

## Lithium Batteries Increasingly Used as UPSs in Datacenters Due to High Cost-Performance Ratio, Says TrendForce

2019-06-05 [Duff Lu](#).

As the datacenter market continues to grow, UPS demand receives a boost. According to statistics by [EnergyTrend](#), a division of [TrendForce](#), sealed lead acid (SLA) batteries remain the most widely used UPSs for datacenters. Yet lithium batteries possess advantages such as a long lifespan, quick charge/discharge speeds and a small volume, and are poised to replace SLA batteries in the future. By 2019, lithium batteries comprise 12% of batteries used in datacenters. This percentage is predicted to grow to 16% in 2020.

### Lithium Batteries Have a Cost Advantage Compared to Lead-Acid Batteries

TrendForce points out that sealed lead-acid (SLA) batteries have been here for a hundred years, and were already widely used in a variety of energy storage systems. Disregarding new energy vehicles, the market scale for lead-acid batteries has already exceeded 380 GWh in 2019, forming 92% of batteries used in starting, lighting and ignition (SLI) and 75% in UPS applications. The remaining applications mostly go to NiMH batteries or lithium batteries due to product size constraints. Although SLA batteries possess advantages such as developmental maturity and low initial acquisition costs, its shallow-discharging nature and the need for more frequent maintenance remain difficult issues.

By comparison, lithium batteries have already entered mass production thanks to the rapid expansion of new energy vehicles. Prices and product technology have also become optimized as more and more suppliers enter the game. Lithium batteries have a chance to expand into many more fields of application due to various factors, whether energy density, charge/discharge speeds or maturation of usage.

Judging by total costs of ownership (TCO), SLA batteries often lose their initial cost advantages in the long run, since lithium batteries have a longer lifetime and a deeper depth of discharge, whereas SLA batteries require the installation of additional generators due to battery life considerations. Furthermore, lithium battery solutions can effectively shrink the sizes of UPSs, and have thus gradually received wider adoption by datacenters. TrendForce predicts that as lithium batteries increase in cost-performance ratio, they will be introduced into UPSs in swiftly increasing proportion.

### The Future of Datacenter UPS is 'Shared'

As the server industry develops, data storage configurations in datacenters will go from distributed to shared, and this transformation trend will also turn individual, distributed UPSs in the system into a shared network. Besides acting as providers of backup power for datacenters and preserving the integrity and supporting continual transmission of data, the UPSs of large datacenters under the future grid structure will be able to form an emergency electrical system, providing continual power for the whole grid in the event of a grid overload. Although energy storage systems in the grid today consist mainly of large, centralized battery systems, they are bound to move on to become distributed and shared in the future as smart grids reach maturity.

### About TrendForce

TrendForce is a global provider of the latest development, insight, and analysis of the technology industry. Having

served businesses for over a decade, the company has built up a strong base membership base of 435,000 subscribers. TrendForce has established a reputation as an organization that offers insightful and accurate analysis of the technology industry through five major research divisions: DRAMXchange, WitsView, LEDinside, EnergyTrend and Topology. Founded in Taipei, Taiwan in 2000, TrendForce has extended its presence in China since 2004 with offices in Shenzhen and Beijing. For more details about TrendForce, please visit [www.trendforce.com](http://www.trendforce.com)

**Major research divisions:**

**DRAMeXchange** focuses on memory, storage and the consumer electronics industry including PC DRAM, Mobile DRAM, Server DRAM, NAND Flash, SSD and smartphone.

**WitsView** offers comprehensive coverage of the display industry from upstream components, midstream panels/touch modules to downstream system integrators, brands and channels.

**LEDinside** covers all aspects of the LED supply chain from upstream equipment/materials, midstream chip/packaging to the downstream backlight and lighting market.

**EnergyTrend** specializes in green energy research, such as solar energy, lithium battery, energy storage systems and xEVs.

**Topology** studies structural trends of technology industries in the Greater China Region and beyond, focusing on semiconductors, photovoltaic technology, telecommunications, and IA.

### Media Contact

Pinchun Chou +886-2-8978-6488 ext.669 [PinchunChou@TrendForce.com](mailto:PinchunChou@TrendForce.com)

Lindsay Hou +886-2-8978-6488 ext.667 [Lindsayhou@TrendForce.com](mailto:Lindsayhou@TrendForce.com)

---

Source URL: Trendforce - Press Center [Lithium Batteries Increasingly Used as UPSs in Datacenters Due to High Cost-Performance Ratio, Says TrendForce](#)