

Regarding Cost –

We would be happy to take you through our unit economics in greater detail, but cost is actually the prime factor that we are solving for with our technology. You can find details on the savings of our HTPEM technology vs current LTPEM technology [here](#).

As you can see from the below table, our HTPEM system provides significant savings against other long-duration storage technology.

Apple-to-Apple Storage Comparison & Differentiation

	HyWatts	Traditional Hydrogen	Iron-Air	Flow Battery	Li-ion Battery
CAPEX (storage), \$/kWh	\$40	\$100	\$100+	\$200	\$266
CAPEX (\$M) 220MWh Storage	\$8.8M	\$22M	\$22M	\$44M	\$54M
220MWh Storage Footprint (m2)	1,100 m2	1,539 m2***	6,232 m2	13,068 m2**	2,671 m2*
Other Pain Points	Not well suited for <1MWh size	Significant maintenance requirements, relatively larger footprint	Significant footprint & water usage; temperature sensitivity	Significant water usage, temperature sensitivity, large footprint	Safety/Fire risk, degradation, temperature sensitivity

HyWatts offers lower CAPEX, Electricity Cost, & Footprint

*Based on Tesla MegaPack, other systems are significantly larger; **Based on ESS Energy Warehouse; ***Assumes same storage space & 2x Electrolyzer/Fuel Cell size as HyWatts

That said, we recognize that at shorter durations/smaller capacities it is not as cost effective which is why we do not target those use cases.

Cost Effectiveness at Different Capacities

Storage Capacity	< 1MWh	1-10MWh	10-300MWh	300-1GWh	>1GWh
Ideal Use	Private Homes	Communities	EV charging in remote areas	Data Centers	Utility Storages
Li Battery	●	●	●	●	●
Flow Battery	●	●	●	●	●
Iron-Air	●	●	●	●	●
CO2	●	●	●	●	●
Gravity	●	●	●	●	●
Traditional H2	●	●	●	●	●
HyWatts RFC	●	●	●	●	●

This can be seen in better detail with a direct comparison again Li-ion technology based on data provided by one of our customers (note that this includes \$21M CAPEX for solar):

Case Study: EV / H2 Charging Station

Solar-powered charging station with Hydrogen Battery storage for rainy periods

- Energy storage for 5 days
- Power for 20 x 360 kW, 20 x 180 kW
- 120+ MWh/day
- 150+ MWh storage (14 tons of H2)

HyWatts Partially
Grid-connected

0.10 \$/kWh
Power

27.0 \$M
CAPEX

3.7 \$/kg
Green H2

HyWatts
Off-Grid

0.16 \$/kWh
Power

39.0 \$M
CAPEX

4.2 \$/kg
Green H2

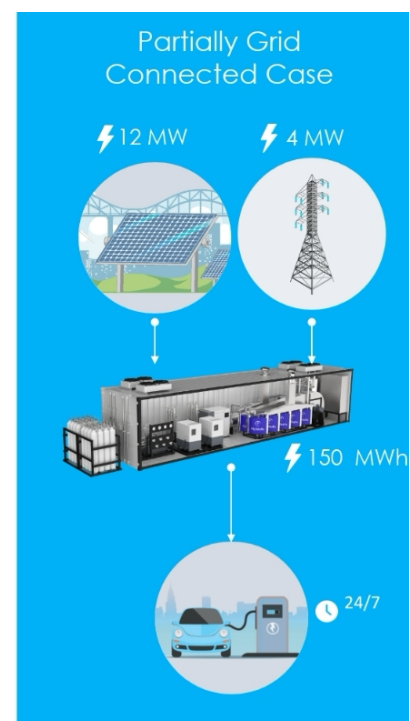
Partially Grid-connected
with batteries

0.15 \$/kWh
Power

55.0 \$M
CAPEX

n/a

without subsidies



Again, we would be happy to find time to take you through things in greater detail.

Regarding RTE (Round Trip Efficiency)

Given that the intention with long-duration storage is not arbitrage and that the system uses excess energy, RTE is not the right metric to focus on. Our customers care about cost and the fact that we can deliver lower \$/kWh & CAPEX versus other solutions, with the added benefit of low-cost green hydrogen.

While the round-trip efficiency of our hydrogen component of the storage system will in fact be at 40% (this will improve with continued development of bi-directional catalysts), with our calculations including the energy spent for compressing the H₂ to the storage pressure of 200 bar.

However, the round-trip efficiency of the HyWatts energy storage system, which combines long-duration hydrogen storage with short-term Li-battery storage, is much higher.

Hydrogen storage covers power needs at low production from the solar energy source ('rainy days'). The Li battery cycles almost every day, storing energy for peak shaving. That yields an overall RTE of >87% for the HyWatts system.=