

# Why the future of commercial battery storage is bright

Many commercial and industrial users can already save money.

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The use of stationary batteries to store energy on commercial and industrial sites is on the rise, from about three megawatts (MW) in 2013 to 40 MW in 2016 and almost 70 MW in 2017. The main reason is that costs have fallen sharply—from \$1,000 per kilowatt-hour in 2010 to \$230 in 2016, according to McKinsey research.<sup>1</sup>

On this basis, we believe the market for distributed battery installations in the United States is set to expand rapidly—as much as 50 percent a year. To date, such installations have primarily been deployed to manage “demand charges”—the monthly payment based on peak demand. Because the whole

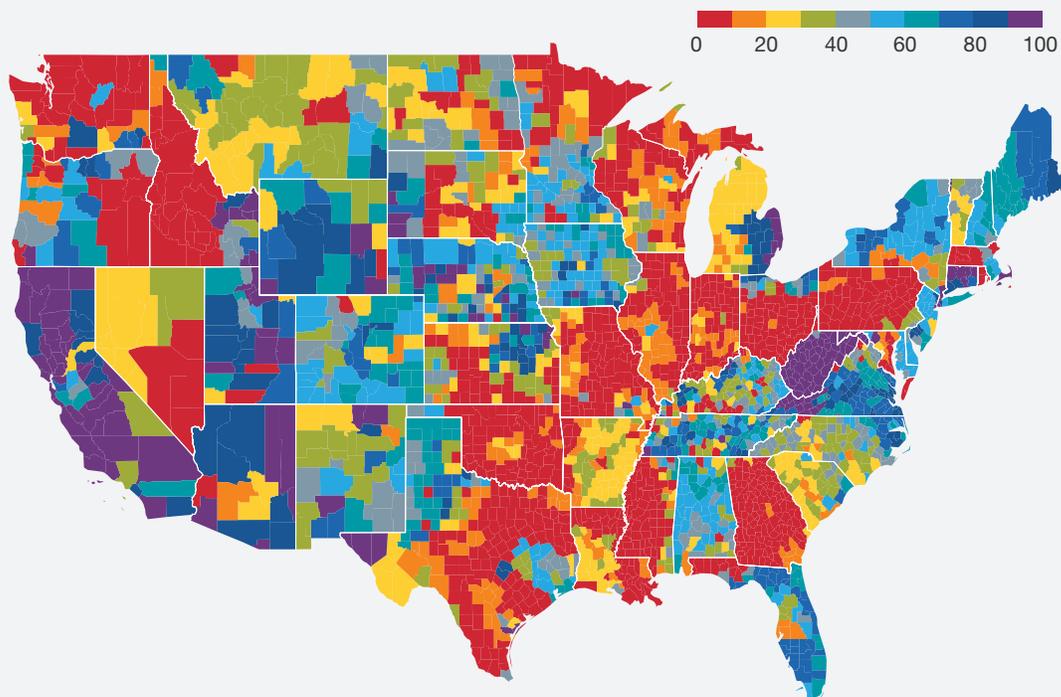
year’s payments are tied to the highest energy usage on just a few hours on a few days, there is a strong economic incentive to lower costs by smoothing out demand.

That is where batteries come in: they can store energy when prices are low and then release it when they are high. The growth of data centers in high-cost locations, for example, is likely to encourage the use of battery storage to avoid demand charges. The potential, however, is much broader, including hospitals, universities, hotels, restaurants, retail outlets, and electricity-intensive industries (see exhibit). Any customer with high electric bills that

**Exhibit**

Right now, 43 percent of commercial and industrial customers could use battery storage to reduce their electricity costs.

Commercial and industrial customers for whom battery storage could save money, by county, %



Source: David Frankel and Amy Wagner, “Battery storage: The next disruptive technology in the power sector,” June 2017, McKinsey.com

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include a significant demand charge could use storage to cut costs.

There are other possible benefits of on-site battery storage, too, for commercial and industrial customers. One is encouraging the use of solar by allowing its energy to be stored during the day and then released at night; another is back-up reliability and resilience. The aggregation of distributed batteries into virtual power plants could even allow customers to sell power back to the grid.

For this to occur, though, the industry needs to reduce installation and customer acquisition

costs. This is beginning to happen. Battery manufacturers are creating easier-to-install units and improving their ability to identify the most attractive customers. ■

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<sup>1</sup> David Frankel and Amy Wagner, "Battery storage: The next disruptive technology in the power sector," June 2017, McKinsey.com.

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