



# Beacon Power Corporation

Independent Regulation Service Provider

(Using Flywheel Energy Storage)

October 23, 2007



# Beacon Power Overview



- Business strategy: driven by FERC initiatives to open markets to new technologies (recent: Schedule 3)
- Initial Mission: own and operate *non-generation resources* to provide regulation services
- Initial markets: NY-ISO, ISO-NE, PJM, CAISO
- Successful demonstration of flywheel energy storage for regulation in California and New York
- Funded by CEC, NYSERDA, DOE
- NASDAQ: BCON - technology developed over ten years; >\$160 million invested
- First Commercial Service in 2008

*Business strongly impacted by FERC Order 890*

# Why Energy Storage should be included in Transmission Planning



- Fast response improves regulation performance
- Additional market participation should reduce costs
- Facilitates wind and solar integration
- Zero CO<sub>2</sub> and other emissions
- Energy Storage has many applications
  - Voltage Control (reactive power)
  - Frequency Response
  - Angular Stability control

*Innovative Technology Enabled by  
Regulatory Change*



# Attachment K Recommendations



- Include Energy Storage technologies in the stakeholder planning process
  - Coordination, Openness and Transparency
- Add energy storage as a customer class for data collection
  - Information Exchange
- Consider energy storage as an option for improving grid reliability and reducing congestion
  - Comparability and Economic Planning

# CAISO Recommendations



Recommend the addition of specific energy storage language in sections:

- 2.1.2.1 Open Season Projects and Data
- 3.3 Data Requirements for Open Season Submissions
- 4.1.1 Transmission Plan Development Plan Input
- 4.1.3 Transmission Plan Development Plan Output



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