



2010 Energy Storage Summit

Beacon Power Technical Panel Presentation

April 20, 2010



Safe Harbor Statement



This presentation contains forward-looking statements, including the Company's beliefs about its business prospects and future results of operations. These statements involve risks and uncertainties. Among the important additional factors that could cause actual results to differ materially from those forward-looking statements are risks associated with the overall economic environment, the successful execution of the Company's plan of operation, changes in the Company's anticipated earnings, continuation of current contracts, changes in energy and other applicable regulations, and other factors detailed in the company's filings with the Securities and Exchange Commission, including its most recent Forms 10-K and 10-Q. In addition, the factors underlying Company forecasts are dynamic and subject to change and therefore those forecasts speak only as of the date they are given. The Company does not undertake to update them; however, it may choose from time to time to update them and if it should do so, it will disseminate the updates to the investing public.

Flywheel-based Storage in ISO-NE



Fast-response frequency regulation resource

- Began commercial operation in November 2008
- Now running 3 MW at >98% availability
- Receiving mileage payments (but not opportunity cost)
- > 6000 full charge/discharge cycles in first year of operation



First MW inside



Additional capacity outdoors

Plans for New York ISO Region



20 MW plant #1 – Stephentown NY

- \$43-million DOE loan guarantee commitment
- Broke ground in November; construction begins this qtr
- First revenue Q4 2010
- Full capacity end-Q1 2011



NY-ISO and NY PSC participated

PJM Interconnection

- 20 MW flywheel plant (#2) awarded \$24-million DOE stimulus grant
 - 4th highest award for energy storage project
 - Only grant award for frequency regulation plant
 - Exploring several potential sites in PJM area
 - DOE loan guarantee-eligible



2nd New York ISO Plant

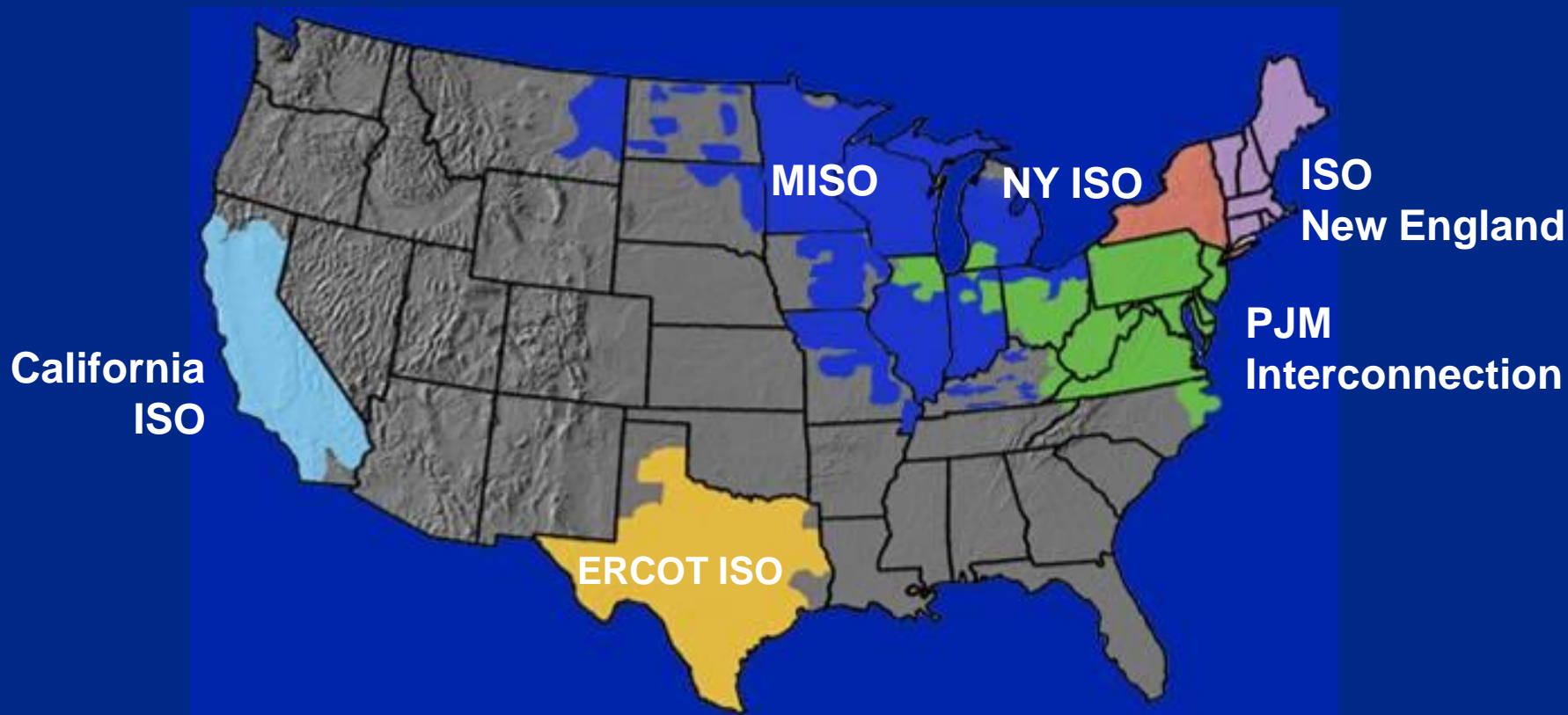


20 MW plant (#3) – Glenville NY

- Secured control of industrial site well suited to regulation plant
- Interconnection process started
- Received go-ahead from DOE to submit full application for 2nd loan guarantee



Regulation Services Markets



- Four open-bid markets accessible now
- CA planning new tariff; ERCOT initial steps
- 2009 market value >\$530 million

Flywheel Plant Technology Costs



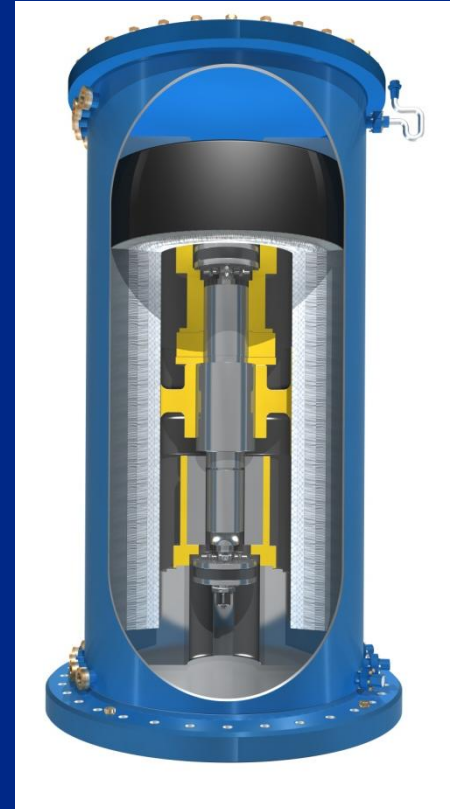
20 MW flywheel plant (installed)

- Capital cost: \$25 - 30 million (target) ¹
- PJM / DOE grant plant cost: \$48M - \$24M grant = \$24M
- Operating margin: 74% to 85 % ²
- Cycle life (flywheels): 150,000
- Required cycles over 20-year life: 120,000+ ³

- 1) Includes: flywheels, electronics, balance-of-plant, step-up transformers to transmission voltage, interconnection; i.e., this is a turnkey plant cost.
- 2) Before debt service, based on gross revenues of \$6M or \$10M / yr.
- 3) ISO-NE, NYISO, MISO

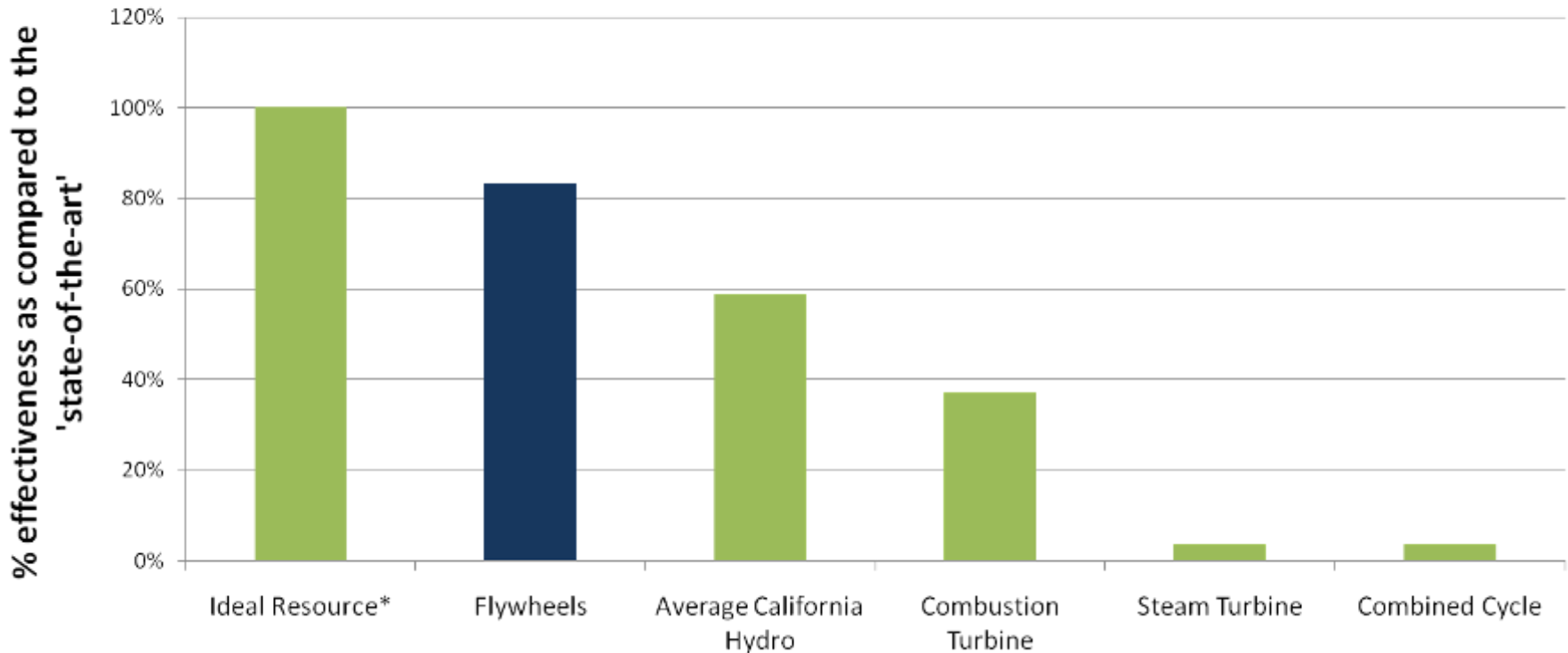
Technical Advantages

- Faster and more effective than incumbents
- Available separately – without generation
- 20-year projected life;
>150,000 cycles
- Lowest operational cost
- Zero direct carbon emissions vs. fossil fuel generators



Benefits of Fast Regulation

Regulation Effectiveness As compared to an 'Ideal Resource'



Growing consensus that fast-response resources should be paid a premium

*Source: Makarov, Y.V., et al. "Assessing the Value of Regulation Resources Based on Their Time Response Characteristics." Pacific Northwest National Laboratory, PNNL – 17632, June 2008

ISO-NE Regulation “Mileage” Payment



- ISO-NE dispatches “fast first” and has a “pay-for-performance” payment component, i.e. Regulation Service Credit (“Mileage”)
 - Procures less regulation as % of load than any other ISO

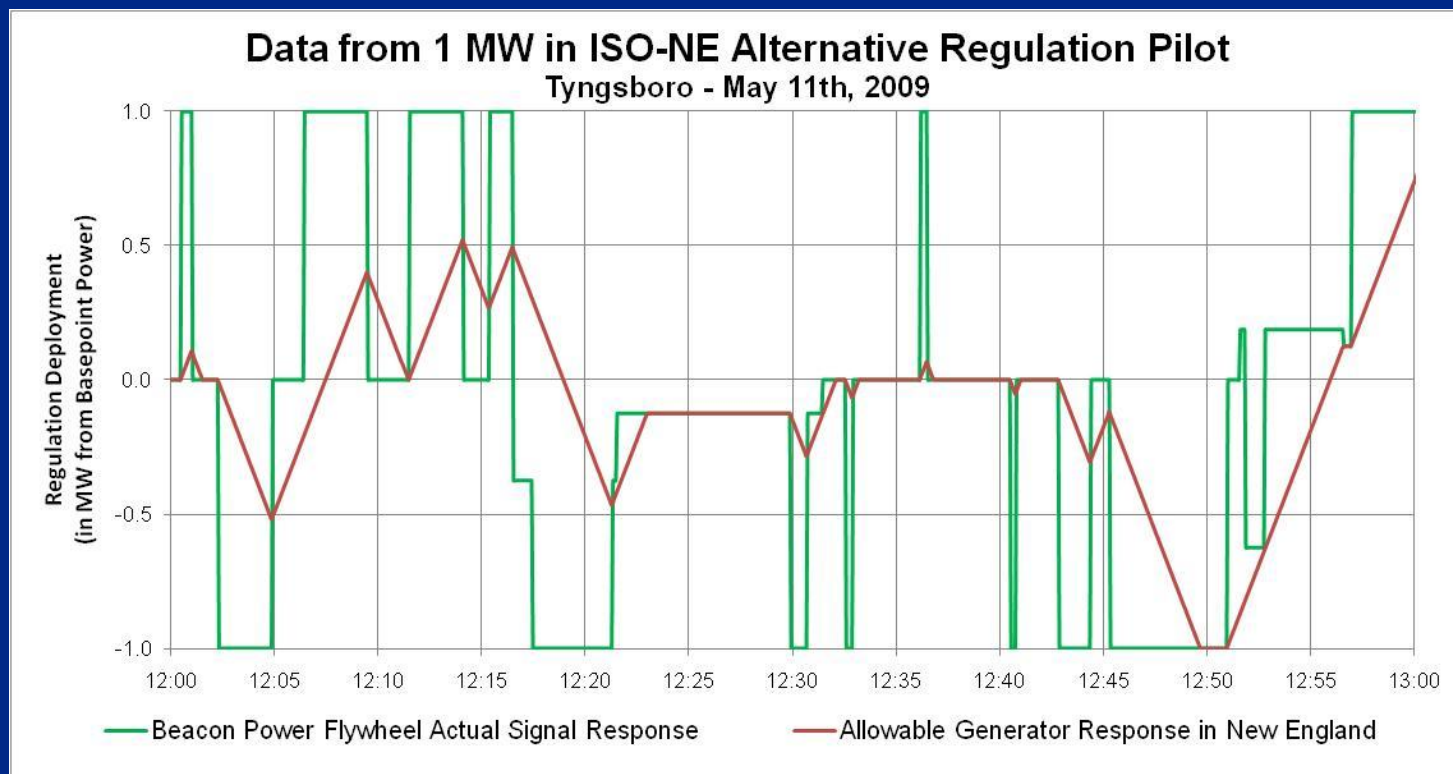
| 2008 Status | ISO-NE | PJM | NYISO | CAISO |
|--|--------------------|-----------|-----------|------------|
| Fast First Dispatch | ✓ | No | No | No |
| Pay-for-Performance | ✓ | No | No | No |
| Maximum Allowable Response time | 5 minutes | 5 minutes | 5 minutes | 10 minutes |
| Regulation Procurement (as % of Average Load) | 0.80% | 1.11% | 1.13% | 1.35% |
| Regulation Procurement vs. ISO-NE | 100% (baseline) | 139% | 141% | 169% |

ISO-NE procures the least amount of regulation as a percent of load

ISO-NE Pilot Program Empirical Data

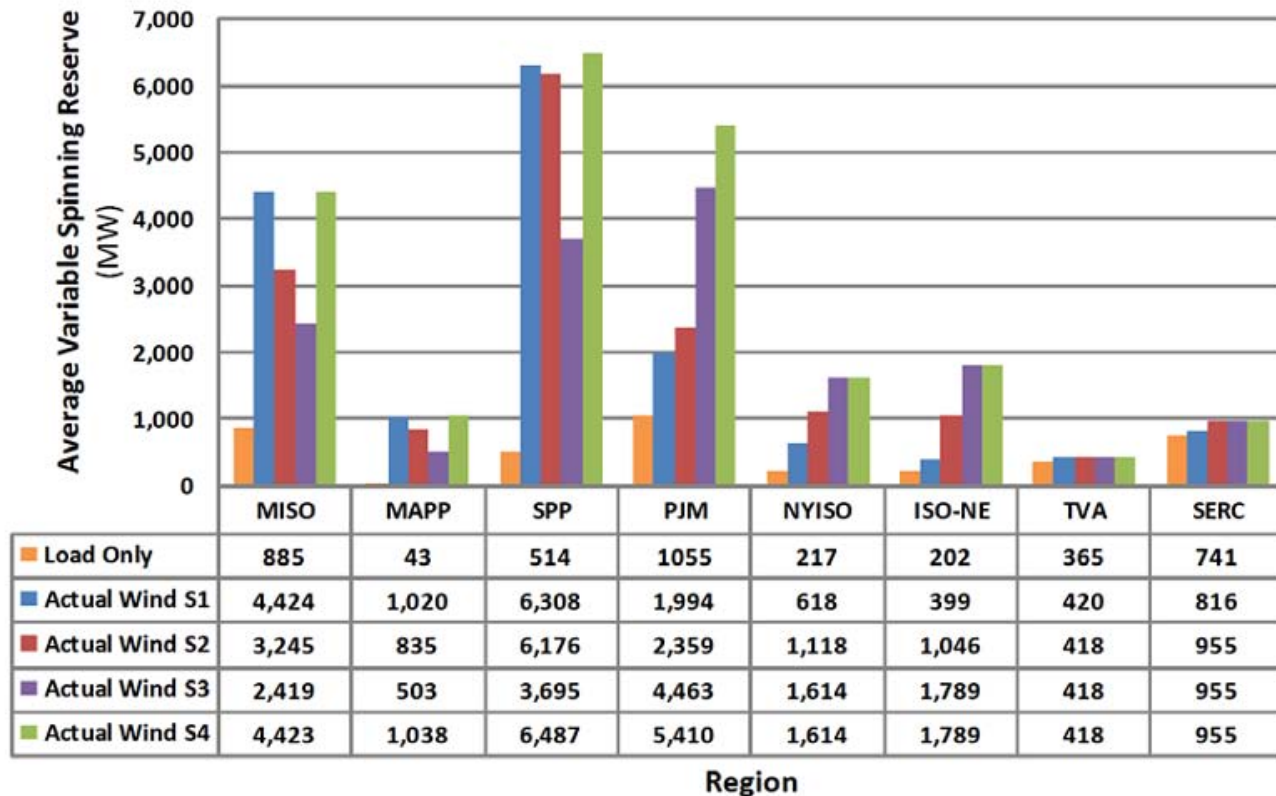


- Based on ISO-NE empirical study results, 1 MW of regulation capacity from a generator produces 10 MW of “regulation service”
- Empirical data from Beacon flywheels in the pilot show 1MW of fast-response flywheel storage produces 20 - 30 MW of regulation service



Beacon's regulation service is **2-3 times** more than an average generator

Impact of 20% Wind Penetration in East



“Load Only” is today’s regulation requirement

Scenarios 1,2,3 represent diff. mixes of on-shore, off-shore and regional wind mixes for 20% wind penetration. On average, about a 4x increase in regulating reserve is required.

Scenario 4 is 30% wind penetration

Figure 9. Regulating reserve requirements by region and scenario
 The incremental amount resulting from wind generation is the difference between the scenario number and the load-only value.



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