Planning with Confidence: Additional Resources for Local Leaders

Battery energy storage systems (BESS) are becoming an increasingly important part of the modern electric grid. As electricity demand grows across the Pacific Northwest, communities will be asked to evaluate more projects that may look unfamiliar at first, but are designed to solve very familiar challenges: keeping power reliable, managing peak demand, supporting economic growth, making better use of existing infrastructure, and potentially reducing pressure on future rates, depending on project purpose and utility planning.

Local leaders do not need to become battery engineers to make informed decisions about BESS. They do need clear information, access to the right experts, and a process that helps them evaluate whether a project is thoughtfully sited, responsibly designed, safely operated, and aligned with community priorities.

The strongest outcomes happen when communities plan ahead, ask informed questions, engage the right partners early, and focus on fit, design, oversight, and long-term value. With the right tools and expectations in place, local governments can support smart energy development while protecting the interests, safety, and quality of life of the communities they serve.

Additional Resources

The following resources provide additional information on battery energy storage technology, safety, siting, permitting, and community planning. This resource list is intended to help readers find the right level of detail for their question. Readers looking for a quick overview should start with the toolkit fact sheets. Readers evaluating a specific project may want to consult the safety, siting, local planning, and emergency response resources listed here. Local governments should also rely on their own legal counsel, planning staff, fire and emergency response partners, and applicable state and local requirements when reviewing specific projects.

BESS Additional Resources

General BESS Information

American Clean Power: Energy Storage Resources
Useful for basic explanations of what battery storage is, why it matters, and how it supports the grid.

U.S. Energy Information Administration: Battery Storage in the United States
A helpful data source for understanding national deployment trends, growth in battery storage capacity, and common grid applications.

Pacific Northwest National Laboratory: Grid Energy Storage
Provides accessible context on the role of energy storage in grid reliability, resilience, and modernization.

Electric Power Research Institute: Energy Storage Roadmap
A useful resource for understanding how utilities, regulators, and energy providers are planning for the expanding role of energy storage in grid reliability, flexibility, safety, and long-term system planning.

Safety, Codes, and Emergency Response

National Fire Protection Association: Energy Storage Systems
A key resource for understanding NFPA 855, the national fire safety standard for stationary energy storage systems.

UL Solutions, UL 9540 and UL 9540A Energy Storage Safety Standards
A helpful resource for understanding equipment safety certification and fire testing used to inform BESS design, spacing, fire protection, and emergency planning.

Electric Power Research Institute, BESS Failure Incident Database
Tracks publicly reported BESS failure incidents and provides context on how failure rates have changed as deployment has increased. Incident datasets have limitations and may not capture every relevant incident.

NY-BEST: Energy Storage Safety FAQ
A practical and easy-to-understand resource addressing common safety questions, including fire risk, testing, certification, and emergency response.

Massachusetts Battery Energy Storage Systems FAQ: Fire Safety and Public Health
A state-level resource that explains fire safety, public health considerations, and emergency planning in plain language.

Sandia National Laboratories: Energy Storage Safety
A strong technical resource on battery safety research, testing, hazard mitigation, and science-based safety practices.

BESS Additional Resources

Planning, Siting, and Local Government Guidance

University of Michigan Center for EmPowering Communities: Planning & Zoning for Battery Energy Storage Systems
A useful guide for local governments considering how to address BESS in zoning, site review, setbacks, screening, sound, safety, and decommissioning.

NYSERDA Battery Energy Storage Guidebook
A detailed resource for local governments, code officials, and project reviewers, including model permitting and safety considerations.

Pacific Northwest National Laboratory: Energy Storage in Local Zoning Ordinances
A helpful planning resource focused on how local governments can incorporate battery storage into land use codes and review processes.

American Clean Power, Model Ordinance: Utility-Scale Battery Energy Storage Systems
A resource for jurisdictions developing local rules for utility-scale BESS. This should be used as a reference point, not as a universal standard.

Community Concerns and Project Impacts

Princeton University: The Impact of Utility-scale Battery Energy Storage System Projects on Property Values
A research resource for understanding the relationship between utility-scale battery storage projects and nearby residential property values.

National Renewable Energy Laboratory (NREL): Battery Storage for Resilience
Provides real-world examples of how battery storage can support resilience, backup power, and critical services during outages or disruptions.

Idaho Power: Melba Battery Fire Incident Review
A case study showing how one utility responded to a battery storage fire, including air quality testing, emergency coordination, lessons learned, and system improvements.