Comparative Understanding of Different Energy Storage Devices

Energy storage systems	Gravimetric energy density Wh/Kg	Volumetric energy density Wh/Kg	Gravimetric power density W/Kg	Relative cost /Kwh(storage)
Petrol	2500	1670	500	0.02
Ni-hi battery	80-150	152-215	200	2
Pb-acid battery	33-70	60-115	100-200	1
Fly wheel	56.5	------	278	------
Steel spring	0.020	------	------	------
Compressed air	57-77	84	500	2-4

Notes:

- Gravimetric energy density (Wh/kg)→amount of energy that can be stored in a given volume/mass.
- Gravimetric power density (W/kg)→rate at which power is released.
- Flywheel is potentially unreliable because of their high rotation rates.

6A, Panchanantala Road, Belghoria
Kolkata - 700056
West Bengal

Email: dde@reliabilityconsultant.net
Web: http://www.reliabilityconsultant.net
Phone: (0) 9836466678 (0) 9432586563