

SCALING UP SOLID STATE BATTERIES

THE MANUFACTURING OF OUR GOLIATH SOLID STATE CELLS
WILL BE AT COST PARITY WITH CURRENT LITHIUM-ION

Production Equipment

The majority of the equipment used for lithium-ion batteries (LIB) can also be used to manufacture Goliath Solid State Battery (SSB) cells. In fact, we have successfully demonstrated manufacturing in a giga-scale factory setting, trialling industry standard equipment at the UK Battery Industrialisation Centre, including the large-scale preparation of Goliath electrolyte and the coating of our composite electrode-electrolyte.

Bill of Materials

- A major part of the BOM is identical to high - nickel NMC lithium-ion materials
- The electrolyte section is different: we have selected a ceramic oxide available off-the-shelf at commoditised prices
- We are not using expensive or rare dopants
- We are using a high % Si/Gr composite which we believe will also be at commoditised prices soon

Manufacturing Environment

- Our process does not involve expensive high-temperature sintering (unlike other ceramic oxide SSB developers), only low-temperature drying
- We are expecting that FA&T (Forming, Ageing & Testing) will be at reduced cost vs LIB, due to the absence of a long SEI formation step and reduced degassing
- Our dry-rooms require same dew point as for LIB



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Analysts expect price parity

SSB could be as cheap as lithium-ion batteries through economies of scale once multiple gigafactories have been constructed