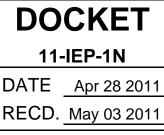


### Panel 2: Energy Storage Applications and Economics

#### Ratepayer Perspective on Viable and Cost-Effective Energy Storage Systems

David Ashuckian, Deputy Director Division of Ratepayer Advocates California Public Utilities Commission

2011 Integrated Energy Policy Report Committee Workshop on Energy Storage for Renewable Integration Sacramento, CA April 28, 2011



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# BACKGROUND

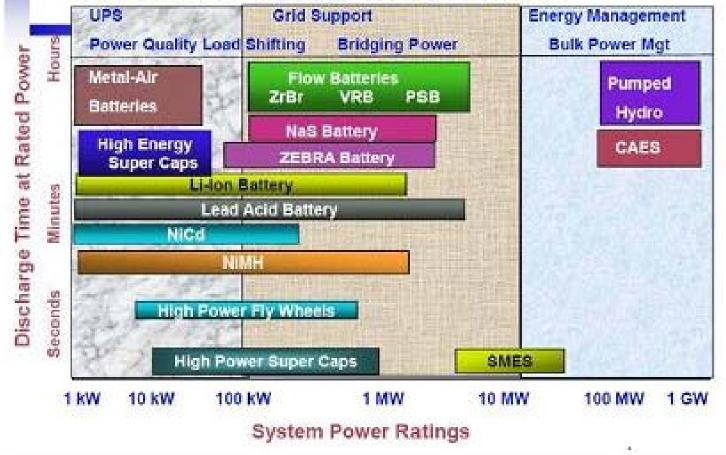
- Assembly Bill 2514 requires the CPUC to open a proceeding "to determine appropriate target, if any, for viable and cost-effective energy storage."
- CPUC Initiated an Order Instituting Rulemaking (OIR) on December 21, 2010 (R.10-12-007)
- Pre-Hearing Conference was held on April 21.
- A PUC scoping ruling is expected in the coming weeks.





## **D**IVISION OF **R**ATEPAYER **A**DVOCATES

#### **Our Current Energy Storage Options**







# **Energy storage has many benefits**

- Facilitate renewable intermittent resources
- Reduce the need to build or upgrade transmission lines.
- Improved power quality
- Ancillary services
- Lower GHG and other emissions





# **Implementing Energy Storage**

- Wide variety of applications/requirements
- AB 2514 requires that storage be "viable and cost-effective"
- Storage needs should be identified by application type annually in the CPUC long-term proceedings.
  - Use of Plug-in Vehicles as distributed storage resources
  - Dynamic Pricing / TOU Rates
  - Potential Inclusion of storage in the loading order



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### **Other DRA Recommendations**

- California should take gradual steps towards energy storage regulations
- DRA recommends not mandating specific storage targets.
- Energy Storage should be compared to other options for viability and cost



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