Podcast Episode: Web 57DHYAFZZFLMj October 29 2026 Batteries storing blistering heat can release

Pip: Welcome to RAWSE Residents Against Wood Smoke Emission Particulates, where we cover the full spectrum of combustion — from the neighbor's backyard fire pit all the way up to industrial furnaces running at four thousand degrees.
Mara: Today we're following the work of lindakarr904744833, who's been tracking a genuinely interesting development in industrial energy — heat batteries that store renewable electricity as extreme temperatures and feed it back to factories on demand.
Pip: Let's start with how you store the sun in a brick.
Batteries Storing Blistering Heat for Industry
Mara: The core question here is whether industrial heat — the kind factories need to make steam, refine fuels, and run heavy processes — can be decoupled from burning fossil fuels, using thermal storage as the bridge.
Pip: The post lays out exactly how one company is doing it: drawing surplus wind electricity, heating carbon blocks to extraordinary temperatures, and holding that energy until it's needed. The direct framing is this: "We take electricity when it's abundant and inexpensive and when no one else needs it."
Mara: So the upshot is that the battery isn't competing with the grid — it's mopping up the overflow. Wind turbines in South Dakota generate sixty percent of the state's power, but transmission bottlenecks force grid operators to shut turbines down. The heat battery absorbs that stranded energy instead of wasting it.
Pip: And the scale of the problem it's solving is worth sitting with. Industrial heat — the steam and high temperatures factories run on — accounts for ten percent of greenhouse gases globally. More than all the world's cars. More than aviation. It's the emissions category that gets almost no dinner-table airtime.
Mara: The technology works by heating carbon blocks to as high as four thousand three hundred fifty-two degrees Fahrenheit. Those blocks stay hot for days, releasing heat on demand and producing steam — in this case, for a biofuel refinery that previously burned natural gas and coal to get there.
Pip: Nearly a dozen startups have now entered this space with their own material choices — ceramic bricks, crushed rock, superheated brick, even dirt. The materials question matters because everything has to survive extreme temperatures repeatedly without degrading.
Mara: One recent study estimated thermal storage could eventually supply up to one-third of America's industrial heat needs if costs keep declining. The economics, per the post, already work in places where electricity prices vary by the hour. The catch is that many utility regions still don't allow hourly pricing, so the arbitrage that makes the model viable simply isn't available without renegotiating rate structures utility by utility.
Pip: There's an inertia challenge, as one former Minnesota Public Utilities Commission member put it — most of these rules were written before thermal batteries existed.
Mara: That regulatory lag is the real friction point right now, not the technology itself.
Pip: So the grid has surplus energy nobody wants at two in the morning, and a glowing block of carbon is apparently the answer.
Mara: The infrastructure and the regulatory frameworks still need to catch up — but the direction is clear. More on where that leads next time.