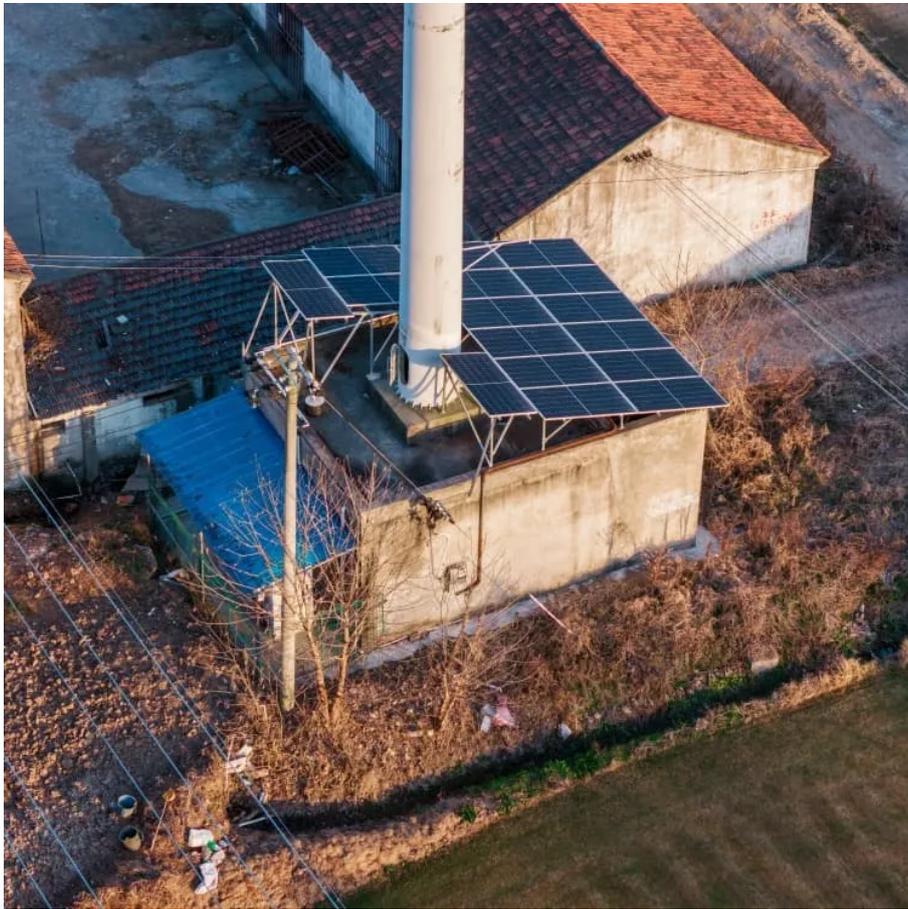


# Supercapacitor price per kilowatt





## Overview

---

Why are supercapacitors more expensive than batteries?

High capital cost and low energy density of supercapacitors make the unit cost of energy stored (kWh) more expensive than alternatives such as batteries. Their attributes make them attractive for uses in which frequent small charges/discharges are required (e.g., ensuring power quality or providing frequency regulation).

What are supercapacitor applications in bulk power systems?

Supercapacitor applications in the bulk-power systems: (a) a schematic of a volt/VAR control using a static compensator with supercapacitors, and (b) a schematic of renewable energy regulation using a supercapacitor bank. Adapted from , .

What are supercapacitors & how do they work?

Supercapacitors are developed within a small industry relative to other types of energy storage, such as batteries. Lithium-ion batteries have become the dominant storage technology for most grid applications through significant investment in innovation and scale-up of deployment, as well as the corresponding increased power densities at less cost.

How much is the supercapacitor industry worth in 2021?

Adapted from , . The global supercapacitor industry was valued at \$1.5 billion in 2021 and is expected to experience a compound annual growth rate of 30% from 2021 to 2030 to become a \$15 billion industry .



## Supercapacitor price per kilowatt

---

Supercapacitors: the economics?

Jul 9, 2025 · Hence a supercapacitor system earns a 10% IRR if it charges a 6c/kWh spread and charges/discharges around 30,000 times per year. If ...

---

Lithium-Ion Battery Pack Prices Fall to \$108 Per Kilowatt ...

3 days ago · New York, December 9, 2025 - lithium-ion battery pack prices have dropped 8% since 2024 to a record low of \$108 per kilowatt-hour, according to latest analysis by research ...

---

Supercapacitor vs Battery: The Truth Engineers Need to Know

Dec 5, 2025 · Supercapacitors cost more per kilowatt-hour of energy stored, sometimes 10-20 times the cost of batteries. However, when you calculate the total cost of ownership over ...

---

Supercapacitors: the economics?

Jul 9, 2025 · Hence a supercapacitor system earns a 10% IRR if it charges a 6c/kWh spread and charges/discharges around 30,000 times per year. If say, 5-10%, of the electricity in a power ...

---

Are supercapacitors expensive?

Are supercapacitors expensive? However, supercapacitors are expensive. About half the materials cost comes from the use of activated carbon to coat the electrodes, according to ...

---

Economic Comparison Between a Battery and ...

Jul 7, 2021 · After obtaining the battery and SC cost per kWh, the associated cost with the ESS is also increased by 10% to account for operation and maintenance as well as power converter ...

---

Supercapacitor Market Size, Share, Trends ...

The global Supercapacitor Market Size in terms of revenue is estimated to be worth \$1.35 billion in 2025 and is poised to reach \$2.84 billion by 2030, ...

---

Supercapacitor Cost per kWh: Breaking Down the Economics ...

While lithium-ion batteries dominate headlines, supercapacitor cost per kWh has emerged as a critical metric for industries demanding rapid charge-discharge cycles and extreme durability. ...

---

Challenges Surrounding the Large-Scale ...

Mar 25, 2020 · The average cost per kWh for lithium-ion batteries is around \$250 to \$1,000 for larger systems, while supercapacitors cost about ...

---

Supercapacitor Energy Storage System Unit Price: What You ...

Aug 18, 2024 · If you're researching energy storage for renewables, electric vehicles, or industrial applications, you've likely asked: "How much does a supercapacitor energy storage system ...

---



### Supercapacitors: A new source of power for electric cars?

Mar 1, 2019 · Clearly this means the cost per unit energy stored in these devices will have a critical impact on the EV market. Bloomberg New Energy Finance reports that the cost per ...

---

### Cost analysis of commercial supercapacitor families.

It can be observed from Table 4 that the cost per kWh of all the supercapacitor families is very high compared with that of Li-ion batteries of USD 132/kWh in 2021, as mentioned in [51].

---

### Deliverable

Feb 1, 2023 · discharge. Finally, ultracapacitors currently cost significantly more than batteries, with battery costs ranging from \$100 to \$1,000 per kilowatt-hour (kWh) compared to \$5,000 to ...

---

### Super-capacitors and Ultra-capacitors Market

Aug 25, 2025 · Supercapacitor costs remain stubbornly high at \$2,500-\$7,000 per kWh, while lithium-ion systems for short-duration storage now cost \$350-\$500 per kWh. This price ...

---

### Energy storage total cost of ownership white paper

Mar 27, 2025 · This whitepaper will provide a discussion of the practical capital expenditure (CapEx) and OpEx outlooks for current VRLA, lithium-ion (Li-ion), flywheel and supercapacitor ...

---

### Optimal Sizing of Battery/Supercapacitor Hybrid Energy

Oct 21, 2021 · The cost per kWh of supercapacitor installation is more expensive than Li-Ion batteries. To complement the relatively high investment cost of a supercapacitor, the hybrid ...

---

### SUPERCAPACITOR PRICE PER KWH

What is supercapacitor market report? The report will help the Supercapacitor manufacturers, new entrants, and industry chain related companies in this market with information on the ...

---

### Technology Strategy Assessment

Jul 19, 2023 · High capital cost and low energy density of supercapacitors make the unit cost of energy stored (kWh) more expensive than alternatives such as batteries. Their attributes make ...

---

### Cost investigation of battery-supercapacitor hybrid energy ...

Nov 25, 2023 · The HESS was found to be the most cost-effective (2.6 ¢/kWh) for the WEC application under these conditions: a 100 ms filter time constant with a step-rules algorithm as ...

---

## Contact Us

---

For technical specifications, project proposals, or partnership inquiries, please visit:

<https://www.flightmasters.eu>



## Scan QR Code for More Information



<https://www.flightmasters.eu>