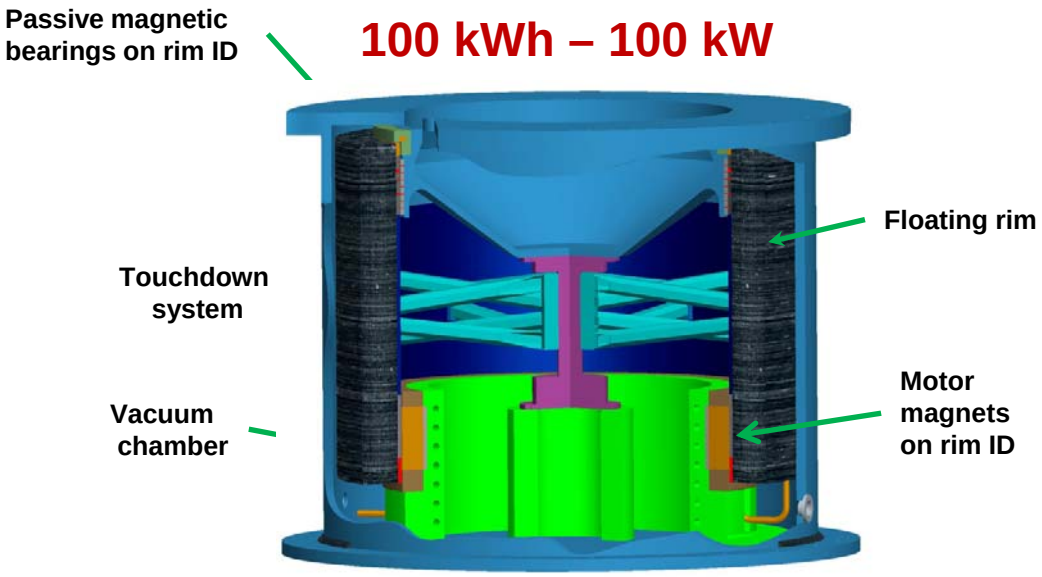
Development of a 100 kWh/100 kW Flywheel Energy Storage Module

High-Speed, Low-Cost, Composite Ring with Bore-Mounted Magnetics



Program Objectives

- Increase storage from 15 minutes to 1 hour
- Achieve 8x reduction in cost per kWh
- Reduce parasitic losses
- Expand applications
  - ✓ Wind and solar ramping
  - ✓ Wind firming
  - ✓ Peak shaving / demand limiting

Program Challenges

- Development of flexible magnets on rim ID
- Touchdown system for earthquake survival
- Process development for large rim manufacture

SBIR Funding

Determine the potential for a unique composite rim technology to:

- ➢ Increase the stored energy
- ➢ With Minimal or no cost increase

Beacon POWER

arpa·e CHANGING WHAT'S POSSIBLE