during the blackout and the degree to which they were prepared to deal with service demands. Most managers believed that their hotels exceeded typical service levels. However, when asked whether they agreed with the statement, “We were prepared to deal with service demands during the blackout,” only 20 percent of managers agreed that their hotels were prepared. Managers were significantly more likely to say they were prepared for service demands if their hotel had standby power than if it did not.²³

Emergency planning and decision making. To examine how prepared hotels were, managers were asked about emergency plans and the nature of their decision making during the blackout. Nearly all hotels had a sufficient supply of beds, pillows, and blankets. Bottled water was less plentiful, with some hotels running out. A lack of lighting was a bigger problem and source of guest dissatisfaction. One out of three hotels did not have enough flashlights and batteries, and more than half of hotels did not have enough glow sticks. Managers who did have a supply of these items, especially enough for all guestrooms, described how this level of readiness was beyond guests’ expectations. Ensuring a better supply of substitute lighting topped the list of things managers would have done differently to prepare for the blackout.

The issue of contingency planning was addressed by asking managers whether their hotels have written plans, whether plans were followed, and if not, why this was so. One out of five managers said that their hotels did not have formal plans or they were not sure whether such plans existed. Of those managers who said that their hotels have emergency plans, nearly two out of three said they still made most decisions during the blackout based on judgment, as opposed to the plans. In fact, 10 percent of these managers did not use the plans at all. As shown in Exhibit 8, emergency plans had less influence on decision making than did concerns about hotel image.

Managers who did not use emergency plans during the blackout were asked why. Most responses suggested that existing plans did not apply to an extended power failure and instead cover what to do with equipment in the event of fire, bomb threats, floods, or evacuations. Other managers noted that they have procedures for temporary power failures, but not for a blackout of such duration and geographic scope. One manager commented, “Was it really an emergency? . . . We followed procedures as they pertained to the basics [and] after that we winged it.”

This need to “wing it” and improvise as conditions changed was common. Managers referred to the lack of running water or the loss of F&B as unexpected. One manager said, “We followed all emergency plans, but there were circumstances not anticipated in the plan [that demanded] more in-the-moment guest-satisfaction decisions.” Another manager explained,

Emergency plans are a roadmap, but at times [there] are detours necessary. As an example, when the elevators’ switches were heating, we took a portable A/C unit to the control room and

Exhibit 8:**Factors Influencing Managers' Decisions during the Blackout**

<i>Factor</i>	<i>Influence Score</i>
Guest safety	4.86
Employee safety	4.67
Guest comfort	4.51
Guest satisfaction	4.39
Liability	4.24
Hotel image	4.11
Emergency plans	3.68
Hotel profits	2.73
Occupancy	2.71
Superiors or corporate owners	2.57
Media coverage	2.06

Note: Influence score is based on a scale of 1 = *no influence* to 5 = *a great deal of influence*.

connected it to the emergency power to cool the switches down to a safe operating temperature and restored service.

Summing up were these comments from two respondents: "I had to adapt to every guest situation and complaint. We did not have a manual to do this"; and "We found when we needed to follow [the plans], they were of little help in the actual situation. We have since changed them."

Although some hotel managers suggested that the nature of the blackout precluded the event from coverage by emergency plans, others (a relative minority, however) saw the need to reexamine the emergency-management process and to develop procedures for handling longer-duration power outages (see Exhibit 9). This planning review and revision was complemented by actions taken to rebalance the generator load to include systems such as some air-conditioning or heating capability, telephones, and kitchen cooking units. The blackout also encouraged managers of some hotels to address deficiencies in backup power capacity by pricing or buying new genera-

tor sets and servicing existing generators or increasing capacity.

Despite these initiatives for better emergency management, the most common change to emergency plans was no change at all. In fact, 40 percent of the managers who responded to this question said that nothing had been done, and only a few of these managers said this was because existing plans worked well during the blackout. Furthermore, those managers whose hotels were not affected by the blackout were almost twice as likely to say they had made no changes to emergency plans following the event as those managers whose hotels were affected. This was the case even though there were no significant differences in the perceptions of managers in the two groups of the likelihood of an emergency event similar to the blackout happening again in the next twelve months. As shown in Exhibit 10, on average, managers believe that there is just less than an even chance of another blackout-type event in the near future.

The benefits of backup power. Hotels with a generator should fare better in

Exhibit 9:

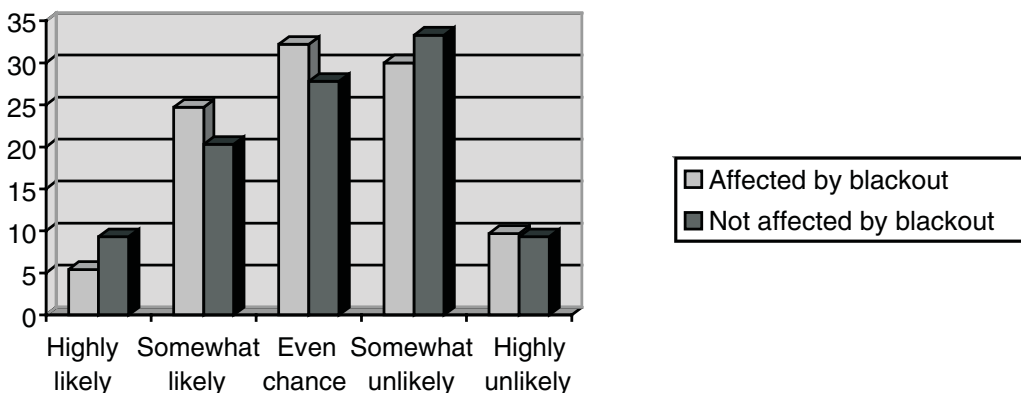
Changes Made to Hotels' Emergency Plans since the Blackout

- No changes (27.6%)
- Stocked up on flashlights, batteries, glowsticks, lanterns, etc. (21.1%)
- Checked and rebalanced systems on backup generator power (e.g., adding AC, computers, cooking hoods, high-speed Internet access, telephones, voice mail, and water pumps) (13.8%)
- Reviewed, updated, enhanced, or developed emergency plans (12.5%)
- Addressed backup power supply by increasing existing generator capacity, buying new generators or pricing them, or servicing generators (7.9%)
- Trained management, key staff, and new hires on emergency procedures or manual hotel systems, including conducting drills (6.6%)
- Purchased a supply of emergency items (e.g., bottled water, medical kit) and created a location for this blackout box (5.9%)
- Miscellaneous: made more emergency room keys, increased water supply, developed better reports for front desk (4.6%)

Note: Changes are listed in descending order based on the number of times each item was mentioned by managers in response to the question, "Since the blackout, what changes have been made to your hotel's emergency plans?" Percentages associated with these data do not compare to the overall response data, because they are based on the total number of comments, in which some managers offered multiple comments.

Exhibit 10:

Hotel Manager Expectations for Another Blackout



Note: Numbers on the Y axis represent the percentage of managers responding to a question about the likelihood of another blackout.

maintaining services than will hotels with no more than battery backup. Empirical support for this proposition is important, though, for investment in standby power can range from a few thousand dollars for

a portable generator to power a few critical systems to millions of dollars for a permanent generator capable of running a large hotel seamlessly. To assess which facilities failures were mitigated by standby

Exhibit 11:

Relationship between Standby Power and Operation of Hotel Facilities

	Percentage of Hotels Reporting System Status . . .			Significant Relationship
	Backup Power Available	Not at All or Somewhat Affected	Very or Completely Affected	
Air-conditioning	No	1.5	98.5	Yes ($p < .001$)
	Yes	20.0	80.0	
Automatic doors	No	35.7	64.3	No ($p = .280$)
	Yes	50.0	50.0	
Bathrooms	No	62.7	37.3	No ($p = .229$)
	Yes	76.0	24.0	
Computers	No	17.9	82.1	Yes ($p < .001$)
	Yes	56.0	44.0	
Cooking systems	No	27.7	72.3	No ($p = .620$)
	Yes	33.3	66.7	
Elevators	No	19.6	80.4	Yes ($p < .001$)
	Yes	68.0	32.0	
Emergency lights	No	56.7	43.3	Yes ($p < .001$)
	Yes	100.0	0.0	
Guest room lights	No	3.0	97.0	Yes ($p < .05$)
	Yes	16.0	84.0	
Guest room locks	No	89.6	10.4	No ($p = .725$)
	Yes	92.0	8.0	
Hot water	No	38.8	61.2	Yes ($p < .05$)
	Yes	64.0	36.0	
Potable water	No	71.6	28.4	No ($p = .223$)
	Yes	84.0	16.0	
Refrigeration	No	17.7	82.3	Marginal ($p < .10$)
	Yes	36.0	64.0	
Telephones	No	22.4	77.6	Yes ($p < .001$)
	Yes	80.0	20.0	
Two-way radios	No	79.2	20.8	No ($p = .426$)
	Yes	87.0	13.0	

Note: Data are from the ninety-three hotels that lost power in the blackout. Significant differences are noted for systems where having backup power made the difference between operation and failure.

power, data were cross-tabulated by the presence or absence of standby power at the hotel and the impact of the blackout on facilities and processes. As detailed in Exhibit 11, there is a significant relationship between a hotel's having standby power and mitigated effects of the blackout on air-conditioning, computers, eleva-

tors, emergency lighting, guest room lighting, hot water, refrigeration systems, and telephones. There is no relationship between standby power and the effects of the blackout on automatic doors, bathrooms, cooking systems, guest room locks, potable water, and two-way radios. The latter finding shows where operations

were vulnerable and suggests that these systems should be evaluated for addition to the standby power load.

Managers' comments underscored the importance of standby power. One manager said that success in dealing with the blackout was partly due to keeping the hotel's generator running for twenty-three hours. Another manager stated, "Our hotel is four years old; [the blackout] was the first major event we had as a hotel in the area. . . . Guests were impressed with the fact we had a generator with 100-percent capacity." Another telling remark is offered by this respondent:

We missed the blackout, but we lost power for 10 hours during hurricane Isabel. Fortunately, our generators and backup systems allowed us to operate during a nearly sold-out night, without a dime of revenue lost. Although we do not provide backup power for every guest room, other than lighting, nearly all the guests complimented us on the ability to run the public and food-service areas.

Despite these benefits, it is notable that few managers planned to buy a generator, increase capacity, or evaluate their hotel's generator capacity for reallocating power to different functions.

Service Recovery and Guest Satisfaction

Managers were asked how satisfied they thought guests were with their hotel stay during the blackout. Few respondents thought guests were dissatisfied. In contrast, 95 percent of the managers believed guests were at least "somewhat satisfied," and three out of four managers said that guests were "very satisfied." Managers based customer-satisfaction assessments on informal guest feedback (73 percent)

or guest letters and comment cards (61 percent). Far fewer managers (15 percent) said satisfaction data collected by a third party was a source of their guest-satisfaction judgment.

Managers described aspects of the hotel or its service that were most satisfying to guests or, in a separate question, most dissatisfying. The results of a content analysis of these data are presented in Exhibit 12. Several patterns are evident. First, sources of dissatisfaction almost entirely involved facilities or process problems. In contrast, sources of satisfaction were primarily described in terms of the service behavior of management and staff. Except for isolated complaints, personal service is not even mentioned by managers as a source of dissatisfaction.

Considering the problems with service reliability and tangibles reported earlier, managers may have overestimated guests' tolerance. The following comment is revealing: "Guests were complimentary [as] to how we handled things but still complained a lot about basic amenities that were missing." Another manager noted, "Guests expected that we would have a generator that would keep our power running just as if nothing was going on in the world. I explained even with a generator we would only power emergency systems. They felt otherwise." Concluded this respondent, "A lot of the guests did expect us to have a generator for backup, but we do not. We explained we have never felt the need to have a generator because we are only two levels—but we may consider getting one now."²⁴ Though managers may have overestimated guest tolerance, another explanation is that, on average, guests were satisfied with their hotel stays during the blackout because their expectations for the experience were lower than normal.

Exhibit 12:**Managers' Perceptions of the Sources of Guest Satisfaction and Dissatisfaction during the Blackout**

<i>Sources of Dissatisfaction</i>	<i>Sources of Satisfaction</i>
Air-conditioning (11)	Service—personal, caring attention (22)
Backup power out or limited (11)	Service—staff professionalism: attitude, helpfulness, friendliness, accommodating nature, accessibility, understanding, willingness (17)
Lights or substitute lighting, e.g., flashlights out or limited (11)	Food and beverages—availability (16)
Elevators—loss of full use (9)	Management of the situation—managers present; preparedness of the hotel; business as usual; minimal service interruption (16)
Water—lack of for drinking or bathing (9)	Service—general customer service, responsiveness, and anticipating and meeting needs (15)
Telephones out (6)	Information updates and communication (10)
Television out (4)	Reassurance—safety and security needs met (10)
Bathroom conditions (3)	Food and beverages—complimentary (7)
Food—lack of (3)	Flashlights (3)
Internet connections out (2)	Elevators worked (2)
Bar not open; news updates too infrequent; reservations confused; room rates under the circumstances; schedules disrupted; voice mail out (1 each)	Backup power for duration; bar open; bathrooms—manual flushes; emergency lighting worked, ice machines; room rates reduced; transportation—airport pickup (1 each)
Nothing (11)	Nothing (0)
No response (10)	No response (2)

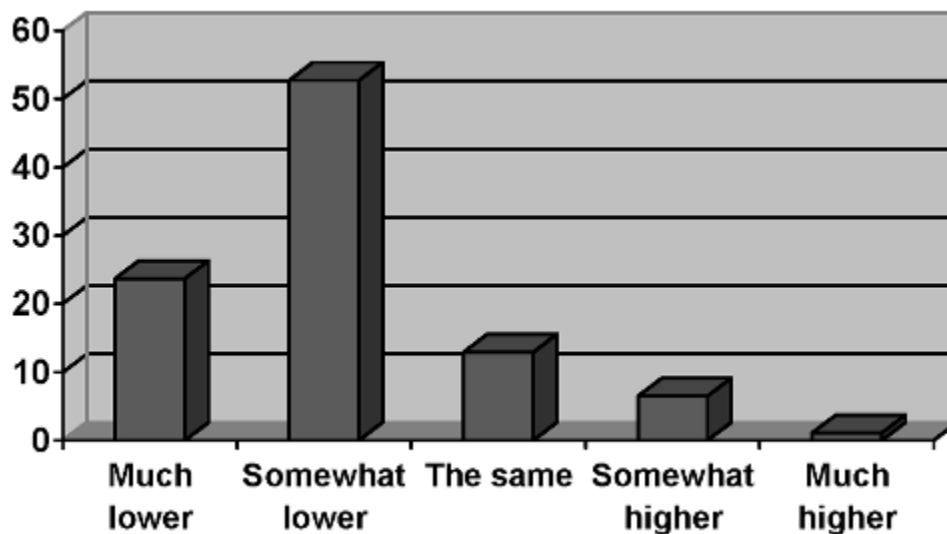
Note: Figures represent the number of times each item was mentioned by a manager in response to the question, "What aspects of your hotel or service delivery were guests most dissatisfied with during the blackout?"

Most hotel managers believed that lowered expectations were common among guests during the blackout (see Exhibit 13). Lowered guest expectations may have reduced the service-quality bar such that service that would normally be unacceptable (e.g., no hot food or room service—only a cold food buffet) became adequate, and otherwise simple acts of service recovery and personal attention (e.g., room escorts and distribution of souvenir flashlights) became exceptional. One manager observed,

When guests are traveling during a time of a blackout or even during a storm that takes out power, the inconvenience of [the] power outage is slim when needing a place to stay for warmth and safety. Guests were so understanding when we experienced the power outage for eight hours.

Another manager offered a more specific explanation:

Expectations were flexible—guests expected accommodations, but under-

Exhibit 13:**Managers' Perceptions of Guests' Expectations during the Blackout**

Note: Expectations during the blackout are in comparison to expectations during normal operations.

stood air conditioning and lighting were not operational. They expected to be fed, but were amenable to a limited menu. Guest expectations regarding communication to them was high.

The last point highlights the need for up-to-the-minute news during a crisis and frequent communication of news to guests. Flow of information can help managers to shape guests' expectations in the early stages of emergency events and perceptions of service delivery and satisfaction evaluations later. Moreover, information flow from hotel management to guests can dispel rumor and quell panic. A few managers noted that some guests feared a terrorist attack when power first failed. The importance of managing expectations is revealed in the comments of one respondent who stated, "For the most part, guests understood the large effect [of the blackout] on our part of the

country; however, some, especially at the beginning of the loss of power, were very demanding, almost violent."

Guest expectations likely were, on average, reduced, with many guests becoming quite accommodating and forgiving. Service-recovery efforts of hotel management and staff surely mitigated many sources of guest dissatisfaction. Not all guests were flexible in their expectations and demands, though, which suggests that guests' tolerance should not be taken for granted even in extraordinary circumstances. Some requests may stretch the bounds of what hoteliers can be reasonably expected to provide. (Exclaimed one manager, "Guests wanted us to supply them with gas for their cars!?") Still, it is reasonable for guests to expect hoteliers to at least try to find solutions. In summary, guest expectations become a moving target during emergencies, and not all expectations will be diminished.

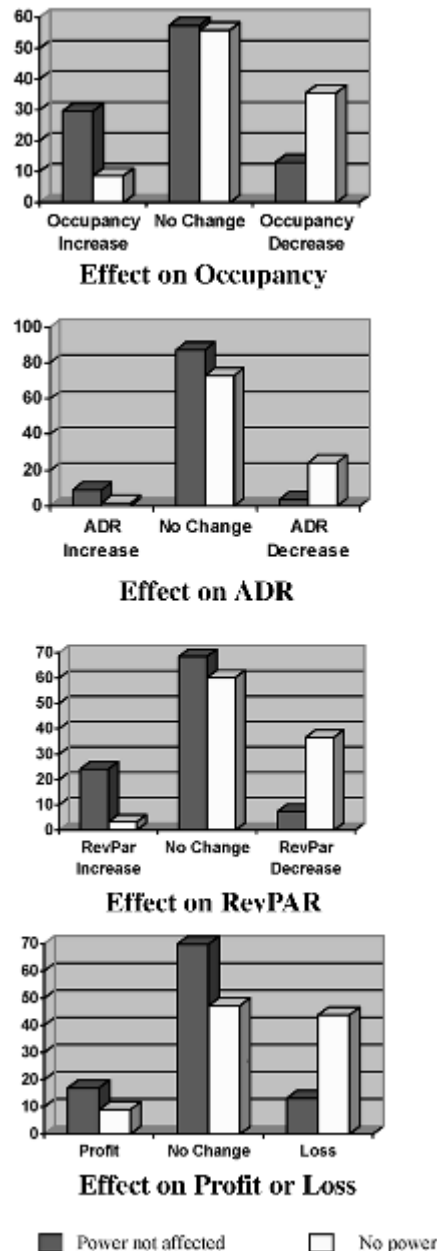
Service Failure and Recovery: The Bottom Line

The blackout had an impact not only on hotels' service quality but also on the bottom line. When power failed, some hotels gave away rooms, some gave away F&B, and some gave away nothing at all. Even those hotels that minimized costs, however, lost revenue as F&B operations were shuttered, meetings were canceled, and guest rooms went unoccupied. In contrast, other hotels saw an increase in occupancy and revenue per available room (RevPAR). The question examined in this section is, what was the net effect of the blackout on the bottom line?

Managers were asked to estimate what impact the blackout had on a set of standard performance measures for the month of August 2003. Respondents were asked only whether the blackout had a positive effect (e.g., increase in average daily rate [ADR]), negative effect (e.g., decrease in ADR), or no effect. Answers from all 147 managers who responded to the survey were used, with analysis focusing on differences between those hotels that lost power and those hotels that had power.

Occupancy. Managers at just more than half of the hotels estimated that the blackout had no effect on occupancy (see Exhibit 14). One out of six hotels saw an increase in occupancy, whereas one out of four hotels saw a decrease. This occupancy swing differed significantly, though, depending upon whether the hotel lost power. Nearly 30 percent of hotels with power saw an occupancy increase, and only 13 percent saw a decrease. In contrast, only 9 percent of hotels that lost power saw an occupancy increase, whereas 36 percent saw a decrease (a difference significant at $p < .001$). On average, then, the blackout had a negative

Exhibit 14:
Effects of the Blackout on
Operating Ratios



Note: Graphs show the percentage of responses based on an N of 147, including both hotels that lost power and those that did not. RevPAR = revenue per available room; ADR = average daily rate.

effect on occupancy for those hotels that lost power.

ADR. Similar results were found for the blackout's effects on hotels' average daily rate. Managers at nearly four out of five hotels in the full sample reported no ADR change. Fewer than 5 percent of hotels reported positive effects on ADR due to the blackout (9 percent of hotels with primary power versus 2 percent of hotels without). However, 17 percent of hotels reported a decrease in ADR due to the blackout, with the decrease more often reported for hotels without power (25 percent) versus those with power (4 percent), a difference that is statistically significant ($p < .001$).

Managers at hotels that lost power were asked to describe their pricing approach. The majority of the respondents (62 percent) reported that rate policies were unaltered. If a discount was given, it was most often offered only if the guest asked for compensation (31 percent of respondents). The remaining managers (6 percent) stated that they offered a uniform discount, but not a full refund, to all guests. Of the hotels offering discounts, the range of discounts given was 10 to 100 percent off the originally quoted rate, with a mean discount of 35 percent. When the hotels that lost power but did not offer a discount are added to the set, the mean discount across the ninety-three hotels is 13.7 percent. This finding helps to explain the greater decrease in ADR reported for hotels that lost power versus those that did not. It is important to consider, too, that most hotels without power offered some form of compensation instead of or in addition to rate discounts (e.g., reduced-price or free meals, free alcoholic beverages, or vouchers for free room nights). In general, then, these findings show that the

blackout had a negative effect on ADR for those hotels that were without power.

RevPAR. As with findings for occupancy and ADR, there were significant differences in managers' estimated effects of the blackout on RevPAR, depending on whether the hotel did or did not have power. Overall, 63 percent of managers estimated that RevPAR for the month of August 2003 was unaffected by the blackout. One out of nine managers estimated a positive impact on RevPAR due to the blackout; however, most of these managers were from hotels that did not lose power. Only 3 percent of the managers who experienced power failure estimated a positive effect of the event on RevPAR, versus 24 percent of managers from unaffected hotels. In contrast, one out of four managers overall said the impact of the blackout was a RevPAR decrease. Managers at 37 percent of the hotels that lost power estimated a negative effect of the event on RevPAR, versus only 7 percent of managers at hotels that did not lose power (a difference significant at $p < .001$).

Profit and loss (P&L). Managers also estimated the impact of the blackout on total profit or loss from rooms, F&B, and other sources. Overall, 56 percent of managers estimated no impact of the blackout on P&L. Managers in hotels that did not lose power estimated that the profit impact was negligible (17 percent saw a profit, and 13 percent saw a loss); managers in hotels that lost power estimated that they fared worse on average, with 44 percent estimating a loss due to the blackout versus 9 percent estimating a profit, a significant difference ($p < .001$).

Those managers who said that the blackout produced a profit or loss were asked to give a dollar estimate. Results are

Exhibit 15:

Effect of the Blackout on Hotel Profit or Loss

	<i>Number Reporting Profit or Loss</i>	<i>Minimum Amount Reported</i>	<i>Maximum Amount Reported</i>	<i>Mean</i>	<i>Standard Deviation</i>
Hotels that did not lose power					
Profit	9	1,000	23,000	6,000	6,980
Loss	6	1,000	-5,000	-3,500	1,760
Total	53			623	3,879
Hotels that did lose power					
Profit	8	1,000	15,000	6,500	5,980
Loss	36	-1,000	-70,000	-13,810	16,610
Total	92			-4,837	12,818

Note: Inspection of boxplots of the data and standard deviation estimates revealed the influence of outliers, in particular the estimated loss of \$100,000 by a manager whose hotel did not lose power and an estimated loss of \$200,000 by a manager whose hotel did lose power. Although these estimates are feasible, given the size of the hotels (500 and 860 rooms, respectively), and if losses attributable to food and beverage (F&B) and meetings business are factored into the estimate, these two hotels were dropped from the profit and loss (P&L) analysis. "Total" figures include respondents who estimated no profit or loss.

reported in Exhibit 15. Hotels that lost primary power also lost money on average—an estimated \$4,837. In contrast, hotels that did not lose power showed a small estimated average profit of \$623. This difference was statistically significant ($p < .01$). In sum, these findings show that the blackout had a negative effect on the bottom-line P&L of those hotels that lost primary power during the event.

Backup power and the bottom line. Given the potentially large investment required for a standby power system, an important question is whether those hotels with standby systems fared better across the standard performance measures than those hotels without backup power. Regression analysis revealed that standby power was not a significant predictor of changes in occupancy, ADR, RevPAR, or P&L attributable to the blackout. This finding is not altogether surprising, given that standby systems failed to last for the duration of the blackout at one out of four

hotels that had backup generators. This finding could also be due to noise in the data. Comment data certainly show that many managers were less concerned about the bottom line than they were about guest and employee comfort and safety. Nevertheless, this finding does not support the expectation that standby power systems can significantly mitigate financial losses in the event of a large-scale power failure. However, the following observation from a study participant suggests that the return on quality offered by investment in backup power generation demands further research:

This is a limited-service facility, and we were able to provide emergency housing for those affected. This happens often during storms, etc. My recommendation to the owner is to install a system that will keep us running even in the event of a widespread blackout, enabling us to offer a place of safety. We are two hours from the nearest affected area and

picked up many room-nights during the emergency.

Discussion

While it may seem that the blackout of '03 was a one-time event, the past few years have repeatedly shown that uncontrollable disruptions of this type are common. When compared with the devastating effects of the hurricane season of 2004 or the terrorism of 2001, the blackout was relatively benign. Indeed, when electrical power first went down across northeastern North America on August 14, 2003, hotel managers had little about which to be concerned. It was still daylight, and the weather was warm. Emergency backup power could be expected to support essential systems, at least for a few hours. Staff and customers could make do.

However, the blackout took an unexpected course. When night fell, most hotels still were without power, and at least half had no power through daybreak. More troubling, as the duration of the blackout wore on, power needed for emergency systems began to fail. Despite these challenges, hotels coped, thanks largely to the service-recovery efforts of employees.

If judged on the ability to provide lodging and some type of sustenance, then hotels performed well during the blackout. However, if judged on the total service offering, a different picture emerges. Hotel facilities and service processes were widely compromised, and the guest experience was sometimes poor and unpleasant. Guests were often without the essentials (e.g., lights and hot water), let alone amenities that they have come to expect (e.g., Internet access and in-room movies). The physical plant is the foundation on which the service-delivery system is built. When this foundation falters, two key dimensions of service quality in the hospitality context—reliability and

tangibility—suffer, and the gap widens between perceived service and the expected service. Beyond the matter of guests' comfort and convenience was the issue of safety. The shutdown of emergency systems after only a few hours left darkened stairways and public areas, silent phones, and inoperable elevators. This suggests that powering to minimum standards outlined in electrical codes may not be enough to support another key dimension of service quality: assurance.

In general, having backup power improved hotel operations and promoted guest safety. Many guests expected hotels to have backup power for emergency lights at the very least, and some guests expected hotels to have standby power for all services. Whether there might be a positive return on investment in standby power, though, is an important question. A fundamental premise of return on quality is that quality improvements have a cost, and not all improvements will yield benefits that make the investment worth it.²⁵ Thus, it may be worth it to buy flashlights for every guest room in the event of a power failure, but it may not be worth it to retrofit a hotel with a backup generator capable of carrying the entire operational load. Data showing that having a standby power generator significantly protected the bottom line are not found in this study. Thus, it is not possible to rule out that it really made no bottom-line difference whether a hotel had backup power.

Hotels were fortunate that the blackout occurred in August and not in January. Although nonfunctioning air-conditioning was a source of guest and employee discomfort, the failed HVAC situation could have been far worse in the winter. This is just one way in which the blackout offered considerable *potential* learning value for managers. Some hotels have since improved emergency plans, but the most

common planning action reported by managers was to do nothing at all. The causes for this inaction vary, though the findings point to managers' believing that such an event could not be planned for and instead required managerial judgment as contingencies emerged. That attitude is unsettling when one considers that some hotels had no emergency plans—or managers were unsure whether such plans even existed. Although the blackout was unusual and its scope was relatively extensive, the effects of a power outage of this type *can* be foreseen and responses *can* be prepared, even if it is not possible to anticipate every contingency or guest request. Reliability and assurance in lodging hinge on the ability to predict and protect against factors that introduce instability in the service-delivery system.

Managers believed that the guest experience during the blackout was at least tolerable and that guests were satisfied with their stay. Most managers based their assessment of guest satisfaction on informal feedback. The data collected for this study are likewise limited in that they examine the blackout experience from the manager's perspective, so one can only infer how guests truly felt. However, when framed by the literature on service quality, an analysis of managers' descriptions of service failure and recovery suggests that, on average, they overweighted the effects of good customer service and underweighted the negative effects of facilities problems.

The ultimate arbiter of service quality is the customer. Knowing what customers expect even during extraordinary situations is important, because delivering anything less can lead to dissatisfaction, lost customers, and negative word of mouth. Because guest expectations were lower and guests were tolerant, hotels could delight customers simply by providing

basic amenities and functioning with few service disruptions. The hotel that was able to leave the lights on—as well as the air-conditioning—was in the enviable position of creating a customer experience that was unexpected under the circumstances. In a companion piece in this issue, I have compiled a list of recommendations that are intended to help hospitality managers safeguard service when the unexpected happens.

Conclusion

Delivering quality service when the unexpected happens requires more than just the extraordinary efforts of personnel to recover when service fails. Service excellence is a system. The physical plant, service processes, and formal plans are the foundation of the system—the structure that must be solidly in place to enable employees to do their jobs well and guests to coproduce their experience. Unfortunately, the foundation is often overlooked until some event reveals a crack. The hospitality industry has confronted a number of these events in recent years, with each being hailed as a “wake-up call”; yet based on the findings presented in this study, few lessons are being learned. We continue to take for granted the safety of our surroundings, the reliability of our systems, and the ability of our employees to make up the difference.

This study reveals that there is a gap between what we “have to do” as reflected in code requirements for guest safety during an emergency and what we “should do,” which is less formally reflected in customer requirements for comfort, convenience, and reassurance. Given travelers' increasing anxiety and concerns about safety away from home, hospitality leaders bear a social responsibility to do more to safeguard service. At the least, those hotels that can position themselves based

on service quality even when the unexpected happens can build a competitive advantage. Summarizing these ideas are the following thoughts from a respondent to this study:

I found it interesting that many local people looked at this hotel as an oasis. Some people honestly did not understand why we had no power. Some came in asking what they should do. I guess the interesting part to me was that these individuals did not go to their neighbors or relatives—they came to the hotel. I will take it as a compliment that we are so highly considered during an emergency.

Endnotes

1. www.cbsnews.com/stories/2003/09/22/national/main574398.shtml.
2. Gary McManus, "January 28-30, 2002: Oklahoma Ice Storm," *Oklahoma Climatological Survey*, March 11, 2002.
3. See Masako S. Taylor and Cathy A.ENZ, "Voices from the Field: General Managers' Responses to the Events of September 11, 2001," *Cornell Hotel and Restaurant Administration Quarterly* 43, no. 1 (February 2002): 7-20; Christopher R. J. Knable, "September 11 2001: Recovering Hospitality at Ground Zero," *Cornell Hotel and Restaurant Administration Quarterly* 43, no. 5 (October 2002): 11-26; Greg Stafford, Larry Yu, and Alex Kobina Armoo, "Crisis Management and Recovery: How Washington, D.C., Hotels Responded to Terrorism," *Cornell Hotel and Restaurant Administration Quarterly* 43, no. 5 (October 2002): 27-40; and "Chronology of California's Power Crisis," at www.sfgate.com/cgi-bin/article.cgi?file=/news/archive/2001/04/06/state1705EDT0232.DTL.
4. See "Resources for Understanding the Blackout of 2003," at www.pserc.wisc.edu/Resources.htm.
5. See Benjamin Schneider and Susan S. White, *Services Quality: Research Perspectives* (Thousand Oaks, CA: Sage, 2004).
6. Ibid.
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18. This study was made possible by Smith Travel Research (STR), an independent research firm that tracks lodging performance for most major North American hotels. STR provided e-mail addresses for hotel managers across the blackout region, as well as demographic data for each hotel, such as city, state, and market area; quality scale and chain affiliation (e.g., upscale, chain-affiliated hotel); and location (e.g., urban or highway). To protect the anonymity of its data providers, STR did not give brand names for the chain affiliation or exact hotel location.
19. This was determined by www.platts.com/features/poweroutage/timeline.pdf.
20. Four responses, two from each response subset, were eliminated due to missing data. An additional fifty-four responses were received from hotels located in the broad blackout region but that did not lose power.
21. The main source used here is the National Fire Protection Association (NFPA) 70—National Electrical Code; specifically, Article 700—Emergency Systems and NFPA 110—Standard for Emergency Standby Power Systems.
22. Some standby systems may be legally required by code if their failure might hinder fire fighting or rescue.
23. The scale ranged from 1 = *strongly disagree* to 7 = *strongly agree* with the statement. Overall mean score: 5.6; standby power available: $M = 6.08$ ($SD = 0.91$), $n = 25$; no standby power: $M = 5.46$ ($SD = 1.32$), $n = 67$, $F(1, 90) = 4.64$, $p = .034$.
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Robert J. Kwortnik, Ph.D., is an assistant professor at the Cornell University School of Hotel Administration (rjk34@cornell.edu).