
Helsinki zinc battery energy storage

Could a Pyhäsalmi Mine be transformed into a giant battery?

An abandoned mine in Finland is set to be transformed into a giant battery to store renewable energy during periods of excess production. The Pyhäsalmi Mine, roughly 450 kilometres north of Helsinki, is Europe's deepest zinc and copper mine and holds the potential to store up to 2 MW of energy within its 1,400-metre-deep shafts.

How much energy can gravity batteries store?

A study last year by the International Institute for Applied Systems Analysis (IIASA) estimated that gravity batteries in abandoned underground mines could store up to 70 TWh of energy - enough to meet global electricity demands.

Can Pyhäsalmi be used for energy storage?

With its copper and zinc deposits depleted, Pyhäsalmi has a lot of vertical space sitting unused that's perfect for capturing the energy of heavy weights being dropped down a shaft, which is precisely what Scottish energy storage tech firm Gravitricity plans to use it for.

Hitachi Energy's battery storage power conversion solutions are aimed to maximise system performance and strengthen the stability of Finland's grid. The scope of supply ...

One of Europe's biggest former metal mines in Finland is to be repurposed as 'gravity battery', an energy storage system that uses gravity to store and release renewable ...

One of Europe's deepest mines is being transformed into an underground energy store. It will use gravity to retain excess power for when it is needed. The remote Finnish ...

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The deepest metal mine in Europe, unused since 2022, is set to host a giant underground gravity battery. Pyhäsalmi Mine, located 450 kilometers north of Helsinki in ...

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Pyhäjärvi, a small town located 450 kilometers north of Helsinki, Finland, is witnessing a groundbreaking transformation. The town's decommissioned Pyhäsalmi mine, ...

Power conversion solutions are essential for unlocking the full potential of energy storage and safeguarding grid stability Hitachi Energy has signed an agreement with Nordic ...

First Quantum's Pyhäsalmi Mine, roughly 450 km (280 miles) north of Helsinki, Finland is set to host a giant underground gravity battery. The zinc and copper mine, was ...

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