

How can we promote safety and sustainability in battery storage systems?

By implementing robust regulations, investing in research and development, promoting collaboration, embracing circular economy principles, and raising public awareness, we can promote safety and sustainability in battery storage systems and accelerate the transition to a cleaner, more resilient energy future.

Are battery storage systems good for the environment?

While battery storage systems offer environmental benefits by enabling the transition to renewable energy, they also pose environmental challenges due to their manufacturing processes, resource extraction, and end-of-life disposal (Akintuyi, 2024, Digitemie & Ekemezie, 2024, Nwokediegwu, et. al., 2024, Popoola, et. al., 2024).

What is a battery energy storage system?

A battery energy storage system (BESS) is a system that stabilizes the electrical grid by ensuring a steady flow of power to homes and businesses. BESS helps mitigate fluctuations from varied energy sources or other disruptions.

How should government regulate battery storage systems?

Governments should establish robust regulatory frameworks that mandate safety standards, environmental protections, and responsible practices throughout the lifecycle of battery storage systems.

Can retired batteries be used in energy storage systems?

By deploying retired batteries in energy storage systems, utilities can optimize energy supply and demand, store excess renewable energy for later use, and improve the reliability and resilience of the electrical grid (Akinsanya, Ekechi & Okeke, 2024, Esho, et. al., 2024, Muteba, et. al., 2023, Popoola, et. al., 2024).

What are the environmental impacts of battery storage systems?

Secondly, environmental impacts arise throughout the lifecycle of battery storage systems, from raw material extraction to end-of-life disposal. Key issues include resource depletion, greenhouse gas emissions, and pollution from mining activities.

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