



INNOVATION: NaKCI Liquid Metal Energy Storage System



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Veridia Energia's breakthrough green energy solution will fulfill the DOE's goals for a long term, cost-effective renewable energy storage source.

Liquid Metal (NaKCI) Energy Storage

Fuel Cell uses Cl₂ gas and liquid NaK that combine into a crystalline solid powder mixture of NaCl & KCl that produces DC electricity.

NaK is a eutectic alloy of two metals: sodium and potassium with a melting temperature below -12° C and is liquid at room temperature.

Fuel Cell

FPU

FPU uses NaCl and KCl mixture plus DC electricity in a process like electroplating to make NaK and chlorine gas.

At 7-8 Atm, chlorine becomes a liquid. Both fuels are stored in liquid form.

Why Liquid Metal Energy Storage?



Energy Storage Type/1 kWh

Reduction in cost to less than 1/2000th!

- Raw materials innocuous.
- Fuels stable, no discharge.
- No limit on storage time.
- No practical limit on amount of storage (X Tanks Built?)
- Useable energy density by volume comparable to gasoline.
- Sodium and potassium ions ubiquitous (seawater).
- No environmental contamination.
- Emission free. No CO₂