

Safety Considerations for Emerging Applications: New Duty Profiles, New Reliability Expectations

Yuliya Preger, Moderator

Andrew Hoover, Redwood Materials; Jason Bobruk, Enphase; Josh Gerber, Symphonic Energy; Adam Han, AEES Consulting

SUMMARY:

This session focuses on new use cases and approaches to deploying energy storage.

IMPACT:

There are many emerging opportunities for energy storage to provide value beyond traditional grid use cases. Early identification of the new safety considerations for these use cases will enhance confidence in deployment.



| ENERGY STORAGE HAS COME A LONG WAY

1929: 29 MW Rocky River Pumped Storage Plant in CT is first PHS in US (still operating!)



Firstlight Energy

2012: Early Li-ion utility-scale ESS commissioned for Portland General Electric



Gizmodo

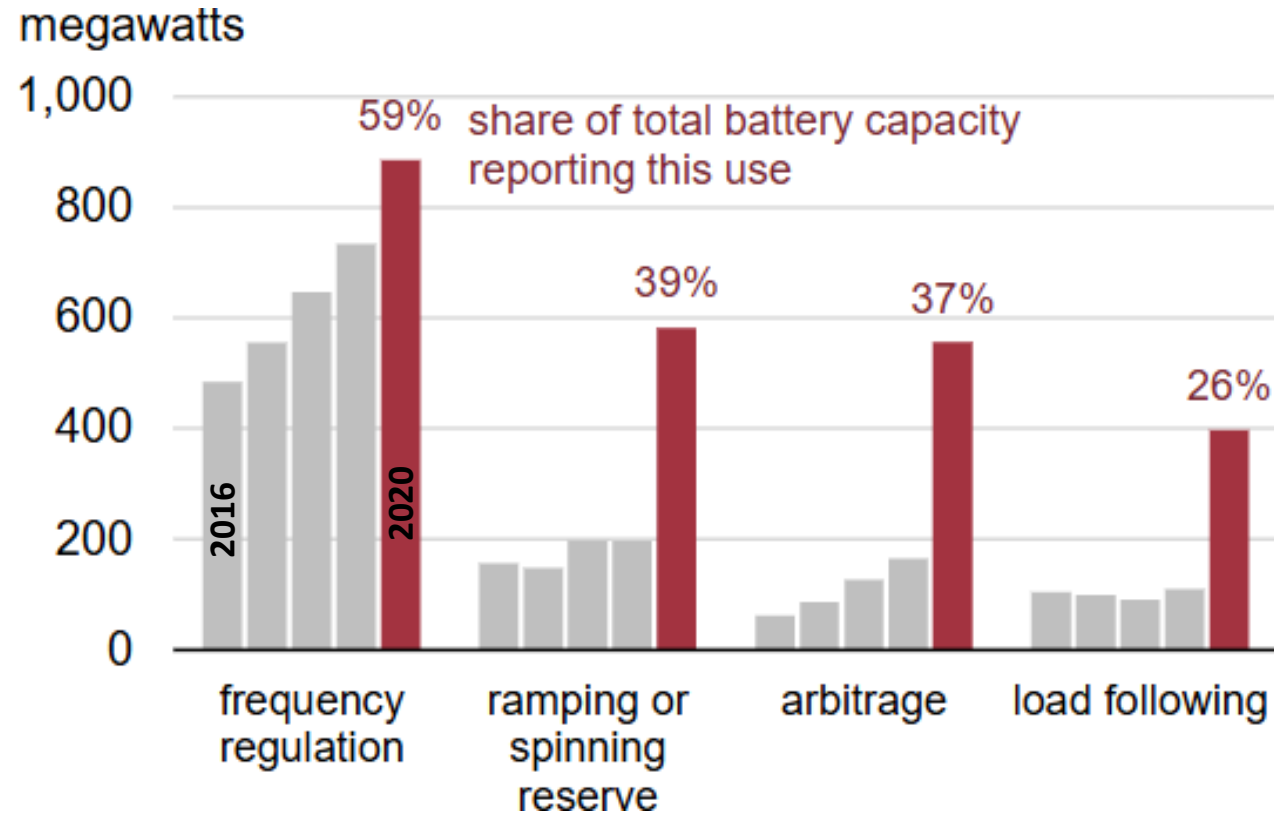
2026: >5 MWh is standard for just a single container



Fluence

CLASSICAL ENERGY STORAGE USE CASES

Use cases for U.S. utility-scale battery storage capacity (2016-2020)



<https://www.eia.gov/todayinenergy/detail.php?id=50176>



EMERGING ENERGY STORAGE USE CASES



Enphase



ESS News



Fort Bliss



Delfos Energy



Redwood-Crusoe



Audience Poll Questions

OPENING QUESTIONS:

Q1: What new applications do you want to know more about now?

Q2: What is the biggest barrier to directly using existing storage resources for new applications?

CLOSING QUESTIONS:

Q3: What applications do you see emerging in 2-3 years that are currently not getting enough attention?

Q4: What information would you need to convince you that energy storage can support a particular new application?

