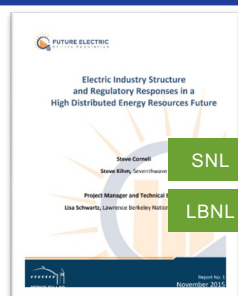




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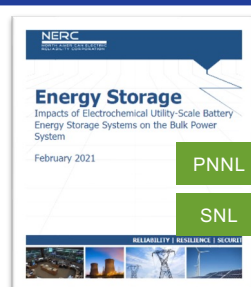
Meeting the Moment with Energy Storage

Assisting Decisionmakers



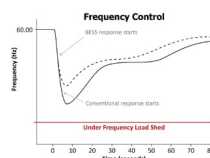
FERC

"And I'm so proud that last year, the Commission issued Order No. 841. This rule removes barriers to the participation of electric storage resources in the capacity, energy, and ancillary services markets operated by the regional organized power markets that FERC oversees."
- FERC Chair N. Chatterjee, 7/2019



NERC

"Battery storage [i]nstallations in the Texas and Western Interconnections are improving frequency control. These improvements are a result of quicker response times arresting the frequency closer to the target of 60Hz."
- NERC 6/2025



State Commissions

Vermont Public Utility Commission
PROPOSED RULE REGARDING THE INSTALLATION, CONSTRUCTION, OPERATION, AND AGGREGATION OF ENERGY STORAGE FACILITIES

8/20/2025
Docket #21-3883

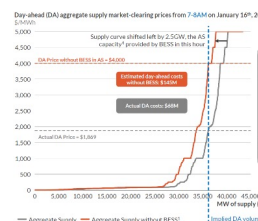


Duke

"Duke, through an ERCOT stakeholder committee, create[d] a special pilot project...to demonstrate the major technical capabilities of the BESS." - 2012

Regional Transmission Operators

"Across January 15th and 16th, BESS saved a total of \$750M in costs to the day-ahead market [in ERCOT]."
- Aurora Energy Research, 4/2024



DTE

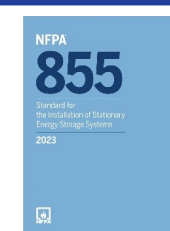
"This [DOE] project successfully demonstrated an early stage CES [Community Energy Storage] system" – DTE, 2015

Utilities

"DTE is seeking between 1,500-3,000 MW of firm MISO-accredited capacity from qualifying resources including...thermal, storage, emerging technologies, distributed energy resources, and other capacity resources."

Non-Price Criteria - Resource Optionality: e.g. "ability to adapt to new market rules or changes in such rules,...ability to add future storage to the site, etc."

- DTE All-Source RFP, 2/2025



PNNL & SNL
Since 2016

Local Jurisdictions

"NFPA 855 has requirements that training of operations staff as well as emergency responders be provided by the system owner or operator."

"Language in local codes [and] ordinances is frequently adapted from standard NFPA 855"

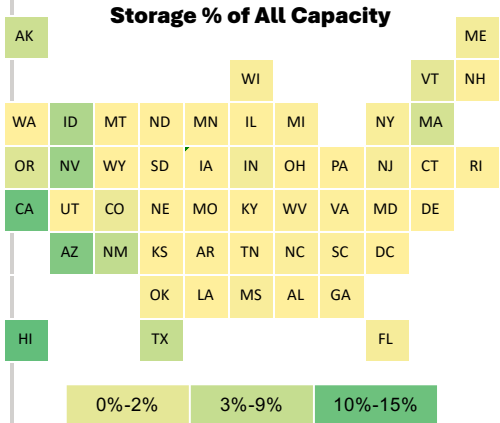
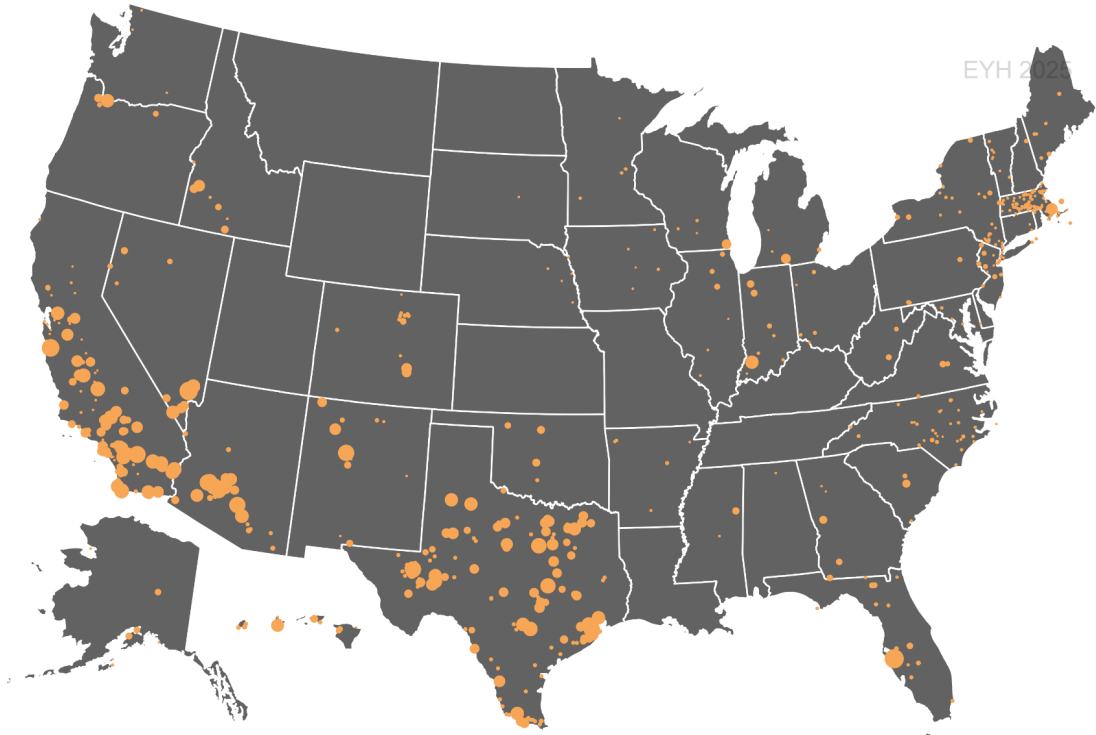
PNNL, Siting and Permitting of Energy Storage, 2025



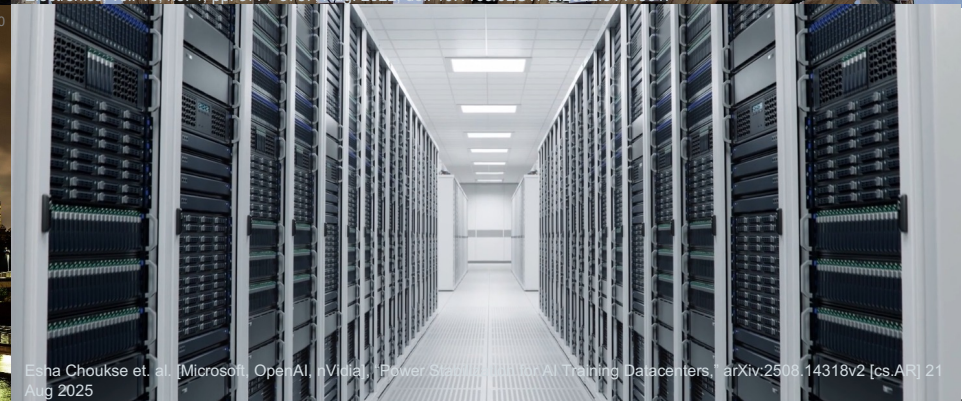
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Deployment Geography

Energy Storage Installations as of July 2025



Emerging Use Cases: Baseload, Delivery, Affordability, AI



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Broadening and Securing the Supply Chain

Elements being (re-) investigated for ESS applications

1 H																		2 He
3 Li	4 Be									5 B	6 C	7 N	8 O	9 F	10 Ne			
11 Na	12 Mg									13 Al	14 Si	15 P	16 S	17 Cl	18 Ar			
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr	
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe	
55 Cs	56 Ba	71 Lu	72 Hf	73 Ta	74 W	75 Re	76 Os	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn		

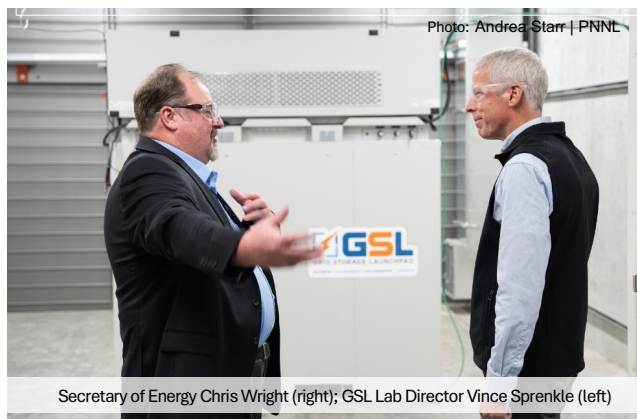


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Action Resources



Independent, realistic testing environment for new grid-scale storage technologies and systems.



Energy Storage Innovations Round 2 Prize

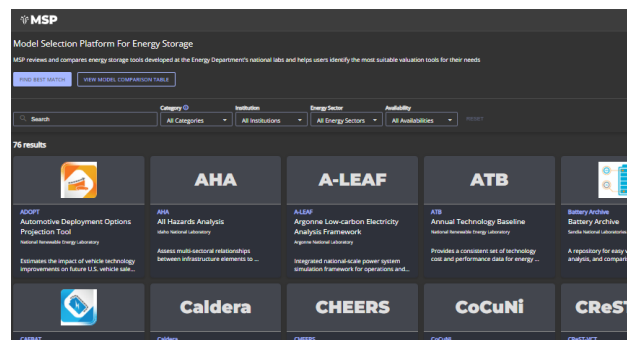
\$300K for new, innovative, and promising energy storage solutions to address niche use cases and grow a community of innovators, open through March 13, 2026



Model Selection Platform

Central repository of 70+ DOE, other governmental, and industry storage-relevant models, tools, or data with guided and natural language-guiding matching

<http://msp.pnnl.gov>



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