

**AMERICAN  
ELECTRIC  
POWER**

**BOUNDLESS ENERGY<sup>SM</sup>**



# Energy Storage Regulatory Risk

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# Regulatory Risks Generation, Transmission or Distribution?

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- Energy storage is currently classified by the states through an inconsistent set of rules.
  - Generation
    - Peak shaving
    - Outages
    - How to account for the energy stored
    - Intermittent nature of renewables

# Regulatory Risks Generation, Transmission or Distribution?

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- Transmission
  - Congestion relief with storage at both ends
  - Reduced thermal strain on equipment
  - Deferred investment
- Distribution
  - Load and demand response
  - Outages
  - Deferred investment

# Regulatory Risks Ownership

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- Who should be able to own energy storage?
  - Utility
    - Economies of scale
    - Reliability metrics
    - Deferred investment
    - Economic development
  - End User/3<sup>rd</sup> Party
    - Competition
    - Efficiency

# Regulatory Risks Technology

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- Technology Risks
  - Lithium ion, NaS, solid state, other battery technology
  - Fire or explosion risk
    - APS Battery Facility on April 19<sup>th</sup>.
  - Obsolescence
  - Rare earth minerals
    - China accounts for over 95% of world's production and 80% of US imports