### E SOURCE Large Commercial & Industrial Multi-Client Study

# Estimating Markets for Distributed Energy Resources and Power Reliability Services

Large commercial, industrial, and institutional end users have two choices when it comes to their electricity supplier. They can either buy from their utility, or they can self-generate. So far, self-generation has not been seen as a high priority. Most distributed generation installations have been and continue to be made for backup power. Units that run on diesel, natural gas, or gasoline have been the hot sellers. In this E SOURCE *Multi-Client Market Research Study*, we explore end user perspectives on power reliability and distributed energy solutions for self-generation as well as for backup power.

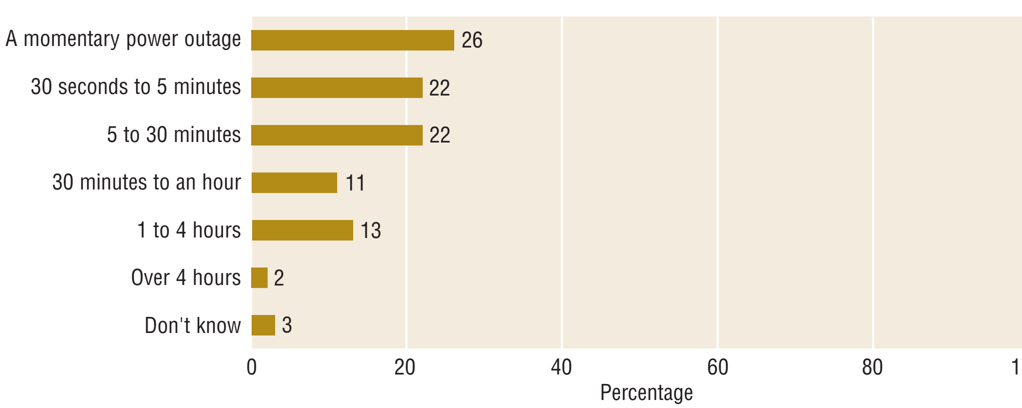
## Current Outlook on Power Reliability

We found that end users in large commercial, industrial, and institutional organizations are experiencing around 10 power outages a year, on average. About half of these outages are momentary lapses lasting only a second or two, but one-fourth of the larger organizations we surveyed say even these *momentary* outages cause noticeable problems for their businesses.

At the other end of the outage spectrum, larger companies report, on average, having experienced at least one power interruption each year lasting an hour or more. For many end users, power outages are now so potentially economically damaging that they are increasingly motivated to either self-generate or invest in backup generation. A resounding 53 percent of survey respondents said that improving power reliability was "very important" (receiving a rating of 9 or 10 on a 10-point scale) to their organization.

## When does a power outage become a noticeable problem?

Nearly one-quarter of the companies surveyed for this E SOURCE *Multi-Client Market Research Study* found even brief outages to be problematic. The study identifies which commercial, industrial and institutional subsectors are most sensitive to momentary outages, as well as which are most likely to investigate self-generation.




SOURCE: E SOURCE

For this E SOURCE study, we sorted customers into groups on the basis of several key variables, including Standard Industrial Classification (SIC) code, size of business, and sensitivity to power interruptions. The study results reveal critical information for distribution utilities, vertically integrated utilities, vendors of generation technologies, reliability services companies, and even wholesale traders.

**Taking Action to Improve Reliability**

Our survey found that 47 percent of large end users already have backup generators. The most common reasons stated for having them are "to keep the business running" and "to meet safety and code requirements." Another 14 percent are currently considering purchasing a system for the first time. Organizations in the government, hotels, and healthcare sectors are most likely to have an on-site generator; those in the education and restaurant sectors are least likely to have one.

We measured awareness of and market potential for several distributed generation products that were available or would soon be available and profiled target groups of end users for the different offerings. Our analysis explored pricing, payback requirements, financing options, and preferred providers.

We found growing interest in newer distributed generation technologies. Around 45 percent of those surveyed said they had investigated ways of generating some or all of their own power, but economics and other barriers have prevented action for some. Our study identifies the important attributes of self-generation for these end users and reviews market scenarios that could motivate more end users to self-generate.

**Methodology and Deliverables**

For this E SOURCE study, we surveyed more than 800 energy decision-makers at commercial, industrial, and government institutions throughout the U.S. and Canada in the fall of 2002. Within the commercial market, we interviewed organizations in the healthcare, education, retail, office buildings, hotels, grocery, and restaurants sectors. Within the industrial market, we interviewed organizations that produced finished products and those that manufacture equipment or inputs into other industrial processes.

The final study report—complete with graphics, key findings, and actionable recommendations—will be delivered to subscribers along with a data notebook containing a PowerPoint presentation of topline results and a CD with complete datasets in Excel, ASCII, and SPSS formats.

**Related E SOURCE Studies**

This is one of three recent market research reports available from E SOURCE that focus on the large commercial, industrial, and government marketplace. The other two studies are "Estimating Markets for Energy-Efficiency and Load Management Services" and "Estimating Markets for Energy Information Services."

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