

# 2021 energy storage project planning recommendations





## Overview

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Declining costs of energy storage technologies, particularly lithium-ion battery storage, opens the potential for larger capacity and longer-duration energy storage projects to provide a broader range of grid services, including medium-term energy and capacity services (Schmidt et al. 2019).

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The purpose of this report is to arm relevant decision makers with the initial layer of information they need to understand energy storage and to make informed policy, regulatory, and investment decisions around grid-connected energy storage. While many of the case studies presented in this report.

The EAC provided a set of recommendations in response to this RFI that drew attention to high-level issues and offered specific recommendations across the five tracks of the Roadmap—technology development, manufacturing and supply chain, technology transition, policy and valuation, and workforce.

This report focuses on energy markets, energy storage legislation and policy, development opportunities and challenges, technological advancements, and the Council’s recommendations to unlock this proven long duration renewable storage resource. We have designed the 2021 report so that it can be;

Energy storage enhances the power system flexibility needed for effective management of renewable energy deployment, which is central to many states’ poli- cies. Energy storage can also enhance grid reliability and resiliency, and may be used to defer capital upgrade costs. To make the best use of.

This SRM outlines activities that implement the strategic objectives facilitating safe, beneficial and timely storage deployment; empower decisionmakers by providing data-driven information analysis; and leverage the country’s global leadership to advance durable engagement throughout the. What is the



'guidance on accelerating the development of new energy storage?

Since April 21, 2021, the National Development and Reform Commission and the National Energy Administration have issued the 'Guidance on Accelerating the Development of New Energy Storage (Draft for Solicitation of Comments)' (referred to as the 'Guidance'), which has given rise to the energy storage industry and even the energy industry.

Does the energy storage strategic plan address new policy actions?

This SRM does not address new policy actions, nor does it specify budgets and resources for future activities. This Energy Storage SRM responds to the Energy Storage Strategic Plan periodic update requirement of the Better Energy Storage Technology (BEST) section of the Energy Policy Act of 2020 (42 U.S.C. § 17232 (b) (5)).

What is the 'guidance' for the energy storage industry?

Based on the above analysis, as the first comprehensive policy document for the energy storage industry during the '14th Five-Year Plan' period, the 'Guidance' provided reassurance for the development of the industry.

Should PSH participate in Renewable Portfolio Standards?

States Legislatures should allow all energy storage technologies, including PSH, to participate in renewable portfolio standard programs (or clean energy standards) on a technology neutral-basis.

Will energy storage eliminate industrial development?

In the context of the 'dual-carbon' goal and energy transition, the energy storage industry's leapfrog development is the general trend and demand. The follow-up actions will inevitably introduce a series of policies for the development of energy storage to eliminate industrial development. Faced with 'obstacles' one by one.

Can energy storage costs be expressed by rated power and discharge duration?

A recent energy storage policy guide concluded that energy storage costs can be expressed by using two metrics: rated power and discharge duration. By only utilizing these two metrics, the true representation of energy storage costs is misrepresented - and most benefited the short-life assets when



excluding the proper levelized cost of the assets.



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### **NATIONAL HYDROPOWER ASSOCIATION 1**

The challenge will be for utility planners, industry stakeholders, regional market operators, and regulators to put into place policies that ensure the grid maintains reliability during this rapid ...

### [National Blueprint for Lithium Batteries 2021-2030](#)

Lithium-based batteries power our daily lives from consumer electronics to national defense. They enable electrification of the transportation sector and provide stationary grid storage, critical to ...



### **Optimal planning of energy storage technologies considering ...**

Put forward recommendations for the development direction of each energy storage. Planning rational and profitable energy storage technologies (ESTs) for satisfying ...



### [Energy Storage Systems \(ESS\) Policies and Guidelines](#)

Explore policies and guidelines for Energy Storage Systems (ESS) by the Ministry of New and Renewable Energy, India, promoting



sustainable energy solutions.



### [ENERGY STORAGE ANALYSIS SUPPLEMENTAL ...](#)

Utilities adopting and integrating energy storage, or facing mandates to do so, brought their planning and operations issues to this project to contribute to the development of this analysis ...

### [Valencia Gardens Energy Storage Final Project Report](#)

As a result of the project's termination, the Clean Coalition proposes a statewide approach: deploying front-of-meter solar and storage as a holistic grid design, with streamlined intercon ...



### [PSC Approves Bulk Energy Storage Plan](#)

The Roadmap is a comprehensive set of recommendations to expand New York's energy storage programs to cost-effectively unlock the rapid growth of renewable ...





### Battery Storage Unlocked: Lessons Learned From Emerging ...

Lessons Learned from Emerging Economies The Supercharging Battery Storage Initiative would like to thank all authors and organizations for their submissions to support this publication. This ...



### Portfolio planning of renewable energy with energy storage ...

Therefore, this paper proposes a two-stage planning framework based on fuzzy multi-criteria-decision-making techniques to select the most promising renewable energy with ...

### [New York State Interagency Fire Safety Working Group](#)

Background and Scope Following a series of fires at three battery energy storage system (BESS) locations across New York State in 2023, Governor Hochul convened an interagency Fire ...



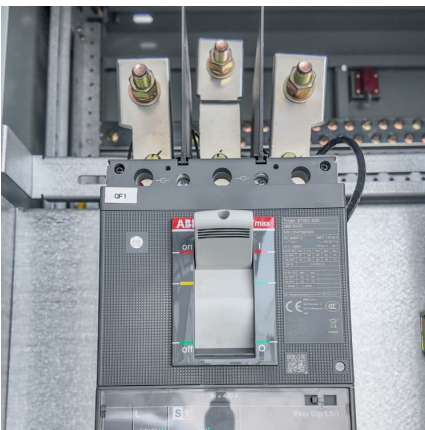
### [Energy Storage in Local Zoning Ordinances](#)

The presence of energy storage language in local zoning ordinances can be divided into four categories: ordinances written to regulate solar generation that also include energy storage; ...



### ESA Recommendations to Congress and the Administration for ...

As outlined in our 2030 Vision, at least 100 GW of energy storage is needed over the next decade to support the buildout of higher shares of wind and solar power, as well as distributed energy ...

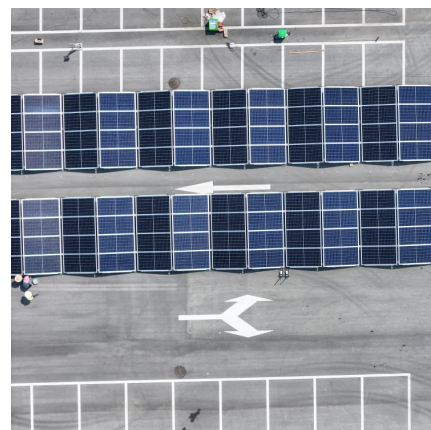


### [USAID Energy Storage Decision Guide for Policymakers](#)

Declining costs of energy storage technologies, particularly lithium-ion battery storage, opens the potential for larger capacity and longer-duration energy storage projects to provide a broader ...

### [Strategic Guide to Deploying Energy Storage in NYC](#)

The storage industry anticipates this to be passed into law in 2022, and that it will apply to projects that achieved commercial operation after December 31, 2020, reducing the risks and ...





### Clean energy transition in Mexico: Policy recommendations for ...

Based on a comparative policy analysis between Mexico, the US and Germany, this paper seeks to provide policy recommendations to incentivise the deployment of energy ...

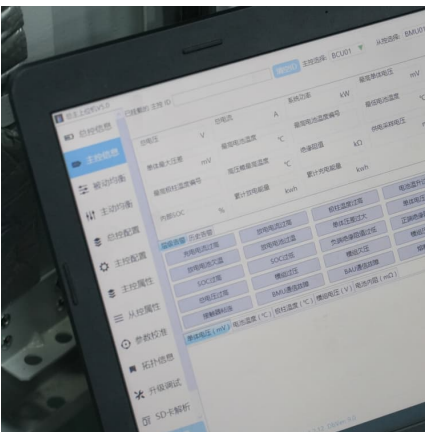
### National Hydropower Association 2021 Pumped Storage Report

The first White Paper was prepared in 2012 and the second in 2018. This report focuses on energy markets, energy storage legislation and policy, development opportunities and ...



### National Hydropower Association 2021 Pumped Storage Report

This report focuses on energy markets, energy storage legislation and policy, development opportunities and challenges, technological advancements, and the Council's ...



### ATTACHMENT D: PROCUREMENT POLICY CASE STUDIES

ATTACHMENT D: PROCUREMENT POLICY CASE STUDIES1 California has the largest and most diversified energy storage fleet in the nation, and the fleet is growing rapidly. Customer ...



### Electrical Energy Storage Data Submission Guidelines, ...

Data storage is very low cost in the context of energy storage or other renewables projects. Drives of 10-Tb NAS (Network Attached Storage) are about \$200 each and can be run in a Redundant ...



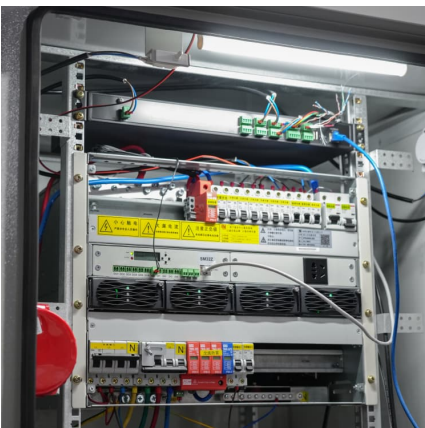
### Safety of Grid-Scale Battery Energy Storage Systems

In June 2021, Baringa released 'Endgame - A zero-carbon electricity plan for Ireland' which projects up to 1,700 MW of large-scale battery storage will be needed on an all-island basis to ...



### Battery Energy Storage Systems

This issue of Zoning Practice explores how stationary battery storage fits into local land-use plans and zoning regulations. It briefly summarizes the market ...





[ESIC Energy Storage Implementation Guide](#)

ABSTRACT Effective implementation of utility-distribution energy storage requires recognition of factors to consider through the complete life cycle of a project. This report serves as a practical ...



**Virginia Solar Energy Development and Energy Storage ...**

With Dominion's 2021 RPS Development Plan, the Company submitted requests for CPCNs to construct and operate 13 utility-scale projects totaling approximately 661 MW of solar and 70 ...



[Policy interpretation: Guidance comprehensively](#)

Based on the above analysis, as the first comprehensive policy document for the energy storage industry during the '14th Five-Year Plan' ...



[Energy Storage Safety Strategic Plan](#)

The Department of Energy Office of Electricity Delivery and Energy Reliability Energy Storage Program would like to acknowledge the external advisory board that contributed to the topic ...



### [Energy Storage and Power Plant Decommissioning](#)

This report examines three fossil-fuel power plant decommissioning strategies to assess the role of energy storage in enabling an equitable clean energy transition. The analysis showed how ...



### **Energy Storage Financing: Project and Portfolio Valuation**

The difference is that energy storage projects have many more design and operational variables to incorporate, and the governing market rules that control these variables are still evolving. ...

### [Utility Battery Energy Storage System \(BESS\) Handbook](#)

Research Overview Primary Audience Utility project managers and teams developing, planning, or considering battery energy storage system (BESS) projects. ...





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