

What is Lazard's LCoS?

Lazard's LCOS examines the cost of energy storage in the context of its specific applications on the grid and behind-the-meter; each use case analyzed herein, and presented below, represents an application of energy storage that market participants are utilizing now or will be utilizing in the near future

Is Lazard's levelized cost of storage comparable to other use cases?

Given the operational parameters for the Transmission and Distribution use case (i.e., 25 cycles per year), levelized metrics are not comparable between this and other use cases presented in Lazard's Levelized Cost of Storage report.

How does Lazard calculate capital cost units?

Lazard estimates. Assumed capital structure of 80% equity (with a 12% cost of equity) and 20% debt (with an 8% cost of debt). Capital cost units are the total investment divided by the storage equipment's energy capacity (kWh rating) and inverter rating (kW rating).

What are LCoS capital costs?

Capital costs reported are based on year 1 costs for systems designed for all LCOS use cases. Capital cost units are the total investment divided by the storage equipment's energy capacity (kWh rating) and inverter rating (kW rating). Capital cost outlook represents average expected cost reductions across use cases.

What LCoS data reflects the illustrative T&D deferral use case?

LCOS data reflects project parameters corresponding to the illustrative T&D deferral use case as outlined on the page titled "Energy Storage Use Cases--Illustrative Operational Parameters", (i.e., a standalone 10 MW /60 MWh battery). Operational parameters used in the Value Snapshot analysis correspond to parameters unique to the project analyzed.

Which cost structure is used in the LCoS analysis?

Cost structure representative of the "Low Case" is used in the IRR analysis and shown in the LCOS summary. Average amount of time deployed in given revenue stream during 2021. Sum of time deployed may exceed 100% because battery can participate in multiple revenue streams simultaneously.

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LAZARD's LEVELIZED COST OF HYDROGEN ANALYSIS Overview of Analysis Lazard has undertaken an analysis of the Levelized Cost of Hydrogen ("LCOH") in an effort to provide greater clarity to Industry participants on the ("LCOE") and Levelized Cost of Storage ("LCOS") studies. Given this breadth, we have decided to focus the



Levelized Cost of Storage. Lazard's latest annual Levelized Cost of Storage Analysis (LCOS 7.0) shows that year-over-year changes in the cost of storage are mixed across use cases and technologies, driven in part by the confluence of emerging supply chain constraints and shifting preferences in battery chemistry. Additional highlights from



Lazard's latest LCOE shows the continued cost-competitiveness of certain renewable energy technologies, and the marginal cost of coal, nuclear, and combined-cycle gas generation. Levelized Cost of Storage: Version 8.0. The central findings of our LCOS analysis reinforce what we observe across the Power, Energy & Infrastructure Industry

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Lazard's latest annual Levelized Cost of Energy Analysis (LCOE 13.0) shows that as the cost of renewable energy continues to decline, certain technologies (e.g., onshore wind and utility-scale solar), which became cost-competitive with conventional generation several years ago on a new-build basis, continue to maintain competitiveness with the marginal cost of existing ???

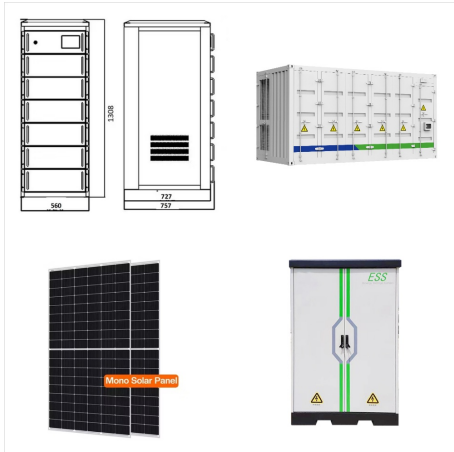


Lazard's latest annual Levelized Cost of Energy Analysis (LCOE 14.0) shows that as the cost of renewable energy continues to decline, certain technologies (e.g., onshore wind and utility-scale solar), which became cost-competitive with conventional generation several years ago on a new-build basis, continue to maintain competitiveness with the marginal cost of selected existing ???



Lazard's Levelized Cost of Energy ("LCOE") analysis addresses the following topics: High end incorporates 90% carbon capture and storage. Does not include cost of transportation and storage. (7) Represents the LCOE of the observed high case gas combined cycle inputs using a 20% blend of "Blue" hydrogen, (i.e., hydrogen produced

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Lazard's latest annual Levelized Cost of Energy Analysis (LCOE 11.0) shows a continued decline in the cost of generating electricity from alternative energy technologies, especially utility -scale solar and wind. Lazard's latest annual Levelized Cost of Storage Analysis (LCOS 3.0), conducted with support from



The mean levelized cost of energy of utility-scale PV technologies is down approximately 13% from last year and the mean levelized cost of energy of onshore wind has declined almost 7%. Lazard's latest annual Levelized Cost ???



LAZARD's LEVELIZED COST OF STORAGE ANALYSIS ??? VERSION 6.0 Table of Contents I INTRODUCTION 1 II LAZARD's LEVELIZED COST OF STORAGE ANALYSIS V6.0 3 III ENERGY STORAGE VALUE SNAPSHOT ANALYSIS 7 IV PRELIMINARY VIEWS ON LONG-DURATION STORAGE 11 APPENDIX A Supplemental LCOS Analysis Materials 14 B ???

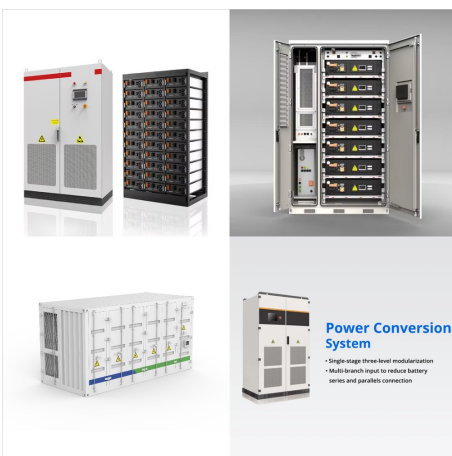
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Lazard's 2023 LCOE+ report analyzes the levelized costs of energy from various generation technologies, energy storage technologies and hydrogen production methods. Click below to read our 2023 findings. 2023 Levelized Cost Of Energy+



Lazard's Levelized Cost of Storage Analysis???Version 3.0 . The central findings of our LCOS analysis include: 1) selected energy storage technologies are increasingly attractive for a number of specialized power grid uses, but none are yet cost -competitive



The second of Lazard's Levelized Cost of Storage Analysis compares the costs of various energy storage technologies in detail across different segments. Credit: Lazard Lazard. The cost of energy storage ???

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levelized cost of energy gas peaking fell 2% and the mean levelized cost of energy of combined cycle gas has declined 4%. ??? The low end levelized cost of onshore wind-generated energy is \$29/MWh, compared to an average illustrative marginal cost of \$36/MWh for coal. The levelized cost of utility -scale solar is nearly identical



The mean levelized cost of energy of utility-scale PV technologies is down approximately 13% from last year and the mean levelized cost of energy of onshore wind has declined almost 7%. Lazard's latest annual Levelized Cost of Storage Analysis (LCOS 4.0) shows significant cost declines across most use cases and technologies, especially for



Lazard's latest annual Levelized Cost of Energy Analysis (LCOE 11.0) shows a continued decline in the cost of generating electricity from alternative energy technologies, especially utility-scale solar and wind. Lazard's latest annual Levelized Cost of Storage Analysis (LCOS 3.0), conducted with support from Enovation Partners, shows

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LAZARD's LEVELIZED COST OF ENERGY ANALYSIS VERSION 15.0??? Does not include cost of transportation and storage. (7) Represents the LCOE of the observed high case gas combined cycle inputs using a 20% blend of "Blue" hydrogen, (i.e., hydrogen produced from a steam -methane reformer, using natural gas as a feedstock, and sequestering the



Lazard's Levelized Cost of Energy+ (LCOE+) is a U.S.-focused annual publication that combines analyses across three distinct reports: Energy (LCOE, 17 th edition), Storage, (LCOS, 9 th edition) and Hydrogen (LCOH, 4 th edition). Lazard first started publishing its comparative analysis of various generation technologies in 2007.



Lazard Releases Annual Levelized Cost of Energy and Levelized Cost of Storage Analyses October 19, 2020 NEW YORK --(BUSINESS WIRE)--Oct. 19, 2020--Lazard Ltd (NYSE: LAZ) has released its annual in-depth studies comparing the costs of energy from various generation technologies and the costs of energy storage technologies for different applications.

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AND LEVELIZED COST OF STORAGE
ANALYSES . NEW YORK, November 8, 2018???
Lazard Ltd (NYSE: LAZ) has released its annual
indepth studies - marginal cost of conventional
generation. latest annual Levelized Cost of Lazard's
Analysis Storage (LCOS 4.0) shows significant cost
declines across most use cases and technologies,
especially for



Lazard's latest annual Levelized Cost of Energy
Analysis (LCOE 12.0) shows that, in some
scenarios outlined below, alternative energy costs
have decreased to the point that they are now at or
below the marginal cost of conventional generation.
Lazard's latest annual Levelized Cost of Storage
Analysis (LCOS 4.0) shows significant cost



By identifying and evaluating the most comm only
deployed energy storage applications, Lazard's
LCOS analyzes the cost and value of energy
storage use cases on the grid and behind-the-meter
Use Case Description Technologies Assessed
In-Front-of-the-Meter Wholesale

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LCOE costs in future iterations of this report (albeit not necessarily higher relative costs). Lazard's latest annual Levelized Cost of Storage Analysis (LCOS 7.0) shows that year-over-year changes in the cost of storage are mixed across use cases and technologies, driven in part by the confluence of



potentially disruptive role of hydrogen across a variety of economic sectors. Our LCOH builds upon, and relates to, our annual Levelized Cost of Energy ("LCOE") and Levelized Cost of Storage ("LCOS") studies. Given this breadth, we have decided to focus the analysis on the following key topics:



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The results of our Levelized Cost of Storage ("LCOS") analysis reinforce what we observe across the Power, Energy & Infrastructure Industry???energy storage system ("ESS") applications are becoming more valuable, well understood and, by extension, widespread as grid operators begin adopting Key takeaways from Version 4.0 of Lazard