EIEI POWER

Power consumption of power battery PACK factory

Overview

How much energy does a battery pack consume?

The specific energy consumption of compressed air is set at 4 cfm/hp, and an average power factor of 0.85 is used in calculating the electricity energy consumption. After the battery cells manufactured, the manual assembly of the battery pack consumes 3.9 Wh/kg energy for welding and screwing . 3.1.

How much energy does a battery use?

When compared, the industrial scale battery manufacturing can reach an energy consumption as low as 14 kWh/kg battery pack, representing a 72% decrease in the energy consumption, mainly from the improved efficiency relative to the increased production scale.

How much energy does a 24 kWh battery pack consume?

As calculated, the specific energy consumption for the 24 kWh battery pack is 50.17 kWh/kg of the battery pack produced. Among that, 38% of energy is consumed during the electrode drying process, and 43% consumed by the dry room facility.

How much energy do battery manufacturing facilities use?

Dai et al (2019) estimate the energy use in battery manufacturing facilities in China with an annual manufacturing capacity of around 2 GWhc to 170 MJ (47 kWh per kWhc, of which 140 MJ is used in the form of steam and) 30 MJ as electricity. Ellingsen et al (2015) studied electricity use in a manufacturing facility over 18 months.

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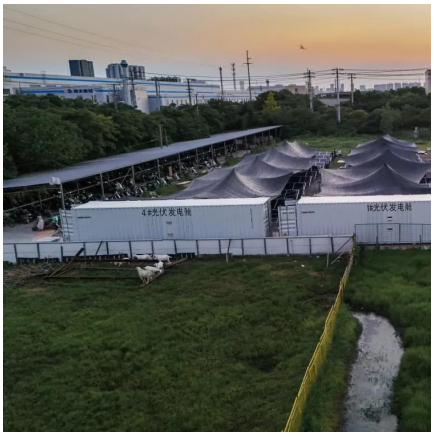

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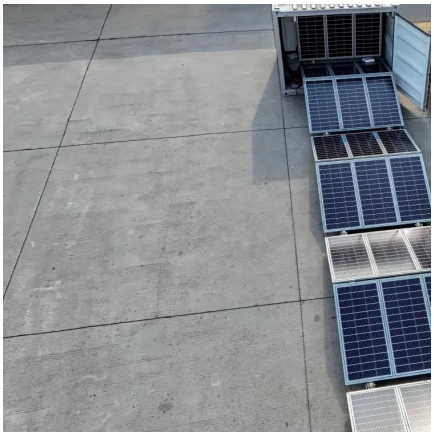

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