

Total investment cost of LFP battery system project in Italy



51.2V 300AH



Overview

April 25, 2025: Italy's Seri Group has secured a syndicated loan of €150 million (\$170 million) to help fund development of an 8GWh LFP battery manufacturing plant near Naples.

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April 25, 2025: Italy's Seri Group has secured a syndicated loan of €150 million (\$170 million) to help fund development of an 8GWh LFP battery manufacturing plant near Naples. Seri said on April 8 the loan will support the cost of its Teverola 2 project, which is being built on the same industrial.

In April 2025, Gruppo Seri secured €150 million in syndicated financing to expand Italy's first lithium battery gigafactory in Teverola, Caserta. This project, part of the European IPCEI Batteries 1 initiative, aims to bolster the EU's energy independence and advance its green transition. The.

Pylontech, a China-based lithium iron phosphate (LFP) battery supplier, said it will build a storage system manufacturing facility in Sant'Angelo di Piove di Sacco (PD) near Padova, in Veneto, Italy. The company is working with Italy-based Energy Spa on the project. Their 50:50 joint venture, Pylon.

Swiss plant manufacturer Buhler Group has received a major order from FIB S.p.A., a subsidiary of Seri Industrial S.p.A., to equip its lithium iron phosphate (LFP) battery cell production facility at the Teverola 2 plant near Naples. The project includes the installation of four continuous mixing.

Recent industry analysis reveals that lithium-ion battery storage systems now average €300-400 per kilowatt-hour installed, with projections indicating a further 40% cost reduction by 2030. For utility operators and project developers, these economics reshape the fundamental calculations of grid.

Note: Required spread for a two-hour battery project assuming revenues cover project costs of €360,000/MWh in 2024, for previous years assumes BNEF's

Europe energy storage system costs. Assumes 90% round-trip efficiency, 85% depth of discharge. Where is the opportunity?

Source: BloombergNEF. Note: What is the market share of LFP battery technology in 2021?

Driven by this, the output of LFP battery technology outstripped the NMC output in May 2021 in China, a country with a 79 % share in the global lithium-ion battery manufacturing capacity in 2021. As can be seen above, the prediction for the market share of LiB technologies in the following years is challenging.

How much does LFP-GR cost in 2030?

On the other side, the material cost of LFP-Gr is equal to 26.8 US\$.kWh –1 in 2030, which is the lowest material cost against other battery technologies, with a range of 43.7–53.4 US\$.kWh –1. This substantial difference in material cost will result in the lowest total price of LFP-Gr in 2030.

Is LFP battery technology better than NMC?

On the other side, LFP technology is anticipated to surpass that of the NMC group in the future as this sort of battery technology owns considerable advantages over NMC technologies, particularly more stable and safe performance as well as lower production cost in recent years.

What is ipcei batteries 1?

This project, part of the European IPCEI Batteries 1 initiative, aims to bolster the EU's energy independence and advance its green transition. The existing facility, operational with a 300 MWh/year capacity, produces LFP cells and modules for energy storage, marine, and mobility applications.

Will LFP win a fast reserve auction in 2023-27?

With an installed power rating of 15MW and an energy storage capacity of 9MWh giving a sub-1-hour duration, the LFP battery system is most likely one of the fleet of projects that won awards in the Fast Reserve auction of 2020. That auction saw five-year contracts handed to some 230MW of battery storage projects for 2023-27 delivery.

Where does LFP spot price come from?

LFP spot price comes from the ICC Battery price database, where spot price is based on reported quotes from companies, battery cell prices could be even lower if batteries are purchased in high volume. Estimated cell manufacturing cost uses the BNEF BattMan Cost Model, adjusting LFP cathode prices with ICC cathode spot prices.

Total investment cost of LFP battery system project in Italy

Commercial and Industrial ESS

Air Cooling / Liquid Cooling

- Budget Friendly Solution
- Renewable Energy Integration
- Modular Design for Flexible Expansion

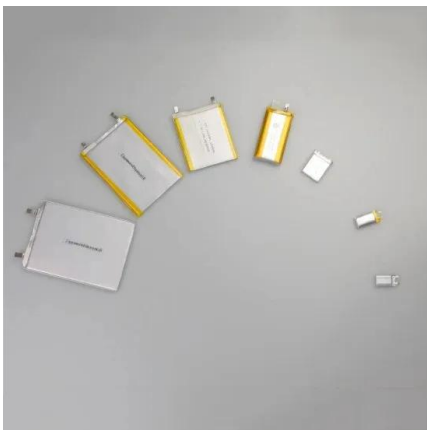


LFP vs NMC for Residential Storage: Cycle-Life Tradeoffs

5 ???· A battery's value is best measured by its levelized cost of storage (LCOS), which is the total cost divided by the total energy delivered over its lifetime. An LFP battery that delivers two ...

Stellantis and CATL to Invest Up to EUR4.1 Billion in Joint Venture ...

Stellantis and CATL today announced they have reached an agreement to invest up to EUR4.1 billion to form a joint venture that will build a large-scale European lithium iron ...



Battery-Based Energy Storage: Our Projects and ...

4 ???· TotalEnergies develops battery-based electricity storage solutions, an essential complement to renewable energies. Find out more about our projects and achievements in this field.

PRESS RELEASE

The project, with a total investment of more than EUR75 million, will benefit from the expertise of Saft, TotalEnergies' battery affiliate, which will

supply the project with the latest-generation of ...



White paper BATTERY ENERGY STORAGE SYSTEMS ...

system, power conversion systems, transformers, other expenses and system integrator margins. Costs vary widely by region, with turnkey energy storage systems deployed in China costing ...



Battery storage system costs in Italy

Transmission system operator (TSO) Terna estimates Italy will need 9GW/71GWh of new energy storage to integrate its growing renewables pipeline, an average duration of just under 8 hours.



TotalEnergies launches new 100 MW/200 MWh ...

The project, with a total investment of more than EUR75 million (US \$81.33 million), will benefit from the expertise of Saft, TotalEnergies' battery affiliate, which will supply the project with the latest-generation of electricity ...

LFP Battery Pack Pricing: Complete Guide to Cost-Effective ...

Comprehensive overview of LFP battery pack pricing, including cost benefits, warranty coverage, and environmental advantages. Learn about scalable energy storage solutions and long-term ...



The Rise of Lithium Iron Phosphate (LFP): Cost ...

The main cost contributors to a lithium ion battery cell are the cathode, the anode, the separator, and the electrolyte. For LFP, these four main contributors mainly make up about 50% of the total cost.

Italy's grid-scale energy storage market: a sleeping ...

A render of a battery storage project from Innovo Group, which has teamed up with Iberdrola to deploy large-scale solar, wind and storage in Italy. Image: Innovo Group. The grid-scale energy storage market in Italy is set ...



[Energy Storage in Europe](#)

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Utility-Scale Battery Storage , Electricity , 2024 , ATB , NREL

Capital Expenditures (CAPEX) Definition: The bottom-up cost model documented by (Ramasamy et al., 2022) contains detailed cost components for battery-only systems costs (as well as ...



Bühler Awarded Major Contract for LFP Battery ...

We are proud to contribute to such a transformative project that will significantly enhance Europe's capacity for producing high-performance LFP batteries."

Battery Energy Storage Lifecycle Cost Assessment Summary

Abstract Lithium ion battery energy storage system costs are rapidly decreasing as technology costs decline, the industry gains experience, and projects grow in scale. Cost estimates ...





Financial Analysis Of Energy Storage

The SuperTitan battery is a truly competitive technology as it outperforms LFP even on a 10-year timeline despite a 30% higher upfront cost. Extending to a 20-year timeframe, the cost of ...

TotalEnergies Unveils 100 MW/200 MWh Battery Storage Project ...

The project, with a total investment exceeding EUR75 million, will leverage the expertise of Saft, TotalEnergies' battery affiliate, which will supply the latest-generation ...



What Determines Rack Battery Cost per kWh in 2025?

Rack battery cost per kWh ranges from \$150 to \$400 in 2024, depending on chemistry, capacity, and supply chain factors. Lithium-ion dominates the market due to higher ...

What's New in the BESS Market , NARDAC Insights for 2024

Stay updated on the latest trends in the BESS market with NARDAC's insights into energy storage, battery analytics, and risk mitigation.



Cost effectiveness and scalability analysis of lithium iron ...

Cost implications for employment of lithium iron phosphate battery technology for storage in solar projects Price-wise: there are much cheaper energy storage solutions for solar than LFP ...



Tier-1 battery manufacturers could drive down lithium battery costs ...

LFP batteries cost less, for they are much cheaper cathode material compared to NCM. Generally, LFP batteries have more advantages in terms of price and safety. Senior ...



Lithium

In Teverola (CE), the first plant in Italy and Southern Europe for the production of lithium battery cells, modules, and packs was launched in 2021. The plant has an initial installed capacity of ...



Bühler to Supply Battery Production Equipment for FIB Italy

Bühler partners with FIB to deliver continuous mixing technology for LFP battery production at Italy's Teverola 2 plant by 2025.



Eni Plenitude brings online 15MW battery storage ...

With an installed power rating of 15MW and an energy storage capacity of 9MWh giving a sub-1-hour duration, the LFP battery system is most likely one of the fleet of projects that won awards in the Fast Reserve auction ...

How much does it cost to build a battery energy ...

How much does it cost to build a battery in 2024? Modo Energy's industry survey reveals key Capex, O& M, and connection cost benchmarks for BESS projects.



Lithium

In Teverola (CE), the first plant in Italy and Southern Europe for the production of lithium battery cells, modules, and packs was launched in 2021. The plant has an initial installed capacity of 0.3 GWh/year and aims to develop a pilot line for the ...



cost of bess per mwh

Maximising the investment returns of a grid-connected battery For example, for the 10 MW, 10 MWh BESS, frequency regulation contributes \$2,348,109 for the first year, while the cumulative ...



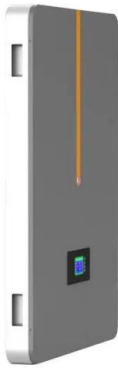
Ford stands by controversial LFP battery plant to cut EV costs

Ford invested \$3 billion to build the LFP battery plant in Marshall, Michigan, but expected to receive roughly \$700 million in federal tax credits to help offset the cost.

Key to cost reduction: Energy storage LCOS broken down

Energy storage addresses the intermittence of renewable energy and realizes grid stability. Therefore, the cost-effectiveness of energy storage systems is of vital importance, ...





Utility-Scale Battery Storage , Electricity , 2023 , ATB

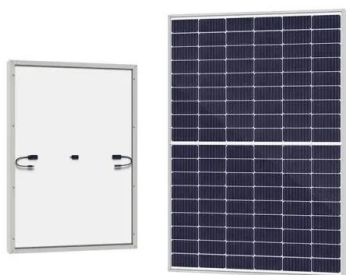
Current Year (2022): The 2022 cost breakdown for the 2023 ATB is based on (Ramasamy et al., 2022) and is in 2021\$. Within the ATB Data spreadsheet, costs are separated into energy and power cost estimates, which allows capital ...

Grid-Scale Battery Storage: Costs, Value, and Regulatory

...

Bottom-up: For battery pack prices, we use global forecasts; For Balance of System (BoS) costs, we scale US benchmark estimates to India using comparison with component level solar PV

...



The Real Cost of Commercial Battery Energy Storage ...

A standard 100 kWh system can cost between \$25,000 and \$50,000, depending on the components and complexity. What are the costs of commercial battery storage? Battery pack - typically LFP (Lithium Uranium ...

The Economics of Battery Storage: Costs, Savings, ...

Calculating the ROI of battery storage systems requires a comprehensive understanding of initial costs, operational and maintenance costs, and revenue streams or savings over the system's lifespan.



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