



# Switzerland ares advanced rail energy storage

How does Ares energy storage work?

ARES energy storage technology employs a fleet of electric traction drive shuttle-trains, operating on a closed low-friction automated steel rail network to transport a field of heavy masses between two storage yards at different elevations.

What is advanced rail energy storage?

Advanced Rail Energy Storage (ARES) uses proven rail technology to harness the power of gravity, providing a utility-scale storage solution at a cost that beats batteries. ARES' highly efficient electric motors drive mass cars uphill, converting electric power to mechanical potential energy.

What is Ares technology?

ARES technology represents a significant and valuable advance in the field of clean and environmentally responsible energy storage and should see wide deployment in the years to come. This chapter is dedicated to John Robinson (1938-2011), cofounder of ARES. Department of Energy.

What is a rail energy storage innovation?

One innovation that may work is ARES, which stands for Advanced Rail Energy Storage. This innovation was invented and developed by a company with the same name, ARES LLC. ARES is a large-scale energy storage device that uses a gravitational train system. This innovation consists of several sets of train on the funicular railroad.

How do Ares shuttle trains work?

During periods where excess energy is available on the grid (Reg-Down), ARES shuttle trains draw electricity from the grid which powers their drive motors to move the trains uphill against the force of gravity--efficiently converting electrical energy into gravitational potential energy.

How will Ares power a city?

ARES will use surplus wind/solar or other low-cost energy from the grid to move hundreds of tons (millions of pounds) of mass uphill on railroad shuttles, effectively storing thousands of megawatt-hours of potential energy to power a medium-sized city for several hours.

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Over the last decade, ARES has developed, tested and patented rail -based, gravity- powered energy storage technologies. By 4. th. quarter 2024, we will have our first facility in operation ...

The ARES Nevada Project is a 50 MW gravity-based rail energy storage system which employs a fleet of seven heavy regenerative traction drive shuttle trains, operating on a high-grade closed low-friction automated steel rail network, to shift mass between alternate elevations, converting electricity into potential energy and back into electric ...

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Manufactured in the United States . No Degradation. Low Cost . Lithium Free. Non-Flammable. Water Free. Rail-Based Gravity Storage. 3

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