



Company Introduction

September 2023



- Invinity Energy Systems (OTCQX:IESVF, LSE:IES)
- A global **leader** in vanadium flow batteries
- **Largest fleet** of flow batteries ever deployed
- Standardized, **factory-built** products
- **Sales pipeline** over 2 GWh
- Installing **largest flow batteries** (U.S., UK, Can, Aus)
- First half 2023 revenue > \$16.5m

70

PROJECTS

Across 15 countries on five continents

65

MWH

Deployed or contracted

134

EMPLOYEES

The most experienced team in flow batteries

73

PATENTS

Granted or pending, plus trade secrets

15+

YEARS

R&D investment in product and manufacturing

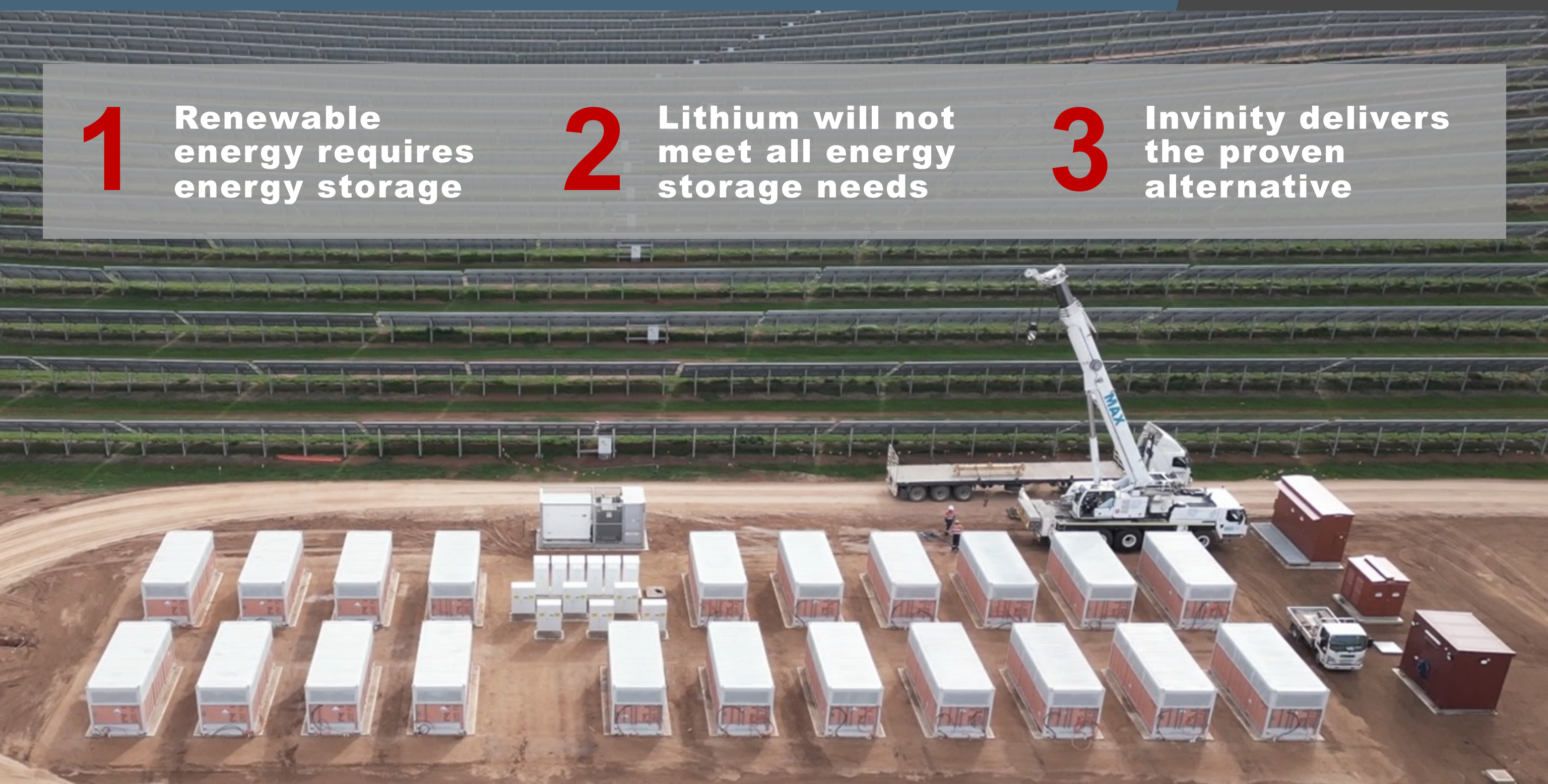


EDF Renewables' 5 MWh Invinity VS3, Oxford UK

1 Renewable energy requires energy storage

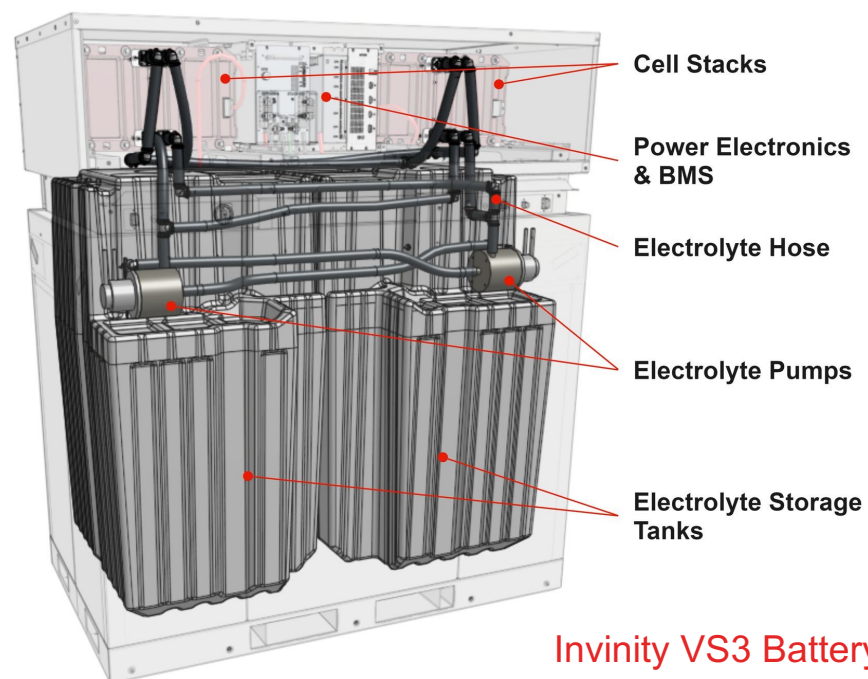
2 Lithium will not meet all energy storage needs

3 Invinity delivers the proven alternative



Workhorse vanadium flow battery (“VFB”)

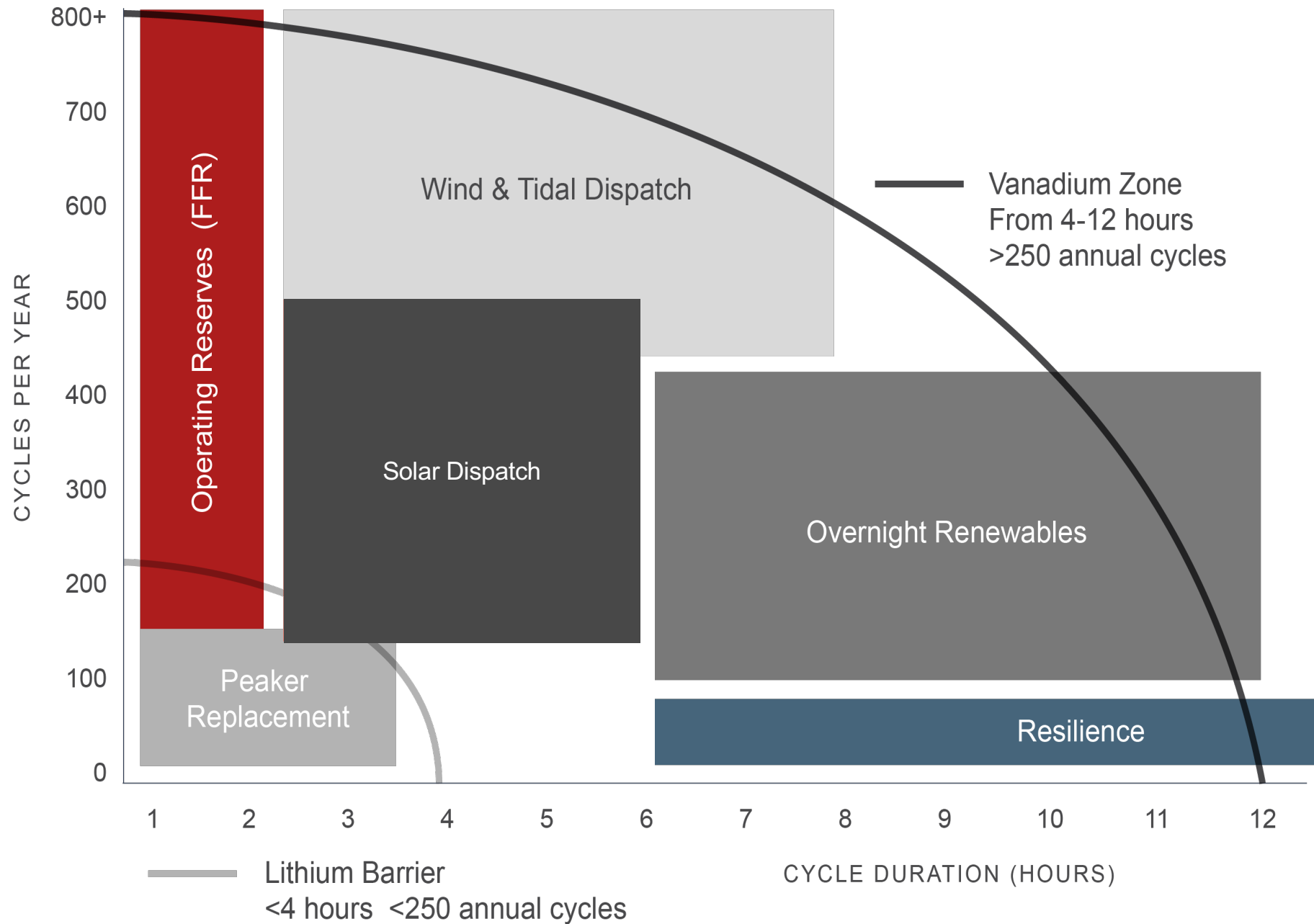
- **Proven** – 65+ MWh operational or in construction
- **Economical** – Lowest total cost of ownership
- **Safe** – Zero fire risk
- **Sustainable** – Widely-available, recyclable materials
- **Durable** – 25 years of high-throughput service



Invinity VS3 Battery Module



The Energy Storage Landscape



High-throughput requirements ...

- VFBs cycle without limitation
- Lithium typically one cycle per day
- VFBs don't degrade with cycling
- VFBs scale economically to 8+ hours

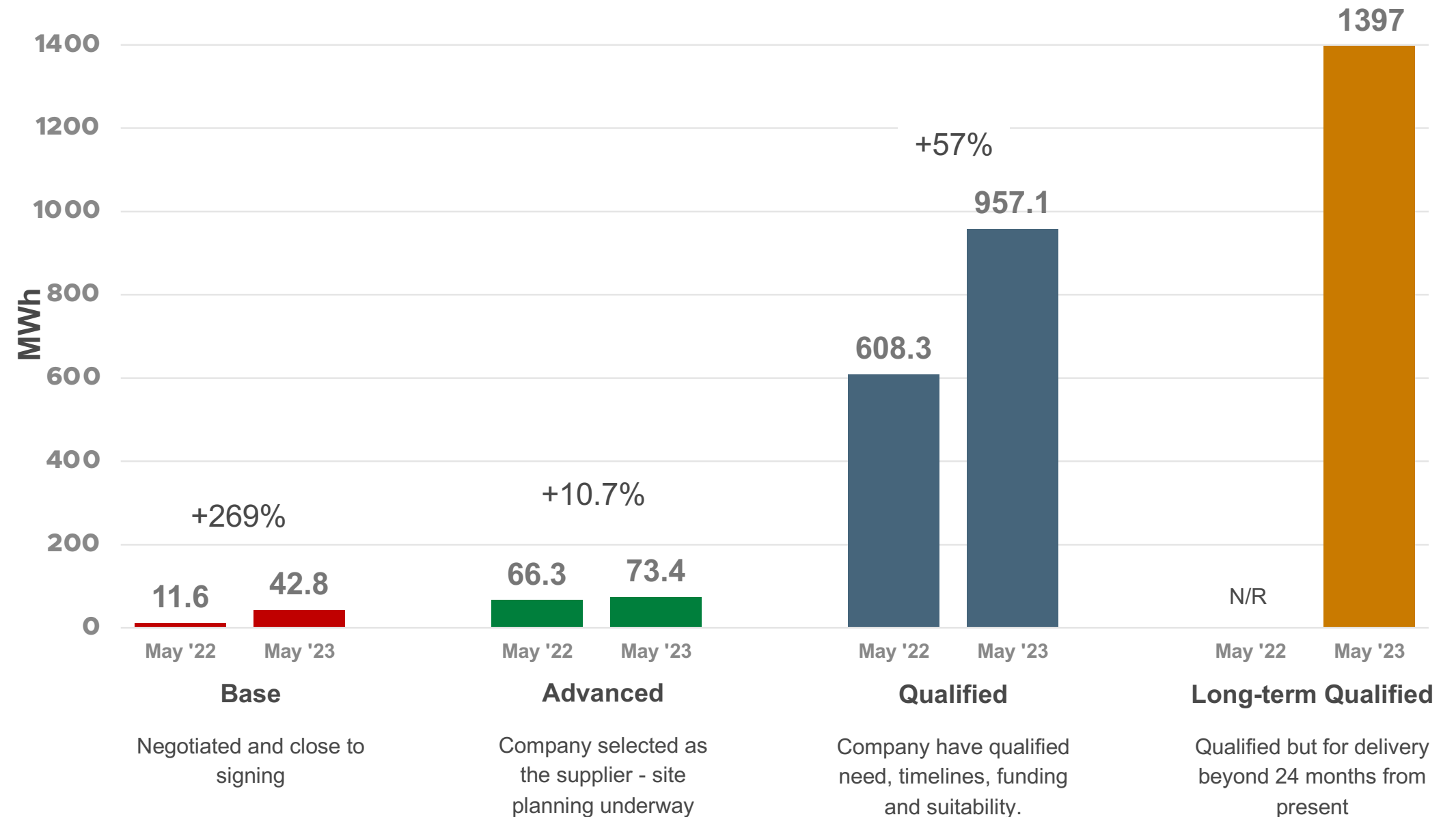
...Opens opportunities

- Delivering renewable power on demand
- Trading in capacity, energy, flexibility, services
- Eliminating bottlenecks on the grid
- Backing up critical infrastructure

June 2023: Sales Pipeline Increases

Growth across all pipeline categories reflecting VS3 traction, Mistral opportunity.

- **Lithium limitations** becoming more clear
- **Policy support** for domestic solutions in core markets
- **Regulation emerging** to enhance long-duration storage profitability.



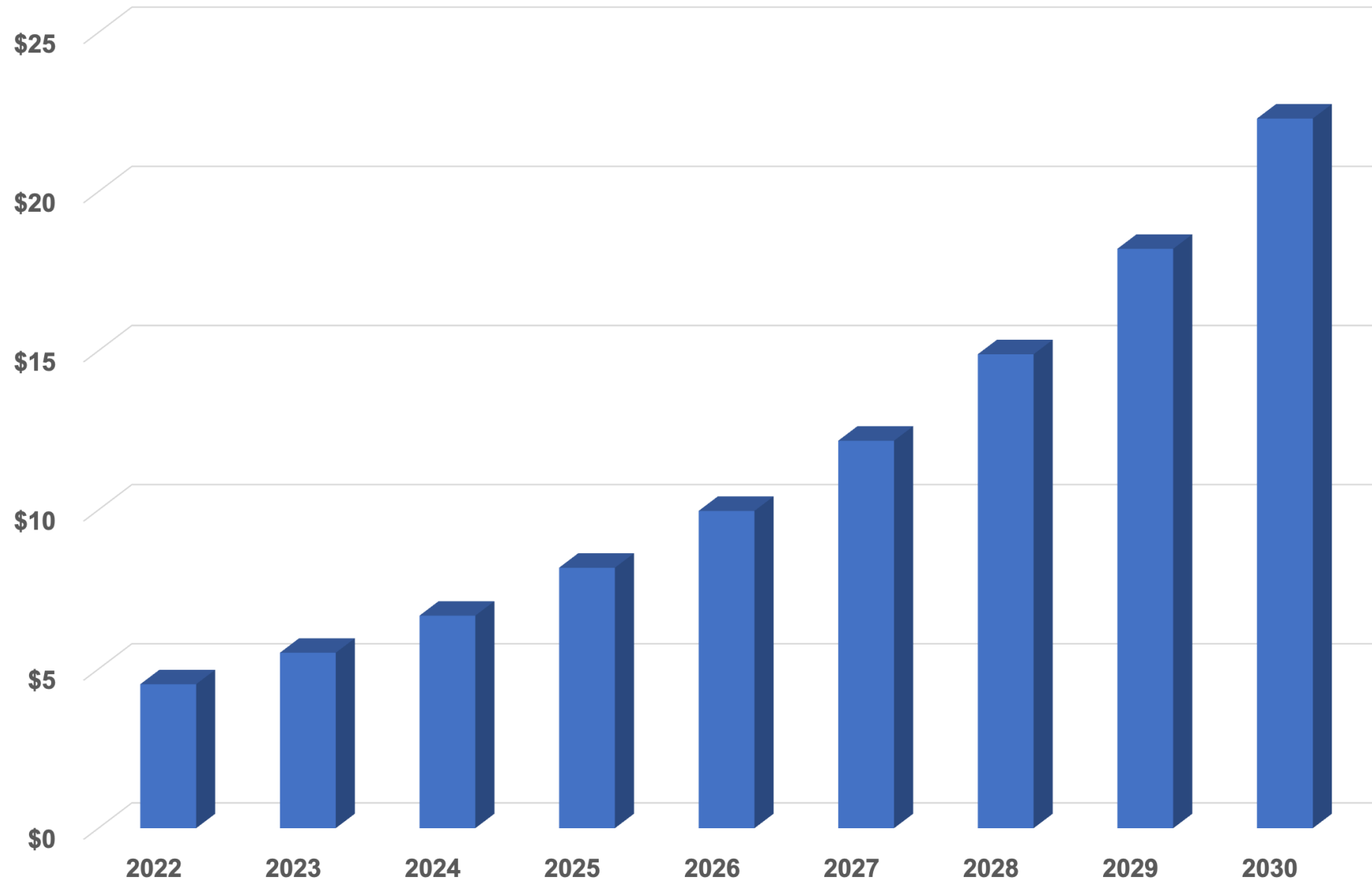
¹ Near term dates in the Qualified categories are where estimated delivery is within the next 24 months. Further term reflects estimated deliveries that are beyond the next 24 months.

² Not reported at time of pipeline publication

³ Increase given from when figure first reported

Flow Battery Total Addressable Market

Flow Batteries Global TAM (\$ Billions)



- Based on average of projections
- Total storage market reduced by BESS (50%) then by time shifting (67%) then by flow battery (50%)

Sources
Precedence Research
Insight Analytics
U.S. Department of Energy
BloombergNEF & WoodMac
LDES Council/McKinsey
NREL
International Energy Agency

Delivered in 2023

Chappice Lake Solar & Storage, Canada

Merchant Trading | 8.4 MWh | 38 VS3s | 21 MW PV



Delivered in 2023

Spencer Energy, Australia

PV Dispatch / FCAS | 8 MWh | 41 VS3s | 6 MW PV



Delivery in process, completion in 2023

Indian Energy, United States

Microgrid | 10 MWh | 44 VS3s | 15 MW PV



Mistral builds on Invinity’s proven core technology. Meeting the **global storage imperative** with class-leading performance, simplified installation, reduced maintenance and **dramatically lower costs**.

	VS3		Mistral	Improvement
Efficiency	67%	➔	78%	17%
MWh Footprint	96m ²	➔	38m ²	60%
Field Wiring Connections	11	➔	4	55%
Tanks and Pumps	12	➔	2	83%
Battery Controllers	7	➔	2	71%
Levelised Cost	\$0.11/kWh	➔	\$0.06/kWh	45%



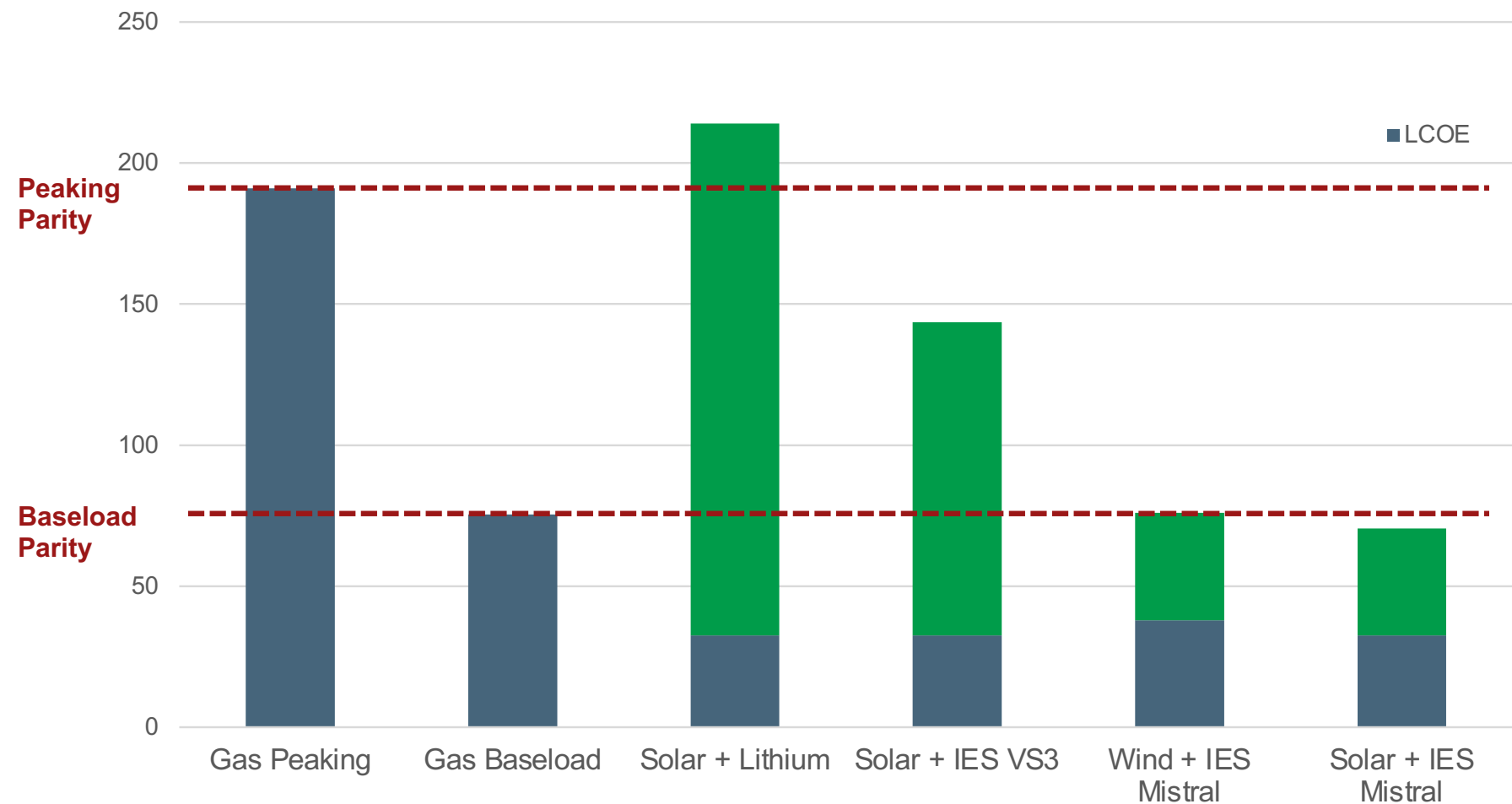
Pilot projects announcement: 2023

First customer ship: 2024

Mistral's Mission: Renewable Baseload

Renewables will replace fuel-based generation when storage hits the right cost. **Mistral will get there first.**

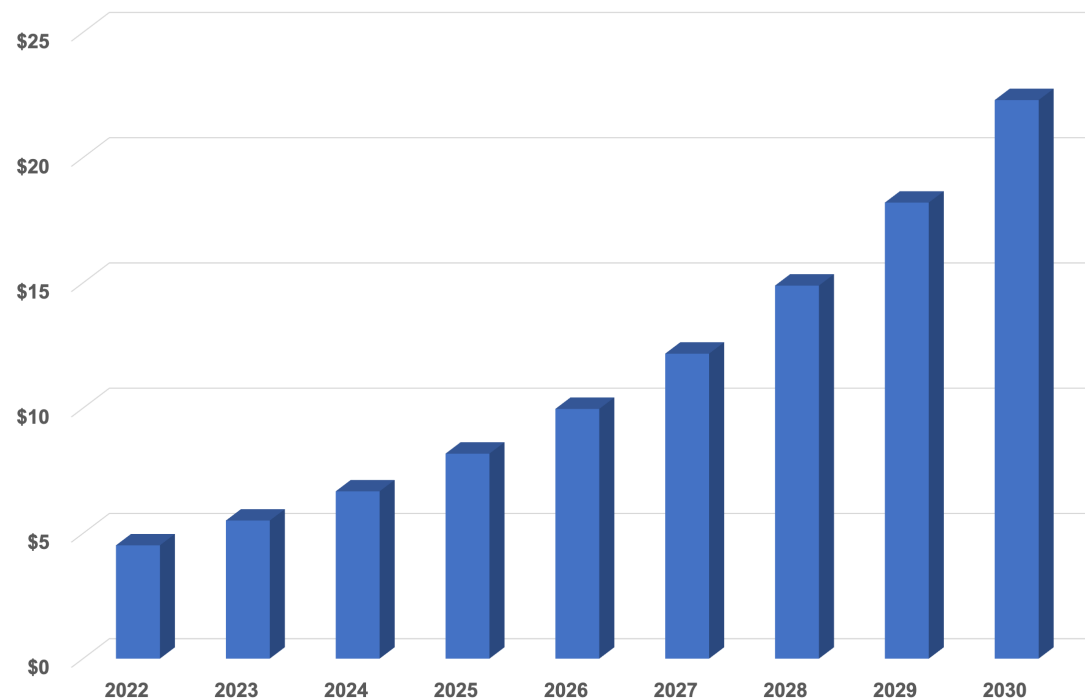
- Renewables provide **lowest cost energy** but require storage to become baseload.
- Ultra-low LCOS requires high lifetime throughput well **above projected future lithium battery performance.**
- Mistral will achieve an LCOS below \$50 per MWh, delivering energy on demand **below average gas baseload costs**
- This step change will accelerate **global energy decarbonization**
- Invinity's customers will see dramatic increases in **both revenue and profitability**



Lithium Data: Lazard LCOS 7.0; **Wind and Solar Data:** Lazard LCOE 15.0; Lazard assumes unsubsidized gas price of \$3.45/MMBTU; IES figures based on company and development partner programme projections.

Summary: Large Market and the Right Product

Flow Batteries Global TAM (\$ Billions)



Accessing a large market

- Global sales staff
- 2 GWh sales pipeline
- Widespread government support

Appropriate product: Mistral

- Proven Invinity technology
- Dramatic improvement in economics
- Ability to scale



August 2023