

INTRODUCTION TO THE PROFIT ANALYSIS OF INVERTER PLUS ENERGY STORAGE



How do we evaluate the economic performance of solar plus storage configurations? In this report, we evaluate the economic performance of solar plus storage configurations by considering each system's benefit/cost (B/C) ratio defined as dividing the annualized benefits (energy revenue and capacity value) by the annualized costs (capital and operating).



Is energy storage a profitable business model? Energy storage can provide such flexibility and is attracting increasing attention in terms of growing deployment and policy support. Profitability of individual opportunities are contradicting. Models for investment in energy storage. We find that all of these business models can be served



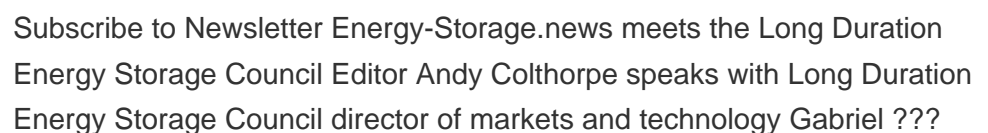
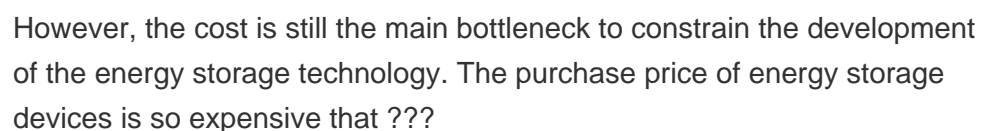
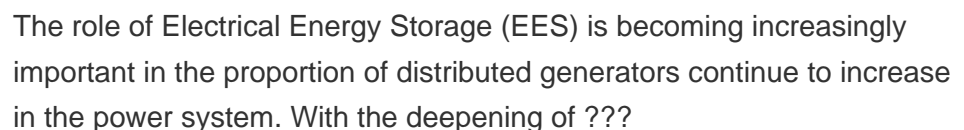
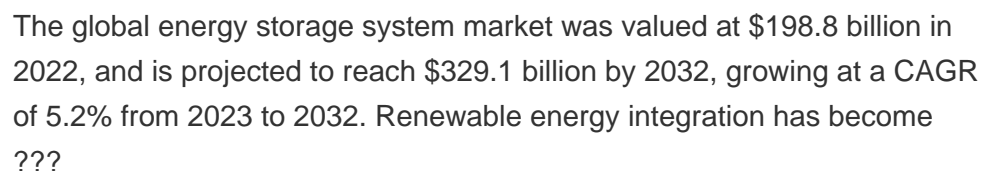
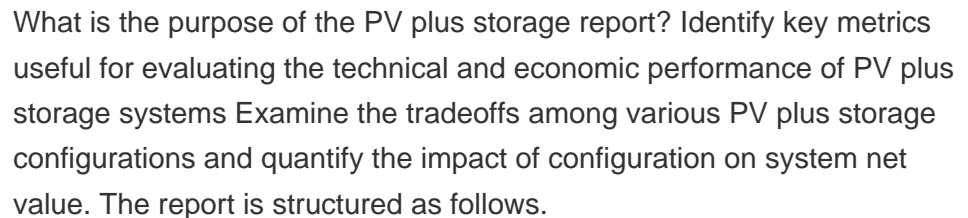
What is the value of a PV plus storage system? The overall capacity credit of the PV plus storage system can be translated into a monetary value, often by using the cost of a proxy resource such as a peaking combustion turbine. For example, one estimate of the annualized financing and operations and maintenance (O&M) cost of a new combustion turbine in California is about \$149/kW (CAISO 2017).



Is energy storage a profitable investment? Profitability of energy storage. Energy storage can provide such flexibility and is attracting increasing attention in terms of growing deployment and policy support. Profitability of individual opportunities are contradicting. Models for investment in energy storage.



What are the benefits of coupling PV and storage? Coupling PV and storage can change both the benefits (energy revenue and capacity value) and costs. Coupling PV and storage can increase the revenue by utilizing otherwise clipped energy. Coupling can also decrease revenue by restricting storage operation during periods of high solar output because of the shared inverter.



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The energy storage battery pack has a voltage of 52 V, a total capacity of 20070Ah, a total storage capacity of 925 kWh, and a total storage capacity of 864 MWh in its life cycle. ???



In the first analysis, we calculate the marginal value of a battery and an inverter using the Optimal Generation Mix Model (OPTIGEN). In the second analysis, we set the ???



operations and maintenance (O& M) cost analysis. Section 12 uses our capital cost and O& M cost results to calculate the levelized cost of electricity (LCOE) for PV and PV-plus-storage systems. ???