

# **Expected ROI of gel battery storage project in Malaysia 2025**





## Overview

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By October 2024, Malaysia saw the deployment of its first sodium-sulfur (NaS) battery system at a large-scale solar farm in Kedah. This marked a significant step forward for the country's storage landscape, as the advanced NaS technology offers higher energy density and a longer discharge duration.

Building on that momentum, national utility Tenaga Nasional Berhad (TNB) announced a bold 400MWh BESS pilot in early 2024, aimed at stabilising the grid and managing intermittency with greater RE penetration. By October 2024, Malaysia saw the deployment of its first sodium-sulfur (NaS) battery.

The Malaysia Gel Battery Market is projected to grow from USD 2.1 billion in 2025 to USD 3.9 billion by 2031, at a CAGR of 10.4%. Growth is fueled by the increasing integration of renewable energy sources and demand for long-lasting backup power systems. Gel batteries are highly preferred in.

KUALA LUMPUR (Aug 21): Malaysia's inaugural bidding round for four large-scale, grid-connected battery storage projects in Peninsular Malaysia has attracted significant interest, with more than 20 industry players submitting over 30 bids, according to sources. The bidding round, known as MyBeST.

Battery energy storage systems (BESS) are integral to achieving a stable and resilient energy infrastructure, and Malaysia is making significant strides in this domain. The BESS market encompasses a range of solutions for storing and deploying electrical energy, from grid-scale installations to.

As Malaysia accelerates its renewable energy ambitions, Battery Energy Storage Systems (BESS) are becoming an integral part of the energy equation—not only as a compliance requirement under the new 2025 SELCO Guidelines (referring to Clause 3.5 - 3.8), but as a strategic solution to enhance.



Bloomberg New Energy Finance (BloombergNEF) projects that the market will expand from 27GW (or 56GWh) in 2021 to 411GW (or 1,194GWh) by 2030. The US and China are expected to dominate the market, accounting for 54% of global installations by 2030. The residential and commercial sectors will. Are battery energy storage systems becoming a reality in Malaysia?

The utilities sector in Malaysia is witnessing significant advancements in battery energy storage systems (BESS), evolving from concept to reality with notable projects underway. The first large-scale BESS project is currently being constructed in Sabah, a pivotal development for the country's energy landscape.

Are battery energy storage systems a good investment?

Battery energy storage systems (BESS) are revolutionising the green energy industry with their potential to harness and utilise renewable energy sources more efficiently. BESS offers not only environmental benefits but also lucrative investment opportunities.

Are battery energy storage systems a SELCO compliance requirement?

As Malaysia accelerates its renewable energy ambitions, Battery Energy Storage Systems (BESS) are becoming an integral part of the energy equation—not only as a compliance requirement under the new 2025 SELCO Guidelines (referring to Clause 3.5 - 3.8), but as a strategic solution to enhance business resilience, efficiency, and sustainability.

Why should you invest in Bess in Malaysia?

BESS offers not only environmental benefits but also lucrative investment opportunities. As Malaysia works towards reducing its carbon footprint and meeting green energy targets, BESS provides a reliable, efficient solution to store and distribute green energy from intermittent renewable sources such as solar, biomass, biogas, and hydropower.

How will the Bess market evolve in future solar projects?

As the BESS market continues to evolve, solar players are expected to benefit significantly from the integration of BESS requirements in future solar projects. The regulatory framework surrounding BESS remains an important factor for market growth.



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### [Solar and Battery Storage Expected to Lead New ...](#)

In total, new solar projects in 2025 are expected to make up more than 50% of the planned added utility-scale electric generation for 2025. Combined with planned battery storage capacity, the share is 81% of total ...

### **Sabah's power grid faces first big test as new projects ...**

Sabah Electricity Chairman Datuk Seri Wilfred Madius Tangau said the combination of new gas capacity, battery storage, and the return of the Tenom Pangli Hydropower Station is expected to significantly boost Sabah's ...



### [2025 Predictions for the Energy Storage Sector ...](#)

Energy storage deployment across North America broke records in 2024, driven by falling battery prices, increased system efficiencies, and growing market opportunities. Globally, energy storage deployment increased ...

### **Tenaga, YTL and Malakoff-linked firms among 20 plus bidders for**

KUALA LUMPUR (Aug 21): Malaysia's inaugural bidding round for four large-scale, grid-connected battery storage projects in Peninsular



Malaysia has attracted significant interest, ...

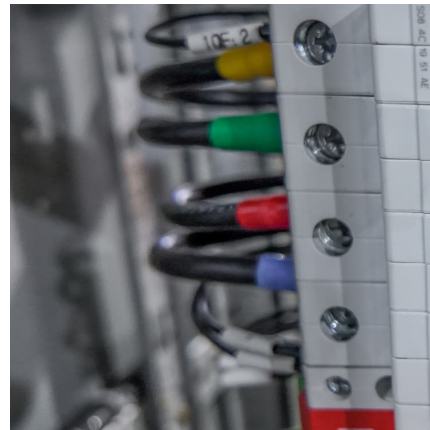


### LSS6 and BESS: The Next Big Leap in Malaysia's Renewable ...

Malaysia is making big moves in renewable energy with the latest Large Scale Solar 6 (LSS6) and Battery Energy Storage System (BESS) projects. Plus, the new Community ...

### Battery Energy Storage Roadmap

This EPRI Battery Energy Storage Roadmap charts a path for advancing deployment of safe, reliable, affordable, and clean battery energy storage systems (BESS) that also cultivate equity, innovation, and workforce ...



### [Solar Energy Services in Malaysia: Post-NEM 3.0](#)

An up-to-date July 2025 guide to Malaysia's solar-energy services after the close of NEM 3.0--covering SelCo, LSS tenders, rebates, service categories and tips for choosing the right provider.



### Tenaga, YTL and Malakoff-linked Firms Among 20 Plus Bidders ...

KUALA LUMPUR (Aug 21): Malaysia's inaugural bidding round for four large-scale, grid-connected battery storage projects in Peninsular Malaysia has attracted significant interest, ...



### Malaysia's energy gets smarter with the rise of grid-scale battery storage

Battery energy storage systems (BESS), once relegated to the margins of policy discussions, are fast becoming a keystone in Malaysia's energy transformation story. As solar ...

### [Malaysia Gel Battery Market Size and Forecasts 2031](#)

3 ???· By 2031, the Malaysia Gel Battery Market is expected to maintain steady growth, particularly in renewable energy storage and rural electrification projects. Their long cycle life ...



### [Battery Energy Storage Systems: A Comprehensive ...](#)

Whether you're already investing in solar or planning to, understanding BESS is essential to prepare for the installation of a battery energy storage system shall only be required after 31st December 2025, and unlock ...



### **CAISO: The state of grid-scale battery energy storage ...**

Which major battery projects are currently in testing and expected to reach commercial operation in 2025. How CAISO's Resource Adequacy market is shaping battery investment and financing decisions. To get full access to Modo ...



### **TNB to undertake 400MWh battery storage project, says ministry**

Tenaga Nasional Bhd will kick-start a 400 megawatt-hour (MWh) battery energy storage system (BESS) pilot project in this quarter, marking Malaysia's first utility-scale battery ...

### **Sabah Electricity: Launch of Southeast Asia's largest battery ...**

KOTA KINABALU, March 27 -- The 100-megawatt (MW) Battery Energy Storage System (BESS) developed by Sabah Electricity is expected to begin operations in July this year. Sabah ...





### Tenaga, YTL and Malakoff-linked Firms Among 20 Plus Bidders ...

The widespread implementation of grid-based battery storage comes at a crucial time as solar energy generation capacity is projected to increase by over 6GW (gigawatts) in ...

### Malaysia Renewable Energy Outlook 2025-2027: Solar & Battery Projects

Key Projects: MyBeST BESS and Large-Scale Solar (LSS) MyBeST: Malaysia's First Grid-Connected Battery Energy Storage System The MyBeST initiative marks Malaysia's ...



### [Energy storage safety and growth outlook in 2025](#)

A notable trend in battery energy storage systems (BESS) is the integration of early thermal runaway detection and containment mechanisms, which are crucial for preventing and mitigating safety incidents associated with ...

### Malaysia 2025 Economic Outlook

Tourism Boost: Tourist arrivals are expected to rise sharply as the government earmarked RM550.0m in budget 2025 to intensify tourism promotion and activities ahead of the 2026 Visit ...



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

The battery storage technologies do not calculate levelized cost of energy (LCOE) or levelized cost of storage (LCOS) and so do not use financial assumptions. Therefore, all parameters are ...



### [US battery storage boom extends into 2025: nearly 19 ...](#)

US developers of large-scale battery storage stations have 18.7 GW of new capacity under construction, according to S& P Global Commodity Insights Market Intelligence data, indicating another strong year for the grid's electrochemical ...



### Cost Projections for Utility-Scale Battery Storage: 2021 ...

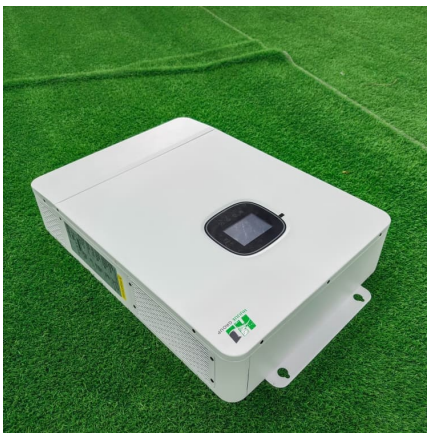
In order to differentiate the cost reduction of the energy and power components, we relied on BNEF battery pack projections for utility-scale plants (BNEF 2019, 2020a), which reports ...





### Malaysia: Competitive bidding for the development of Battery ...

In brief On 29 November 2024, the Ministry of Energy Transition and Water Transformation ("PETRA ") announced the opening of the bidding process for the development of battery energy ...



### [The major Battery Storage projects from around the ...](#)

We provide a detailed report on all the major Battery Storage construction projects around the world with key focus on the largest projects in Europe, Africa, USA and Asia

### Enabling renewable energy with battery energy storage systems

These developments are propelling the market for battery energy storage systems (BESS). Battery storage is an essential enabler of renewable-energy generation, ...



### Malaysia commissions its first big BESS at coal-fired power plant ...

Sarawak Energy, commissioner of the 60 MW/82 MWh battery energy storage system (BESS), is one of the biggest utilities serving Sarawak, a Malaysian territory on Borneo ...



### [Battery Energy Storage System \(BESS\): A Lucrative ...](#)

The Malaysia Renewable Energy Roadmap (MyRER) outlines target and investment in BESS projects as part of its energy transition. With supportive policies and rich renewable resources, Malaysia can emerge as a significant ...



### **What Are the ROI Metrics for Commercial Battery Storage?**

For any business investing in commercial battery storage systems, the ultimate question is clear: what's the return on investment (ROI)? While the upfront cost of a battery energy storage ...

### **Solar, battery storage to lead new U.S. generating capacity ...**

We expect 63 gigawatts (GW) of new utility-scale electric-generating capacity to be added to the U.S. power grid in 2025 in our latest Preliminary Monthly Electric Generator ...





### [Enabling renewable energy with battery energy](#)

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These developments are propelling the market for battery energy storage systems (BESS). Battery storage is an essential enabler of renewable-energy generation, helping alternatives make a steady contribution to the ...

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