

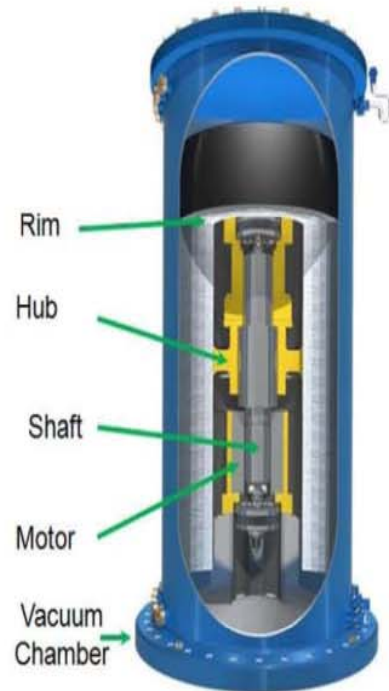
Development of a 100kWh Flywheel



Current State-of-the-Art Flywheel

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

25 kWh – 100kW



Eliminate shaft and hub
Levitate on passive magnetic bearings
Increase rim tip speed

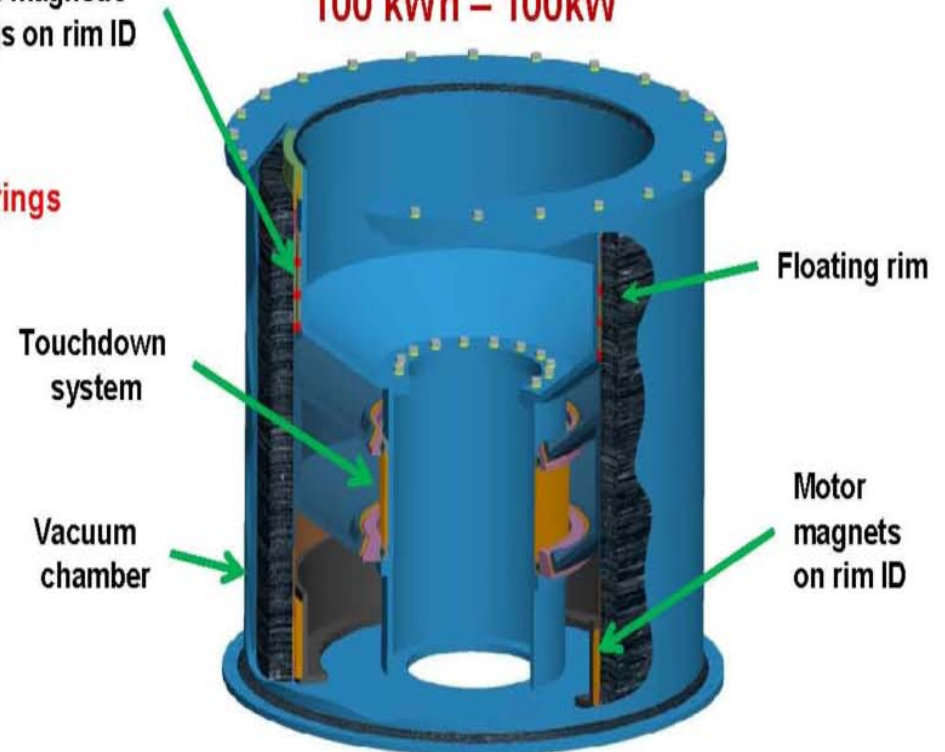
Larger-diameter, thinner rim stores more energy

4x increase in stored energy with only 60% increase in weight



Passive magnetic bearings on rim ID

100 kWh – 100kW



Program Tasks – Develop Bonded Magnets, Touchdown Bearings, and Low Cost Rim