

Clean, reliable electricity, ALL THE TIME

LDES National Consortium
Annual Workshop Presentation
September 2024

 Photon Vault © 2024

DOE: \$0.05/kWh Cost Target by 2031

Long Duration Storage Shot



Reduce storage costs
by **90%***...

*from a 2020 Li-ion baseline



...in storage systems
that deliver **10+** hours
of duration



...in **1** decade

Clean power anytime, anywhere.

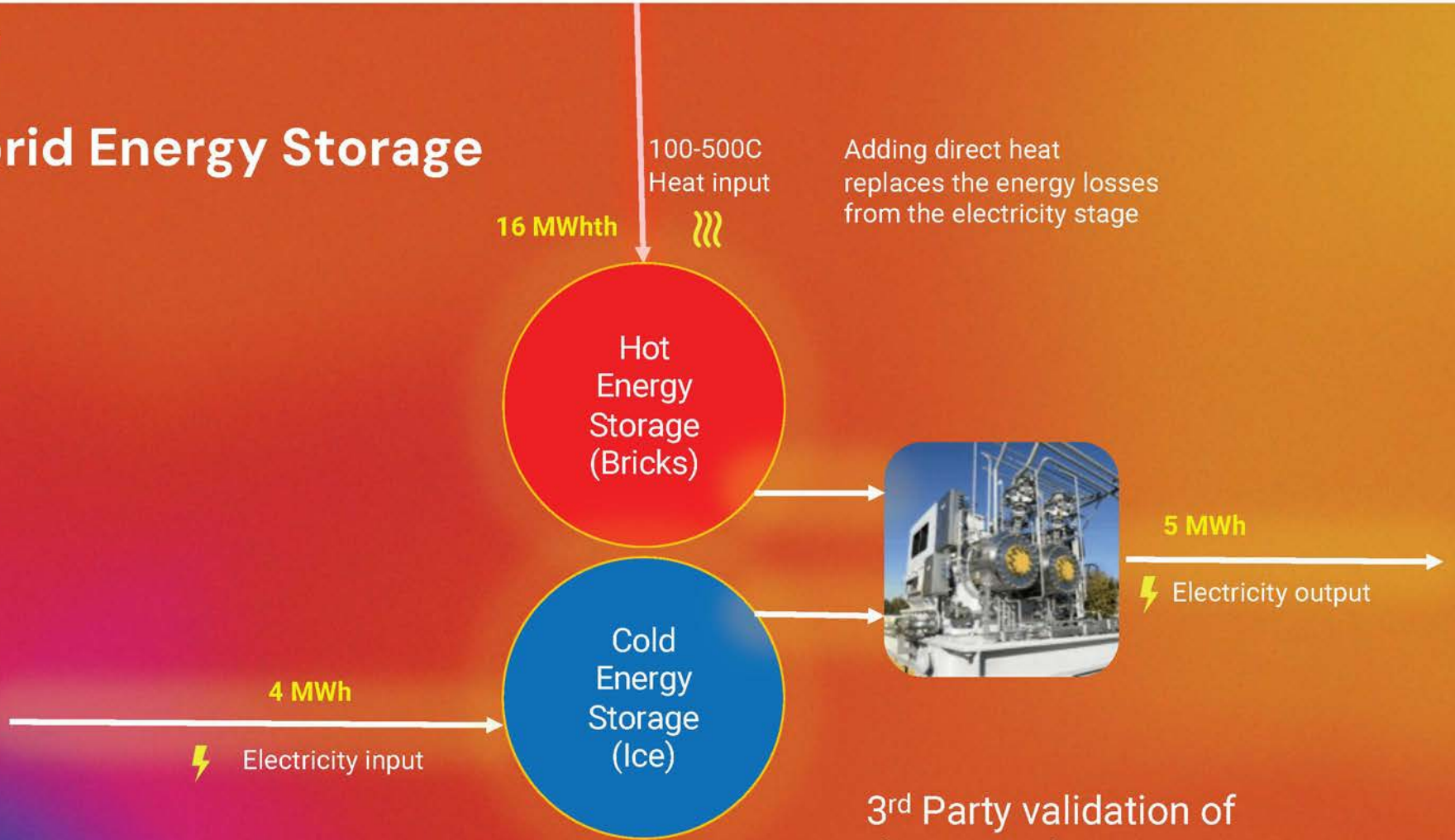
Solution

How do you get to 5-cent Storage??

	Levelized Cost <\$0.05/kWh	90% Electrical RTE	Energy Cost <\$50/kWh	Power Cost <\$1000/kW
Photon Vault	✓	✓	✓	✓
Lithium-ion	X	X	X	X
Other Thermal	X	X	✓	X
Compressed Air	X	X	✓	X
Flow Batteries	X	X	X	X

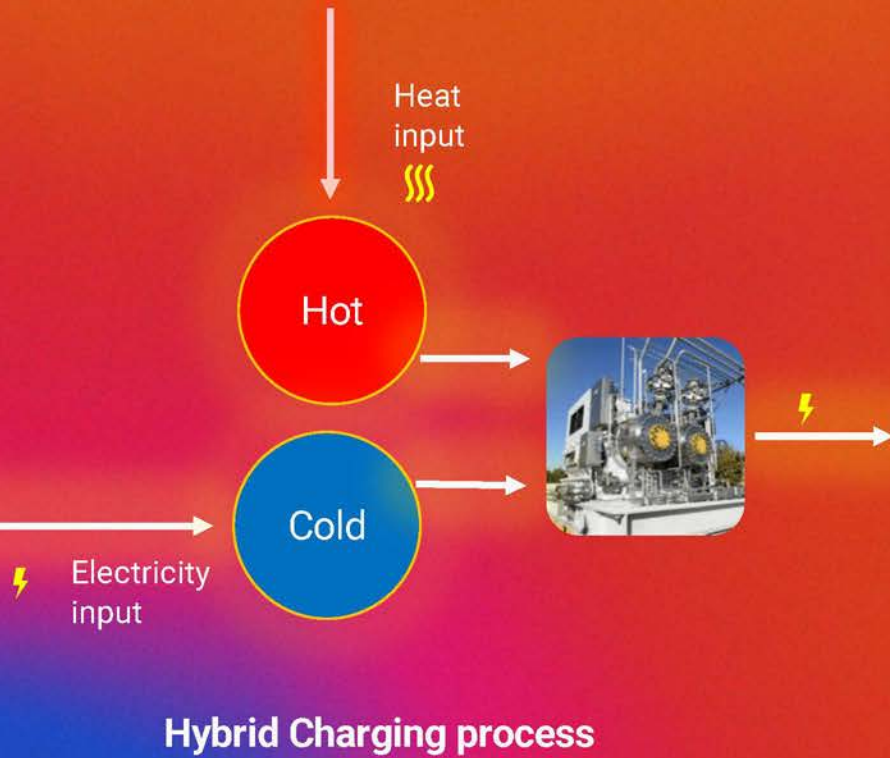
Differentiator

Hybrid Energy Storage



3rd Party validation of design and engineering

Core Innovations



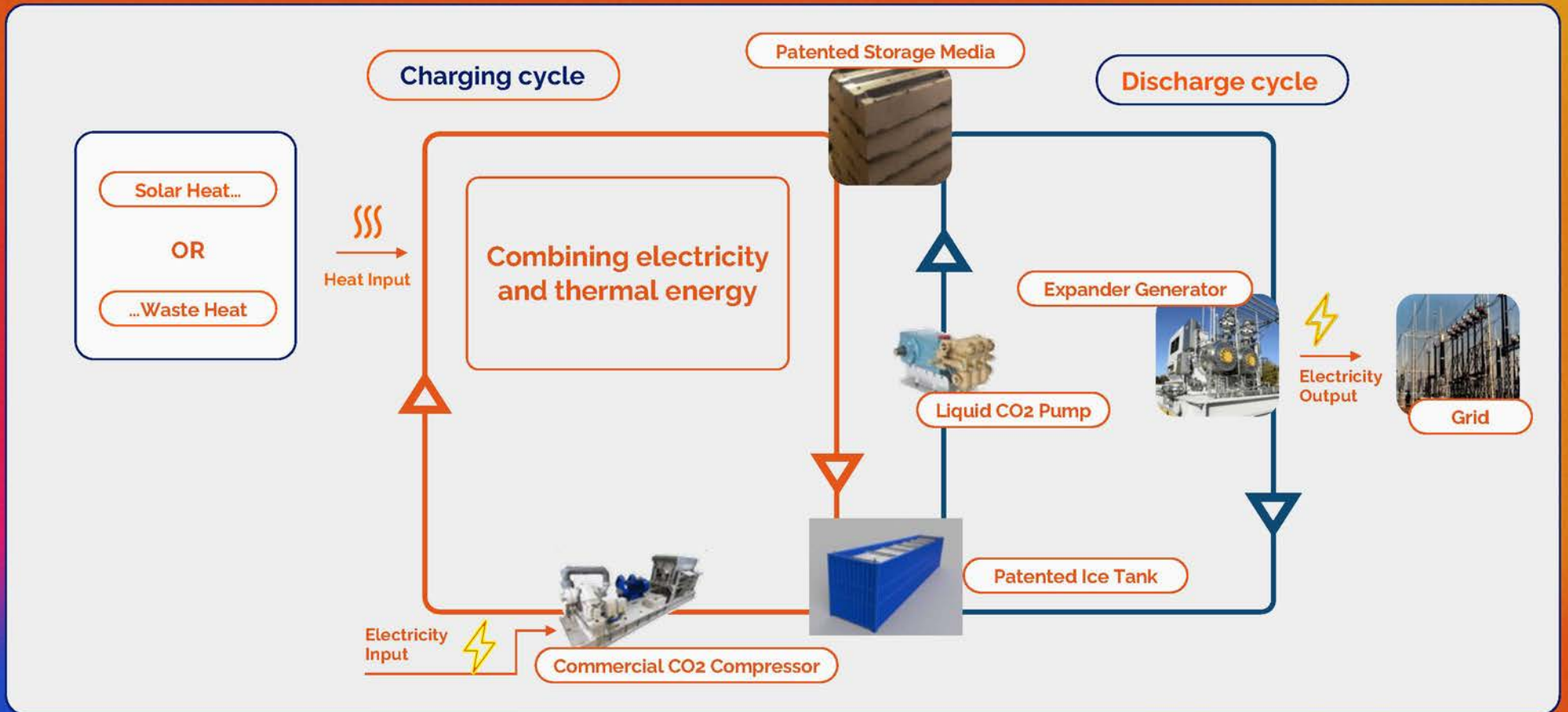
10X Cost Reduction

Bricks for storing heat



Ice Tanks for storing cold

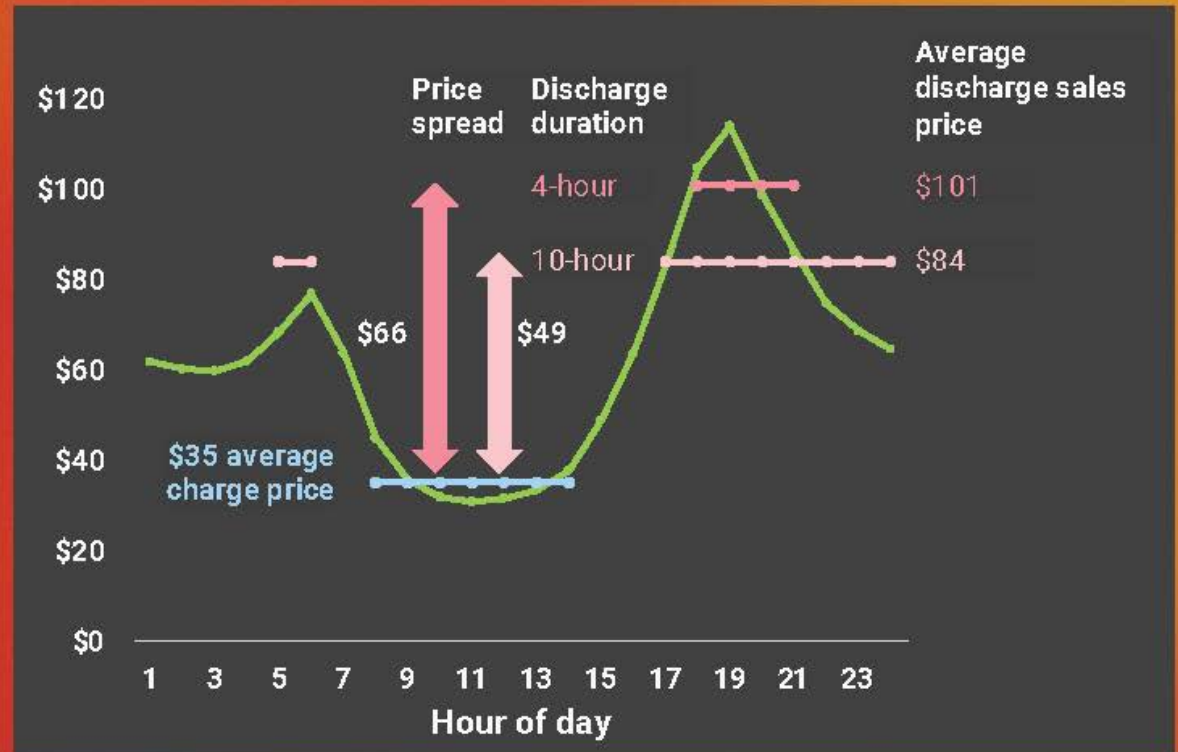
Integrated System



Longer Duration Storage = Lower Spread

In California, a 4hr battery will earn about 35% more average revenue per hour than will a 10hr battery.

Longer durations require lower costs and higher efficiencies to succeed.



Recent historical example: hourly energy prices in CA

Clean, reliable electricity ALL THE TIME

APPENDIX

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