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Holcim-ENGIE-INSA Lyon partner to develop breakthrough energy storage solution

- **Cement-based solution storing and converting waste heat into energy**
- **Enabling an affordable, local, safe and recyclable alternative to batteries**
- **Making cement part of accelerating the transition to renewable energy**

Holcim is developing a breakthrough energy storage technology together with INSA Lyon and ENGIE's Corporate Research Center, ENGIE Lab CRIGEN, to serve as an alternative to batteries. The solution is based on cement hydration, storing heat as energy and releasing it when needed in an infinitely repeatable cycle. This next-generation approach offers an alternative to conventional batteries that is local, safe, affordable and recyclable.

Edelio Bermejo, Head of Global Innovation: "The world needs innovative solutions to accelerate our shift towards renewable energy generation, distribution and storage – all areas in which Holcim can play a big part. With this collaboration we are moving energy storage forward, opening up a new range of solutions based on materials that are local and recyclable."

Cementitious material used as energy storage

This innovation is based on leveraging the unique properties of a specific cementitious material that can absorb 300 kiloWatt of energy per cubic meter and release it later through hydration. It is designed to store the surplus energy that runs through a heating network and release it when needed through a hydration trigger. This cycle can be repeated infinitely. Holcim and its partners will investigate how to efficiently integrate this solution into a heating network as well as the broader energy infrastructure.

A breakthrough solution for energy management in cities

This innovative approach could help meet the demands of renewable energy storage while optimizing urban heating networks in line with Holcim's vision to build greener cities. Holcim is putting its expertise to work in many ways to accelerate the world's transition to renewable energy, from 3D printing of windmill towers all the way to enabling roads that recharge electric vehicles.

About Holcim

Holcim builds progress for people and the planet. As a global leader in innovative and sustainable building solutions, Holcim is enabling greener cities, smarter infrastructure and improving living standards around the world. With sustainability at the core of its strategy Holcim is becoming a net zero company, with its people and communities at the heart of its success. The company is driving the circular economy as a world leader in recycling to build more with less. Holcim is the company behind some of the world's most trusted brands in the building sector including ACC, Aggregate Industries, Ambuja Cement, Disensa, Firestone Building Products, Geocycle, Holcim and Lafarge. Holcim is 70,000 people around the world who are passionate about building progress for people and the planet through four business segments: Cement, Ready-Mix Concrete, Aggregates and Solutions & Products.

Learn more about Holcim on www.holcim.com, and by following us on [LinkedIn](#) and [Twitter](#).

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