



Does Lazard have a levelized cost of storage?

Source: Lazard estimates. (1) Given the operational parameters for the Transmission and Distribution use case (i.e., 25 cycles per year), certain levelized metrics are not comparable between this and other use cases presented in Lazard's Levelized Cost of Storage report.

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

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.

How much does storage cost?

The corresponding levelized cost of storage for this case would be \$1,613/MWh - \$3,034/MWh. The scope of revenue sources is limited to those captured by existing or soon-to-be commissioned projects. Revenue sources that are not identifiable or without publicly available data are not analyzed

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.

Why did Lazard exclude a transmission and distribution use case?

Lazard's Value Snapshot analysis intentionally excluded a Transmission and Distribution use case from its international analysis given the lack of substantive publicly available data for projects deployed for this use case. Source: Lazard and Roland Berger.

LEVELIZED COST OF STORAGE LAZARD PERU



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 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 ???



II LAZARD's LEVELIZED COST OF STORAGE ANALYSIS???VERSION 8.0. 15: III LAZARD's LEVELIZED COST OF HYDROGEN ANALYSIS???VERSION 3.0. 24: APPENDIX . A Maturing Technologies: 29. 1 Carbon Capture & Storage Systems: 30. 2 Long Duration Energy Storage: 33. B LCOE v16.0: 36. C LCOS v8.0: 41. D LCOH v3.0: 43. APRIL 2023.

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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:



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 ???



Levelized Cost Of Energy, Levelized Cost Of Storage, and Levelized Cost Of Hydrogen 2021. Lazard's latest annual Levelized Cost of Energy Analysis (LCOE 15.0) shows the continued cost competitiveness of certain renewable energy technologies on a subsidized basis and the marginal cost of coal, nuclear and combined cycle gas generation.

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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

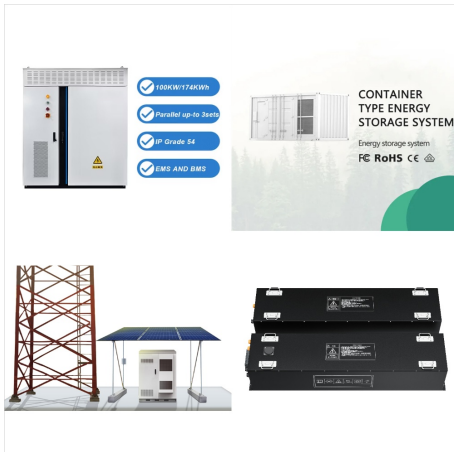


Lazard's Levelized Cost of Energy+ (LCOE+) is a U.S.-focused annual publication that combines analyses across three distinct reports: Energy (LCOE, 17 th edition), Storage, (LCOS, 9 th edition) and Hydrogen (LCOH, 4 th edition). Lazard first started publishing its comparative analysis of various generation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



ii lazard's levelized cost of storage analysis v5.0 For comparison purposes, this report evaluates six illustrative use cases for energy storage; while there may be alternative or combined/"stacked" use cases available to energy storage systems, the six use cases below represent illustrative current and contemplated

LEVELIZED COST OF STORAGE LAZARD PERU



Lazard's Levelized Cost of Storage analysis provides a transparent, logical methodology for comparing the cost of energy storage across distinct use cases for more than a dozen storage technologies. Utilities, third-party providers, ???



LAZARD's LEVELIZED COST OF ENERGY ANALYSIS???V E R S I O N 1 1 . 0 Lazard's Levelized Cost of Energy ("LCOE") analysis addresses the following topics: Does not include cost of transportation and storage. Low and high end depicts an illustrative recent IGCC facility located in the U.S.



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

LEVELIZED COST OF STORAGE LAZARD PERU



LAZARD's LEVELIZED COST OF STORAGE ANALYSIS 2.0 . KEY FINDINGS . Lazard has published its second Levelized Cost of Storage Analysis ("LCOS 2.0"), 1 an in-depth study that compares the costs of various energy storage technologies for particular applications. 2



II LAZARD's LEVELIZED COST OF STORAGE ANALYSIS???VERSION 8.0. 15: III LAZARD's LEVELIZED COST OF HYDROGEN ANALYSIS???VERSION 3.0. 24: APPENDIX . A Maturing Technologies: 29. 1 Carbon Capture & Storage Systems: 30. 2 Long Duration Energy Storage: 33. B LCOE v16.0: 36. C LCOS v8.0: 41. D LCOH v3.0: 43. APRIL 2023



IV LAZARD's LEVELIZED COST OF STORAGE ANALYSIS V4.0 A Overview of Selected Use Cases 9 B Lazard's Levelized Cost of Storage Analysis v4.0 11 V LANDSCAPE OF ENERGY STORAGE REVENUE POTENTIAL 16 VI ENERGY STORAGE VALUE SNAPSHOT ANALYSIS 21 APPENDIX A Supplementary LCOS Analysis Materials 26 B Supplementary Value ???

LEVELIZED COST OF STORAGE LAZARD PERU



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



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 Value Snapshot Case Studies 1 Value Snapshot Case Studies???U.S. 16 2 Value Snapshot Case Studies???International 23

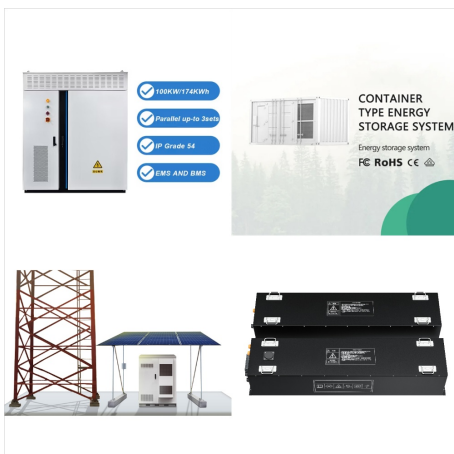


Lazard Releases Annual Levelized Cost of Energy and Levelized Cost of Storage Analyses October 19, 2020 NEW YORK --(BUSINESS WIRE)--Oct. 19, 2020--Lazard Ltd (NYSE: LAZ) has released its annual in-depth studies comparing the costs of energy from various generation technologies and the costs of energy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

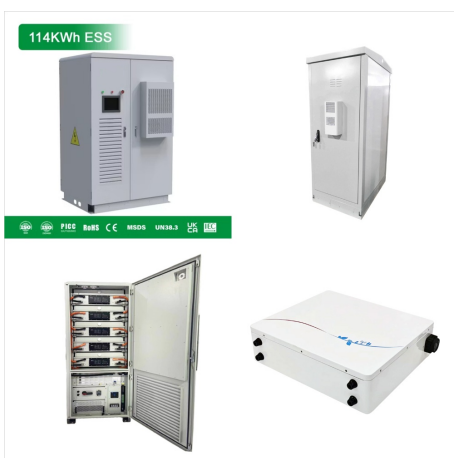
LEVELIZED COST OF STORAGE LAZARD PERU



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



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



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 ???

LEVELIZED COST OF STORAGE LAZARD PERU



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



LAZARD RELEASES ANNUAL LEVELIZED COST OF ENERGY . AND LEVELIZED COST OF STORAGE ANALYSES . NEW YORK, November 8, 2018??? Lazard Ltd (NYSE: LAZ) has released its annual indepth studies - comparing the costs of energy from various generation technologies and of energy storage technologies for different applications.



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. ???

LEVELIZED COST OF STORAGE LAZARD PERU



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 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



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

LEVELIZED COST OF STORAGE LAZARD PERU



The levelized cost of electricity is a measure of the average total cost of building and operating a power plant per unit of total electricity generated over its assumed lifetime. $\frac{NPV \text{ of Total Costs over project lifetime}}{NPV \text{ of Electrical Energy produced over project lifetime}} = 7$ Energy transition update:
Levelized cost of electricity from