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Why are we discussing Lithium

Why are we discussing Lithium? The newest and best material for storage batteries is Sodium Ion, this tech is taking over the car battery world, why?

Please review the attached 2 pages. The only downside i see in sodium over Lithium is the lifespan, and that is increasing and will be likely longer foing forward. NO FIRE HAZARD.

Please tell me why we are still pursuing Lithium.

Additional submitted attachment is included below.

Key Contrasts for Municipal Decision-Makers

1. Urban Footprint vs. Resource Abundance

- **Lithium-ion** is highly power-dense. For space-constrained metropolitan areas or indoor substations, Li-ion packs more energy into fewer square meters.
- **Sodium-ion** requires a larger geographic footprint to store the exact same amount of energy. However, it completely bypasses geopolitical supply chain bottlenecks because sodium is thousands of times more abundant than lithium.

2. Lifecycle Costs and Project Economics

- **Lithium-ion** has a higher upfront capital cost due to expensive raw materials. However, its high round-trip efficiency (~90-95%) and established lifecycle make it easier to secure project financing (bankability).
- **Sodium-ion** projects materials cost savings of 20-30% over lithium at scale. Because Na-ion can be completely discharged to 0 volts for transit without damaging the cells, shipping and logistics costs are lower and safer.

3. Safety Profile and Fire Risks in Populated Areas

- **Lithium-ion** presents strict zoning and safety challenges for cities due to the risk of toxic gas release and difficult-to-extinguish fires during a thermal runaway event.
- **Sodium-ion** inherently possesses superior thermal stability. It resists combustion under short-circuits or mechanical damage, making it much easier to permit in dense urban centers or near critical municipal infrastructure.

4. Environmental Impact and Recycling

- **Lithium-ion** mining (specifically lithium brine extraction and cobalt mining) carries heavy environmental and ethical baggage. Recycling infrastructure is growing but chemically complex.
 - **Sodium-ion** utilizes simpler materials (like aluminum current collectors instead of copper) and non-toxic elements, translating to a much cleaner "cradle-to-grave" environmental footprint for a city's sustainability scorecard.
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