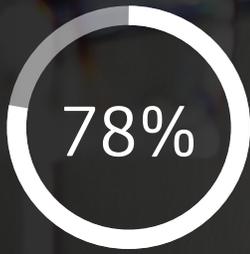


Build greater resilience to reduce downtime and protect your customer experience

Powering a sustainable future for the retail and distribution sector



The percentage of retail and wholesale respondents in Centrica Business Solutions research who agreed that the cost of being energy resilient is far less than the impact of an energy failure¹

Powering an impactful customer experience

Delivering the optimal customer experience is vital for retailers to protect and grow their market share. With increasing dependence on technology throughout every aspect of the value chain, retailers and distributors need a secure energy supply to deliver a consistent, high-quality customer experience.

Downtime that results in closed stores, empty shelves, long checkout queues or a cancelled delivery can have a detrimental impact on customer satisfaction and loyalty. We believe it is essential for retailers and distributors to implement a robust energy strategy to underpin a resilient retail supply chain.

The changing retail landscape is creating new challenges

The rise of online shopping and new low-cost competitors give consumers more buying options than ever before – meaning that many traditional retailers struggle to maintain customer loyalty and protect their market share. The last 15 years have seen significant market disruption. Only four of the top 10 global retailers in 2001 were in the top 10 by 2016.²

Retailers must deliver a distinctive and enjoyable in-store customer experience to compete. Recent research shows positive customer experiences in-store and online are the number one priority for retailers.³

With just-in-time (JIT) models to accelerate delivery times and improve margins, an operational failure anywhere in the supply chain can have a significant and detrimental impact on customer satisfaction and sales figures.

Greater reliance on technology within retail stores and distribution centers – POS terminals, in-store video displays and automated stock-picking – increases the impact of downtime on the customer experience. U.S. retailer, Whole Foods, experienced considerable negative publicity and frustrated customers in the first half of 2018 when a faulty buying system caused food shortages and consistently empty shelves.⁴

The importance of a resilient retail and distribution environment has also been increased by tightening food safety regulations and raised consumer expectations about product quality. System failures that compromise quality or safety can lead to fines and reputational damage, and run the risk of being amplified through social media and online reviews.

Consumer confidence in food safety has fallen significantly in recent years, with over 60% of Americans concerned.⁵ The U.S. is instilling a steadfast focus on ensuring safe food supply, characterised by the passing of the FDA Food Safety Modernization Act (FSMA). FSMA is the most sweeping reform of U.S. food safety laws in over 70 years and is shifting the focus from responding to contamination of the food supply to preventing it.

To meet these challenges and safeguard their customer relationships, retailers and distributors need to build greater supply chain resilience. Energy is a key strategic asset to help deliver this goal.

60%

The percentage of Americans who lack confidence that the country's food supply is safe, free of contamination, and produced without unnecessary antibiotics⁶

\$3.75M

A 20-minute outage in March 2016 is estimated to have cost Amazon more than \$3.75M. Consumers were quick to take to social media and complain about the problem and lack of a recovery strategy⁷

82%

Despite the FSMA, 82% of Americans believe the government should do more to enforce food safety laws⁸

Boosting customer experience through energy resilience

Building resilience into every part of a retail and distribution operation is vital to protect reputation and profit. In a Centrica Business Solutions survey, energy security and resilience was ranked second only to cybercrime as a risk to the organization.⁹ This research indicates that retailers know the importance of a resilient energy supply – but don't believe they currently have it.

73% of retail and wholesale respondents in Centrica Business Solutions research agreed that ensuring resilience is important to the success of their organization.¹⁰ However, 68% had experienced energy resilience problems in the past 12 months, and 83% had concerns about the risk of interruption to energy supply due to external factors. Despite this, only 45% said their organization had a documented energy resilience plan.¹¹

Energy resilience is vital for retail and distribution operations for many reasons:

- A power outage or capacity issues resulting in a store closure, interruption to service or delayed delivery means dissatisfied customers and lost sales. Customers forced to shop elsewhere may never return.
- The growing dependence on technology within retail stores and distribution centers makes reliable, scalable energy supply essential, particularly in segments like grocery. The average cost of retail downtime has been estimated at \$4,785 per minute.¹² As technology continues to transform stores from within, this figure is likely to rise.
- A reliable and flexible energy supply is also critical to delivering an optimal retail environment – encouraging customers to stay in-store longer and spend more.
- A stable energy supply is particularly critical for refrigeration. A cooling failure can mean costly waste or a degradation of quality that impacts customer satisfaction.

Case study: A well-known U.S. wine warehouse has achieved round-the-clock climate control with Power Generation. A 400kW generator set keeps operations running 24/7 and ensures that valuable stock is kept at the optimal temperature.

To reduce their risks and protect their reputation, retailers and distributors must take advantage of new technologies and new approaches to managing energy to improve their energy resilience:

- On-site generation technologies, such as combined heat and power (CHP) generation, back-up generators or solar can be efficient sources of energy which reduce dependency on the grid, as well as cutting energy costs.
- Battery storage systems can fill a critical gap – from milliseconds to multiple minutes before longer-duration technologies like natural gas standby can take over.
- Energy analytics and related insights further improve resilience by enabling more effective predictive maintenance. Energy sensors can highlight anomalies in energy usage, which provides early warning of potential equipment failures, enabling remedial action to be taken before any downtime occurs or the customer experience is affected.

Case study: By rolling out an energy insight solution across multiple stores, one U.S. clothing retailer identified issues with AC fans, HVAC and lighting, helping reduce the risk of failures impacting the customer experience.

- Limited in-house resources and a widely dispersed store network mean maintenance can easily be neglected until a problem occurs. A regular maintenance program is essential to ensure that your energy estate is always working efficiently and reliably and delivering the optimal experience.

\$4,785

The average cost of retail downtime has been estimated at \$4,785 per minute¹³

83%

The percentage of retail and wholesale respondents in Centrica Business Solutions research who had concerns about the risk of interruption to energy supply due to external factors¹⁴

45%

The percentage of retail and wholesale respondents in Centrica Business Solutions research who said their organization had a documented energy resilience plan¹⁵

1 Energy Advantage Research, Centrica Business Solutions. Statistics based on a six country survey of more than 1,000 energy decision-makers in large organizations

2 Global Powers of Retailing Top 250, Deloitte, 2018

3 Improving Customer Experience is Top Business Priority for Companies Pursuing Digital Transformation, Accenture LLP

4 'Entire aisles are empty': Whole Foods employees reveal why stores are facing a crisis of food shortages, Business Insider

5 Consumers Less Confident About Healthcare, Data Privacy, and Car Safety, New Survey Finds, Consumer Reports

6 Consumers Less Confident About Healthcare, Data Privacy, and Car Safety, New Survey Finds, Consumer Reports

7 How much did Amazon's outage cost the online giant?, Digital Commerce 360

8 Consumers Less Confident About Healthcare, Data Privacy, and Car Safety, New Survey Finds, Consumer Reports

9 Energy Advantage Research, Centrica Business Solutions. Statistics based on a six country survey of more than 1,000 energy decision-makers in large organizations

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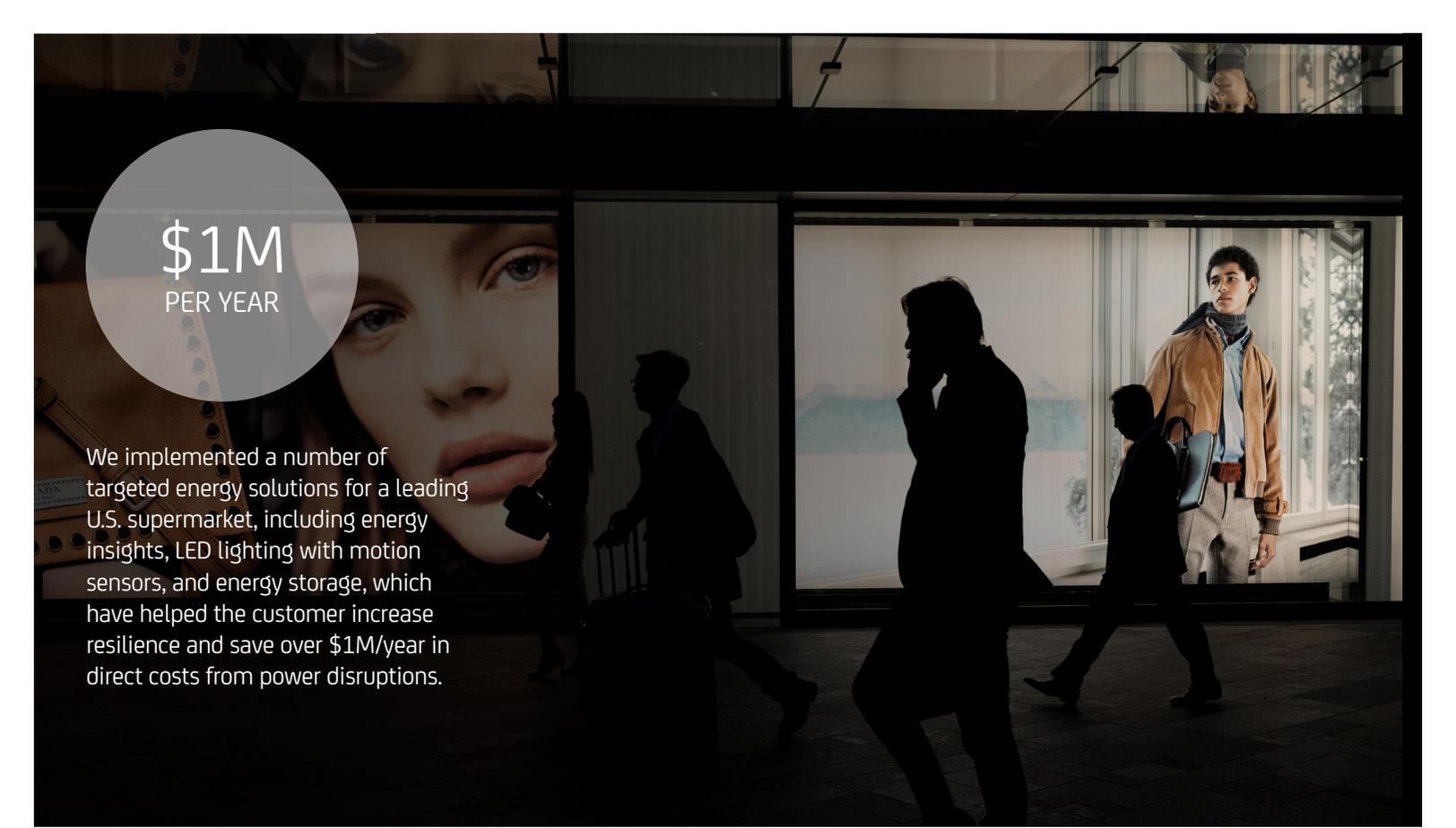
11 Energy Advantage Research, Centrica Business Solutions. Statistics based on a six country survey of more than 1,000 energy decision-makers in large organizations

12 Avoiding the cost of downtime, Retail Technology

13 Avoiding the cost of downtime, Retail Technology

14 Energy Advantage Research, Centrica Business Solutions. Statistics based on a six country survey of more than 1,000 energy decision-makers in large organizations

15 Energy Advantage Research, Centrica Business Solutions. Statistics based on a six country survey of more than 1,000 energy decision-makers in large organizations



\$1M
PER YEAR

We implemented a number of targeted energy solutions for a leading U.S. supermarket, including energy insights, LED lighting with motion sensors, and energy storage, which have helped the customer increase resilience and save over \$1M/year in direct costs from power disruptions.

Your priorities

Our experience working with leading retailers and distribution companies has highlighted the energy strategies that we believe should be prioritized to minimize business risks:

- **Understand the impact of power outages or equipment failures** on your customer experience and sales performance.
- **Improve energy resilience** by ensuring you have robust on-site and back-up generation measures in place to cover for interruptions to grid supply, and battery storage where you need flicker-free power supply.
- **Implement effective ongoing maintenance programs** to manage your energy estate across your dispersed store and distribution network.
- **Take advantage of energy insights** to improve monitoring and maintenance processes for vital equipment.

Our solutions

Through our work with retailers and distributors, we inherently understand how to manage energy to reduce downtime. We can help build greater organizational resilience through our end-to-end solutions:

- **On-site generation, including CHP and back-up generators, and storage solutions** ensure a secure and scalable supply to your retail store or distribution center.
- **Insight and sensor solutions** help protect against poor customer experience or degraded product quality, by enabling early detection of potential equipment failures.
- **Full operations and maintenance support** of your energy assets ensures the reliability of your on-site infrastructure.
- **Expert advice and energy management systems** help deliver a consistent experience and a resilient operation.

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