UTILITY RESOURCE PLANNING

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Initial Challenge and Recommendations

Initial assignment: Challenge #8 (“LDES is not included in most utility grid firming plans”)

First round of recommendations:

1. **Cost and performance data:** A research organization should develop a public repository of accurate cost and performance data for LDES technologies
2. **Long-term planning scenarios:** A research organization should work directly with utilities to develop long-term planning scenarios that better represent future grid needs
3. **8,760 Modeling:** Utilities should begin transitioning to full, 8,760-hour chronological capacity expansion modeling
4. **Planning and Power Flow Integration:** Collaboration between utilities and research organizations is needed to integrate power flow models with capacity expansion models
5. **Storage as Transmission:** FERC should require transmission planners to evaluate energy storage alternatives in transmission planning processes

Additional Recommendations Under Development

Our team is working on developing the next round of recommendations:

1. **LDES Buckets:** How can utilities fairly model a wide range of candidate LDES technologies without having to do multiple model runs?

2. **Charge Rates:** What are the charge and discharge rates of different LDES technologies, and what are their implications for modeling?

3. **Capacity Accreditation (Planning):** Are new approaches needed to assign capacity values to LDES technologies in planning models?