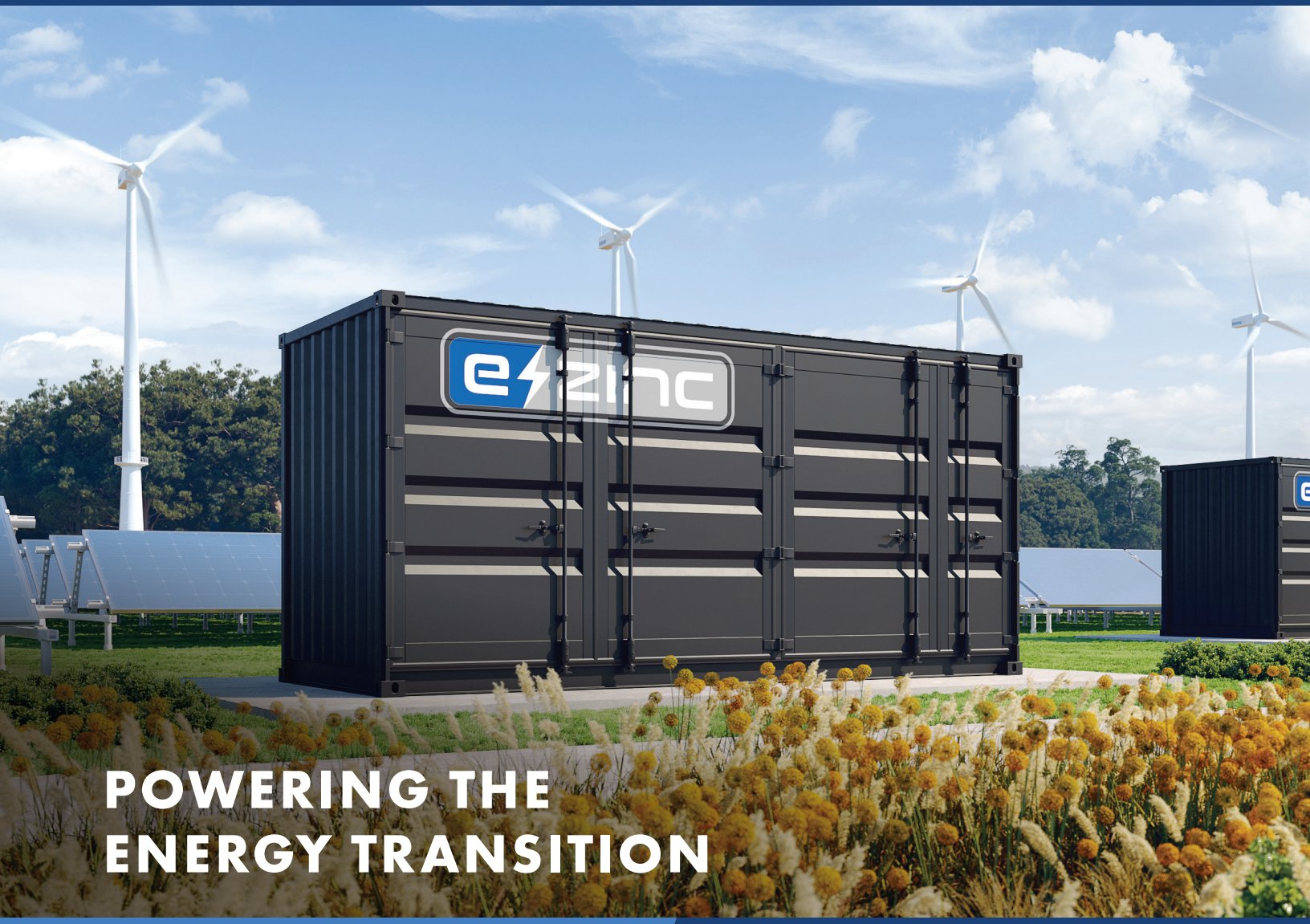

POWERING THE ENERGY TRANSITION

e-Zinc has pioneered a game-changing long-duration energy storage (LDES) solution that provides reliable, fossil fuel free backup power, ranging from several hours to several days.

Our system uses zinc metal as the energy carrier. The compelling combination of zinc's affordability, unique electrochemical properties, safety profile, and widespread availability fuels our ambition to harness its unique properties for innovative energy storage solutions that cater to a wide array of applications.

e-Zinc's long-duration energy storage technology is a paradigm shift in energy storage to enable a zero-carbon energy future.

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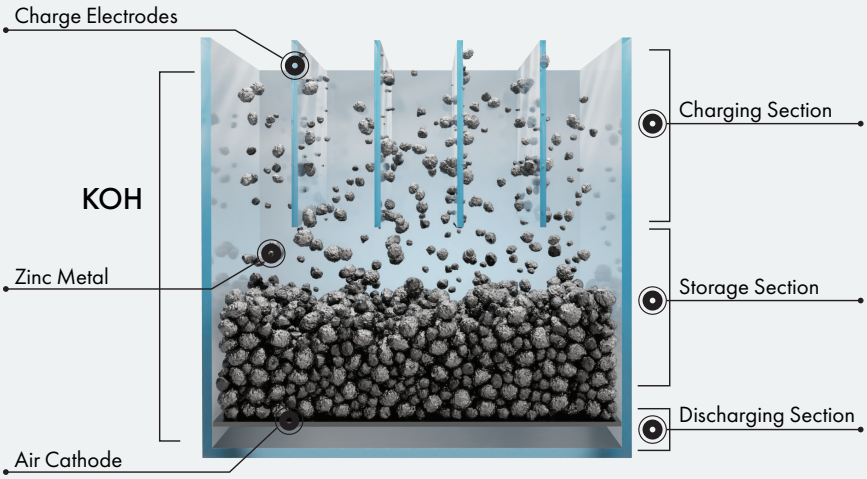
HOW IT WORKS

The foundation of e-Zinc's technology is an innovative electrochemical cell which consists of a charging section at the top, a discharging section at the bottom, and a storage section in the middle.



Charge

Zinc metal pellets are formed on the electrodes in the upper section of our battery cell while it is absorbing energy.

Store

The zinc metal deposits are periodically wiped off from the charging electrodes and fall naturally through the electrolyte into the spaces between the discharging electrodes, where they are stored until needed.

Deliver

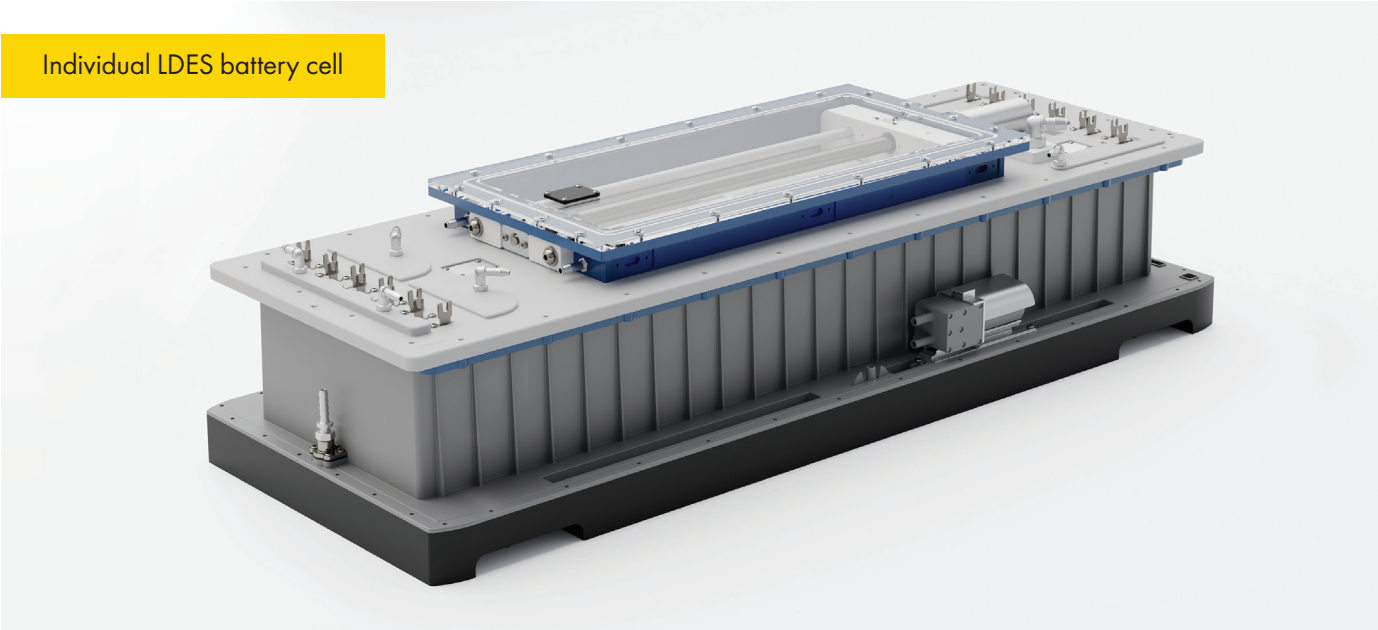
When discharging, air is injected into the cell and the oxygen dissolves the zinc back into the electrolyte, which is then recirculated to the charging section, ready for the next charging cycle.

A LOW-COST SCALABLE SOLUTION

e-Zinc's technology decouples power from energy, allowing low-cost scaling of storage capacity based on 3 principles:

1. Using zinc metal as the energy carrier, which has a high energy density and is inexpensive.
2. The zinc metal is detached from electrodes, allowing the metal to be stored independently at a low cost, unlike rechargeable batteries in which the energy-bearing metal is fixed on the electrodes.
3. The storage space is located within the same electrochemical cell as the charging and discharging electrodes, enabling a simple operation.

Individual LDES battery cell



PROPERTIES OF THE CELL

Reliable

Simple and robust design is able to store tens to hundreds of hours of clean energy capacity and perform in the harshest environments.

Safe

Non-flammable water-based electrolyte has no risk of thermal runaway or igniting in a fire.

Long Lifetime

Retains its usable energy capacity throughout an expected 10-15 year lifetime.

Economical

Low cost, abundant, and ubiquitous commodity materials, combined with the ability to scale energy capacity by only adding more electrolyte.

Recyclable and Reusable

Donning a circularity lens, almost every component has an existing recycling market or can be reused in subsequent systems.

Flexible and Scalable

The ability to scale energy capacity independently from power enables a customised system design that meets the exact power and energy needs of each market application.

POWER CONFIGURATION

e-Zinc arranges individual cells into stacked arrays, and connects them as parallel strings. These are containerized in standard shipping containers with external access doors for maintenance and operations. The containers include everything needed for the DC block (cells, Balance Of System, etc.). This block is connected to a Power Conversion System (PCS) and Energy Management System (EMS) controllers.

Rendering of e-Zinc's resilience solution at a commercial / industrial building site

INNOVATIVE ENERGY STORAGE APPLICATIONS

Resilient Backup Power

For commercial, industrial and municipal / utility buildings, our LDES solution offers energy resilience in the case of power disruptions, as well as customer bill management and wholesale market energy arbitrage. The system provides the ability to serve daily cycling needs for cost savings and revenue generation while also reserving enough capacity to sustain a customer through single day / multi-day outages.

Remote Power

For remote communities and industries like mining, oil & gas, and telecom, our solution offers robust, safe chemistry that can perform multi-day dispatch in harsh environments, displacing costly diesel and ensuring the efficient use of onsite renewables.

Renewable Energy Integration

Solving for renewable energy intermittency and critical grid services, e-Zinc's technology will provide the platform for the world's energy markets to be fully powered by renewable energy. e-Zinc's solution is capable of multiple days of storage capacity and will be critical as the world's proliferation of renewable energy pushes penetration levels higher.

OUR PARTNERS

e-Zinc continues to successfully secure funding and grants from a diverse array of governmental and private sector entities, and establishes valuable relationships with national laboratories and industry partners.

CALIFORNIA ENERGY COMMISSION

FARMOR

MAGNA

SDTC SUSTAINABLE DEVELOPMENT TECHNOLOGY CANADA

SunGrid

TOYOTA TSUSHO

Learn how we provide a flexible energy storage offering – from DC scope to full-wrap turnkey.

Contact solutions@e-Zinc.ca for more information.

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