

Storage

Physics and Mathematics of Sustainable Energy

College of the Atlantic. November 18, 2025

1. The batteries in electric cars vary, but roughly 60 kWh seems to be a reasonable average for newer cars.
 - (a) For how long could a 60 kWh battery power a Maine house?
 - (b) How many such batteries would we need to get a storage capacity of 5 GWh?

The aggregate capacity for California as of 2024 is roughly 47 GWh¹.

Raccoon mountain is a pumped storage facility with a capacity of 35 GWh.

¹<https://www.caiso.com/documents/2024-special-report-on-battery-storage-may-29-2025.pdf>