

Higher Energy density for Batteries in eVTOL: Lithium-Ion (Li-Ion) and Solid-state batteries

Overview

Density has a direct relationship with the range of aircraft. To increase the range, energy density should be increased. Two ways to increase this are to increase the number of batteries or change the chemistry of the batteries. If we increase the number of batteries, it will contribute to the overall weight of the vehicle. This will not only cause a loss of energy but also limit the payload capacity.

By changing the chemistry of traditional batteries to lithium-ion (NMC/NCA), it will offer more energy density in smaller and lighter packaging. A solid-state battery is an upcoming technology that is more improved than a liquid electrolyte. It reduces the risk of thermal runaway and allows for more compact and lightweight designs. This will also help to increase the payload capacity and range of eVTOL.

Features

- Increased range and payload capacity
- Safer solution
- Higher energy density

