



# Analyst Day

Andy Marsh, CEO

June 14, 2023

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# Forward-Looking Statements & Disclaimer

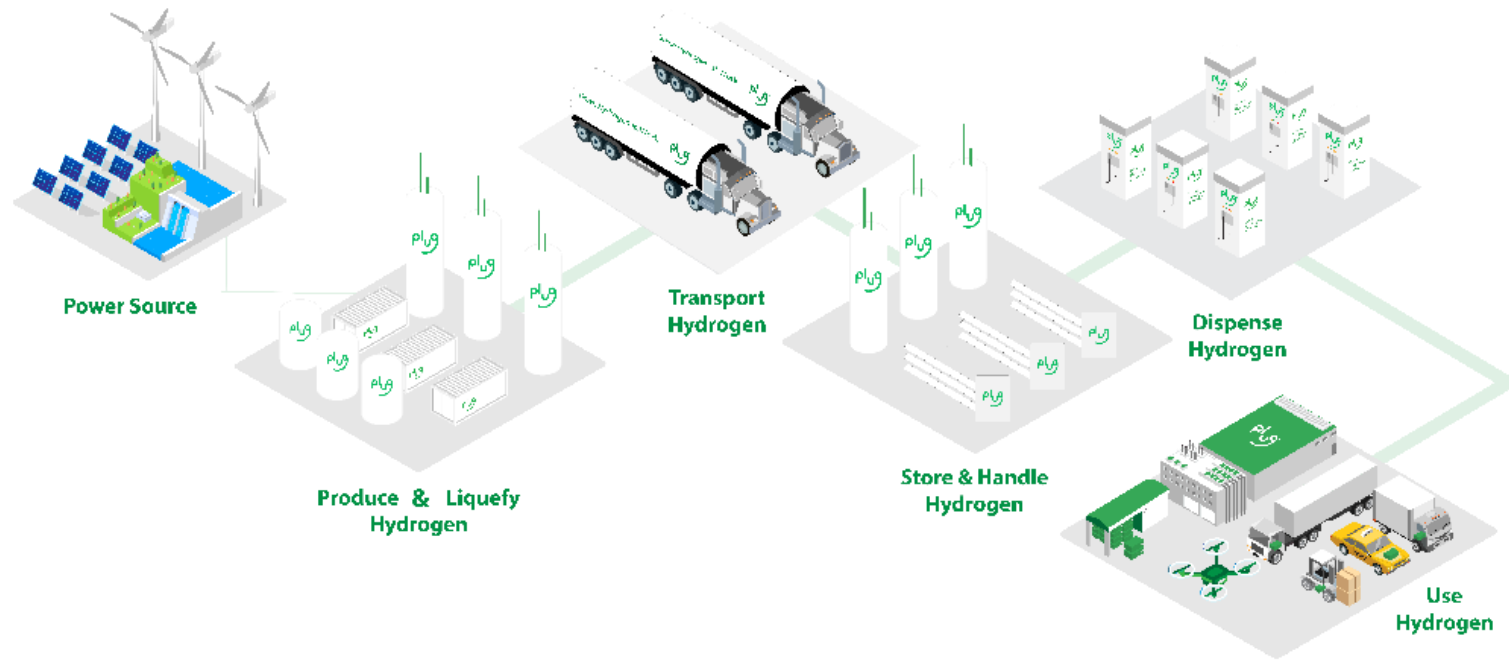
This presentation will include “forward-looking statements” about Plug Power Inc. (“Plug”). These forward-looking statements will contain projections of Plug’s future results of operations, or of Plug’s business or financial position, or other forward-looking statements. We intend these forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements are based upon the current expectations, estimates, forecasts and projections as well as the current beliefs and assumptions of Plug’s management and are subject to significant risks and uncertainties and include, but are not limited to, statements about: Plug’s ability to achieve profitability; Plug’s projections regarding its future financial and market outlook, including its ability to achieve forecasted revenue, gross margin, annual sales, operating income, operating cash flows and OPEX leverage targets; Plug’s expectation that substantial growth will continue and its expectation regarding the underlying drivers of the company’s growth; Plug’s expectation regarding the total addressable market and sales and market opportunities; Plug’s belief that its growth strategies will have the intended benefits; Plug’s belief that hydrogen investments will accelerate revenue growth and the anticipated effect of revenue on the compound annual growth rate; the expected benefits of Plug’s planned equipment improvements, service improvements, and fuel improvements; Plug’s ability to realize growth across multiple business units, including electrolyzers, stationary power, on-road, green hydrogen, and material handling, and its expectation that its applications business will grow by 45% year-over-year in 2023; Plug’s ability to obtain financing for its hydrogen plants; the ability of joint venture partners to complement Plug’s growth; Plug’s expectation that favorable government policy initiatives will continue; Plug’s expectation regarding its liquidity and potential for investments; Plug’s expectation joint effort with Energy Vault will accelerate the deployment of energy storage solutions; the expected timing and forecasts related to its key performance indicators; the anticipated opportunities for financing and investment, including potential projects; the anticipated benefits, capacity, capabilities, and output of Plug’s green hydrogen plants, including those located in Georgia and Finland; the potential for global adoption of hydrogen power and Plug’s electrolyzer products; Plug’s 2030 projections with respect to, among other things: hydrogen output, demand and use of its HyVia vans, stationary products, electrolyzers, fuel cell powered forklift trucks, and manufacturing capabilities; Plug’s ability to meet its anticipated hydrogen outputs by 2025, 2026, 2027, 2028 and 2030; the expansion of Plug’s hydrogen network, including its European and United States expansion, including Plug’s ability to build the first kiloton-scale plant by 2030; Plug’s ability to meet its key objectives outlined for its electrolyzer, cryogenic, and green hydrogen plant businesses; Plug’s expectation that it can grow its revenue and expand margin in 2023 and 2024; the projected growth in Plug’s applications, material handling, and stationary power businesses; the expected addition of pedestal customers in 2023; the expected timing and outcome of Plug’s yard tractor pilot program and green EV charge pilot program; Plug’s ability to capitalize on demand from electric vehicle and new home power generation; Plug’s expectation with respect to the output opportunities for each of its hydrogen plants; Plug’s expectation with respect to ELX scaling; Plug’s ability to deliver each of its supply chain goals and execute its supply chain improvement strategy; Plug’s ability to continue to deliver on expanding its green hydrogen network and capacity; and the scalability of Plug’s products, services, and hydrogen plants.

You can identify the forward-looking statements by forward-looking words such as “anticipate,” “believe,” “could,” “continue,” “estimate,” “expect,” “forecast,” “intend,” “may,” “should,” “will,” “would,” “plan,” “projected,” “target” or the negative of such words or other similar words or phrases. Plug believes that it is important to communicate its future expectations to investors. Such statements should not be read as a guarantee of future performance or results. Such statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in these statements, including that Plug continues to incur losses and might never achieve or maintain profitability, that Plug will need to raise additional capital to fund its operations and such capital may not be available to the company, global economic uncertainty, including inflationary pressures, fluctuating interest rates, bank failure, and supply chain disruptions, and that Plug’s lack of extensive experience in manufacturing and marketing of certain of its products may impact its ability to manufacture and market products on a profitable and large-scale commercial basis. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of Plug in general, see Plug’s public filings with the Securities and Exchange Commission (the “SEC”), including the “Risk Factors” section of Plug’s Annual Report on Form 10-K for the year ended December 31, 2022, Quarterly Report on Form 10-Q for the quarter ended March 31, 2023 and any subsequent filings with the SEC. Readers are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements are made as of the date hereof and Plug undertakes no obligation to update such statements as a result of new information.

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In addition, Plug does not undertake any responsibility for the accuracy of the information provided by Energy Vault and none of Plug and its representatives shall have any liability with respect to the information provided by Energy Vault in this presentation.





We are  
building,  
selling and  
deploying real  
products,  
today!

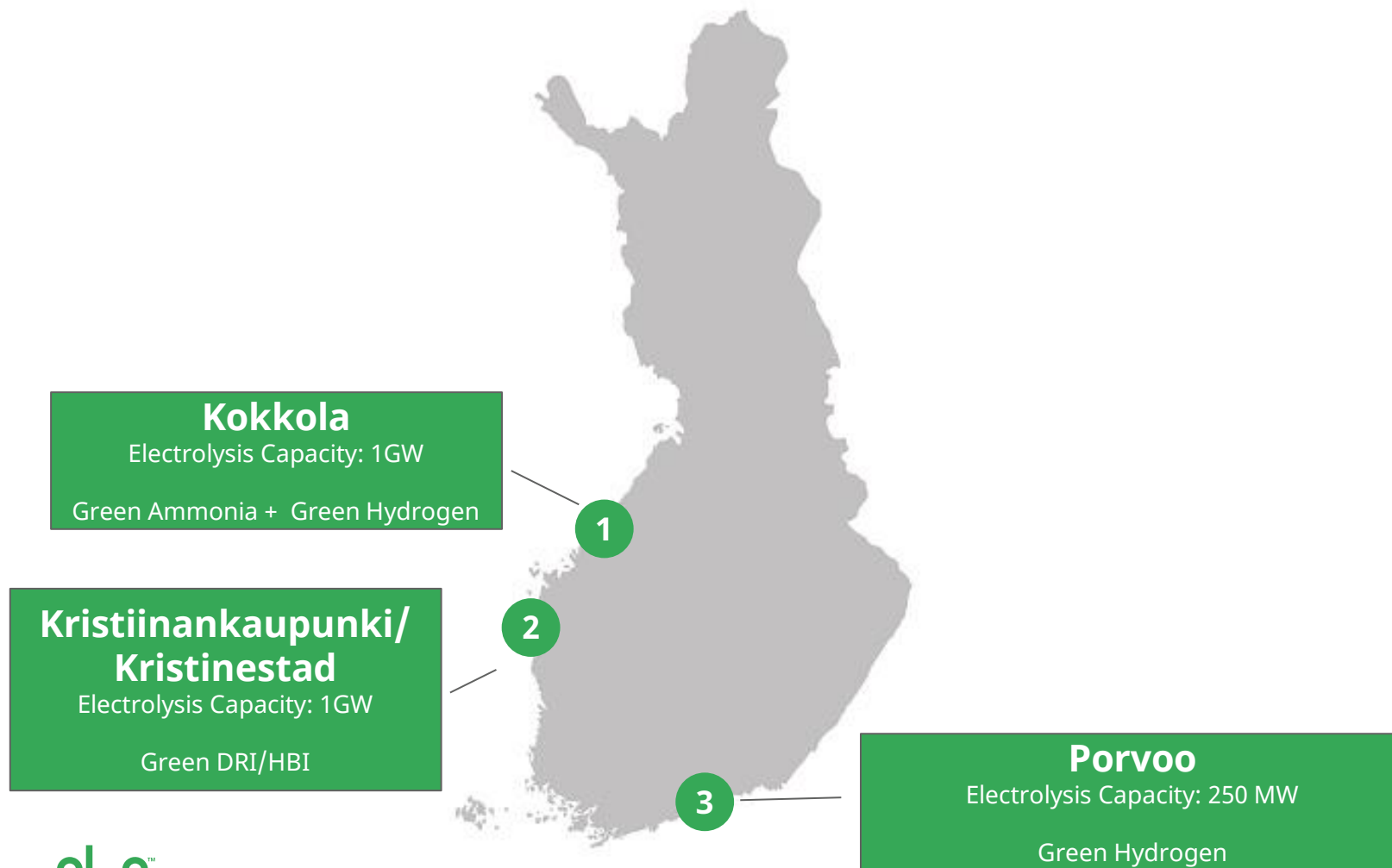


# Plug Green Hydrogen Plant – Woodbine, Georgia



# Plug Green Hydrogen Production Sites in Finland

(FID 2025/2026)



- Production of 850 tons per day of green hydrogen
- 2.2 GW electrolyzer interconnection by the end of the decade
- 1,000 direct jobs and 3,000 indirect jobs
- Contribute to Finland's target to be carbon neutral by 2035
- Support the development of green electricity and hydrogen European backbone pipeline



# 1MW and 5MW Plug Electrolyzers – Global Adoption



# Plug's 1GW Plant: Green Hydrogen at Work



ELX425D



ELX2125D



ELX4250D



# Large-Scale Stationary Power: Manufacturing Ramping





# Plug for Mobility Applications



# Robust Manufacturing in New York State



Vista Tech Park, NY



Rochester, NY





# We are at an inflection point

- Revenue will be between \$1.2B - \$1.4B
- Gross margins positive
- Broad span of products with leading edge manufacturing capabilities
- 25% of our revenue will be European this year
- 60% of our revenue will be non-material handling
- A policy climate strongly supporting our business
- Unmatched in the industry



# The Plug World we are Building for 2030

- Over 2,000 T of hydrogen per day
- 100,000 HyVia vans on the road
- 1GW of stationary products deployed
- Shipping 5GW of electrolyzers per year
- 500K fuel cell powered forklift trucks
- Manufacturing capability to support 10GW of fuel cells and electrolyzers



Markets and  
opportunities  
that allow us  
to continue  
to dream!





Green Hydrogen at Work<sup>TM</sup>



# Applications Business Unit

Jose Luis Crespo,  
General Manager Fuel Cell Applications/Global Accounts



Our Applications business is projecting to grow by 45% YOY in 2023 propelled by:

The value our technology brings to customers

Low carbon and global electrification trends



# Material Handling drivers for growth

Plug's productivity value proposition is getting stronger

Grid constraints are now part of our value proposition

Plug's mid-market (around 50Kg/day) solution



In 2023 already signed 2 new pedestal customers in Europe (Stef and Asda) and 1 new pedestal customer in the US

Working on another two in 2023 almost doubling the number of pedestals



# Other Mobility Activities



Successful introduction of the  
Hyvia Van in Europe

Working with Geely and SK in  
Korea on busses

Yard tractor pilots in Q2





# Stationary Power

Grid constraints & regulations driving increased demand for zero-emission H<sub>2</sub> generators

+\$30M in the first year of product introduction



Green EV Charge  
Pilots in progress



Prime Power  
Energy Vault  
SK-Power Generation



Enhanced (Back-Up) Power  
Microsoft

## Green EV Charging

- Large fleets with grid availability & deployment timing constraints



## Prime Power

- Utility Grid Support, Energy Arbitrage, Peaker Plants
- CA PSPS solutions



## Enhanced Backup Power

- Zero-Emission Datacenter
- Displace Diesel Generators
- Achieve Sustainability Goals



# +\$1T Addressable Market



Enhanced  
Back-Up Power

\$30B  
Generator  
TAM



Green EV Charge

\$1B BEV  
Fleet Charge  
TAM



Prime Power

\$1T Grid  
Parallel  
TAM



“The proliferation of electric vehicles will be the biggest disrupter to the electric grid since the invention of the air conditioner.”

*- Smart Electric Power Alliance*



Putting that in perspective...

230 TWh

Annual energy demand from  
electric vehicles in 2030

\* Source: McKinsey

230 = 21

terawatt-hours

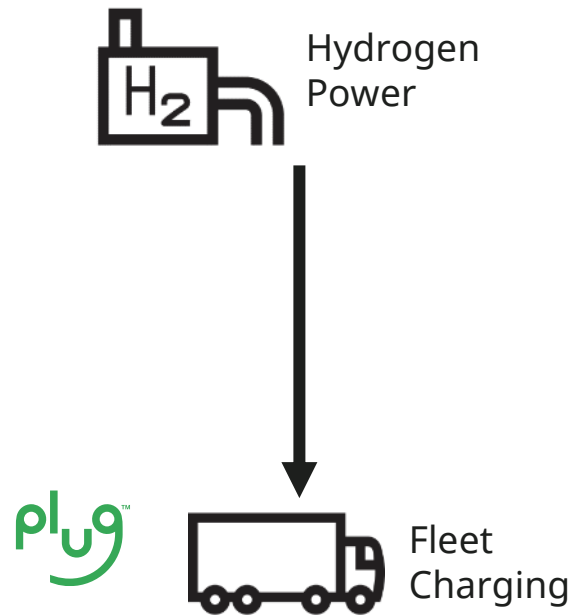
million new homes

The US builds approximately 1.3M  
homes per year



# Green EV Charging

Grid constrained  
locations



# For Plug this is a Green H2 business

1MW generator consumes  
65Kg/hr

Continued Power: 1.5T/day

EV Charging 10hrs/day:  
650Kg/day





# Energy Vault selects Plug Power to Supply 8 MW of Hydrogen Fuel Cells as part of hybrid microgrid back-up system for PG&E and the city of Calistoga.

- Customer:



- MW: 8.5

- Duration: 48 up to 96 hours

- COD: June 2024



**2,000 Customers**

Designed to provide resilient power to local customers and critical community infrastructure within the City of Calistoga's existing microgrid.



**100% Carbon Free (RPS compliant)**

Fully aligned with California's Renewable Portfolio Standard (RPS), helping to further the state's decarbonization & sustainability goals.



**30-50 Skilled Labor Jobs**

Creates on-site construction jobs & associated economic benefits to the local community for the duration of project development.

CALIFORNIA  
NAPA COUNTY  
CALISTOGA

# Plug Power and Energy Vault sign MOU to accelerate the deployment of economical and sustainable long duration energy storage solutions

- **Plug** selects **Energy Vault** as the integrator of choice for its customers that demand long duration storage and micro-grid solutions
- Energy Vault will license to Plug its Energy Management System (Vault-OS and Optimizer) that will increase the financial return of Plug's customers
- Energy Vault will optimize its ultra-long duration solutions with Plug's fuel cells and electrolyzers

The joint effort will address the rapidly growing multi day and micro-grid energy storage segment with a ***SAM over five years of +100GWh (+\$10Bn)***

***(equivalent to 100 “Calistoga” type systems over five years)***





# Energy Vault | Energy Management System Differentiation

Only software solution with modular and flexible architecture that can implement and integrate any combination of assets across **all three solution layers**:

## Applications

## Storage technology

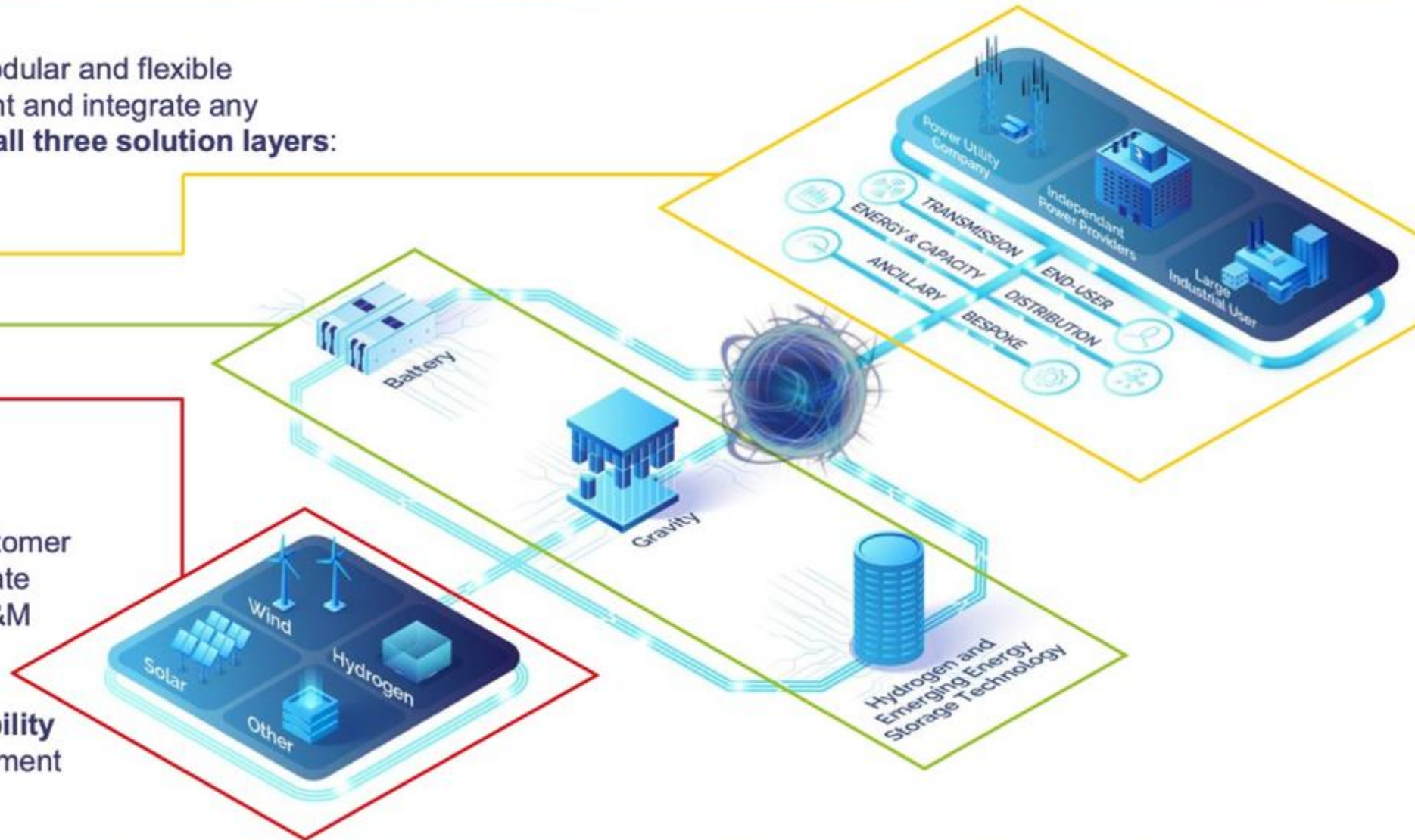
## Generation technology

### Configuration Flexibility

Delivers optimized cost to customer with more use cases to generate economic return and better O&M functionality to reduce costs

### Inherent Agility and Adaptability

Future-proofs customer investment





# NRGV: the only pure play storage company with full coverage of durations (S-L-XL) under the same tech neutral Energy Mgmt Software



**ENERGY VAULT**  
Enabling a Renewable World

## Mission

To identify, develop, and bring to market the most economical and sustainable energy storage solutions to maximize the financial and environmental value of our customers' energy projects.

### Short Duration

#### B-VAULT™

MODULAR AND SCALABLE BESS PLATFORM  
(AC BLOCK: STRING INVERTER, DC BLOCK: EXTERNAL INVERTER)



TEXAS (USA) | MW: 100 | MWh: 200



CALIFORNIA (USA) | MW: 65.8 | MWh: 275.2



CALIFORNIA (USA) | MW: 30 | MWh: 20



NEVADA (USA) | MW: 220 | MWh: 440



#### CUSTOMIZED SOLUTIONS

- Containerized Li-ion BESS solution
- Highly modular (up to GWh scale)
- Customized for output, battery chemistry, OEM model



#### FUTURE PROOF DESIGN

- Designed to manage market, grid, and regulatory changes
- Simplified hardware architecture enables scalability and technology flexibility



#### SOPHISTICATED SOFTWARE

- Proprietary cloud-based EMS plant control
- Market participation, analytics, and asset management functionality
- Meets cybersecurity standards of leading utilities and ISOs



#### LIFETIME VALUE

- Project contracts tailored to long-term financial goals
- Long-term service offerings with performance guarantees and add-ons

### Long Duration

#### G-VAULT™



100 MWh GESS. RUDONG, CHINA

Ground breaking EVx™ gravity energy storage system (GESS) to support and balance China's national energy grid

### Multi-Days

#### H-VAULT™

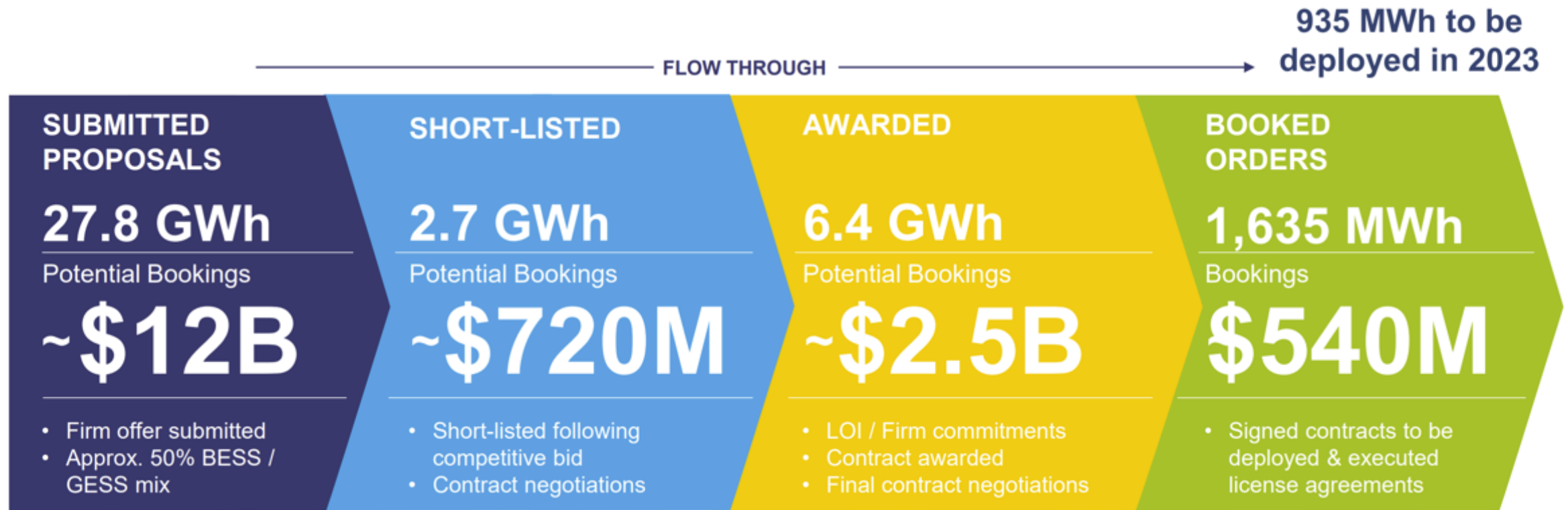


HYBRID ENERGY STORAGE SOLUTIONS

Leveraging hydrogen and other emerging technologies to address grid resiliency and economic dispatch needs

# Exponential growth fueled by the tech-neutral solutions approach validated by largest utilities and IPPs

- 40% growth q/q in the most recent Q1 2023 results in Project Awards and overall near term Sales Funnel



- 2023 Financial Guidance Supported by 1,635 MWh of booked orders and 6.4 GWh of awards
- Total Signed Contracts & Awards are approximately 8 GWh, representing more than \$3B of potential revenue





Green Hydrogen at Work<sup>TM</sup>





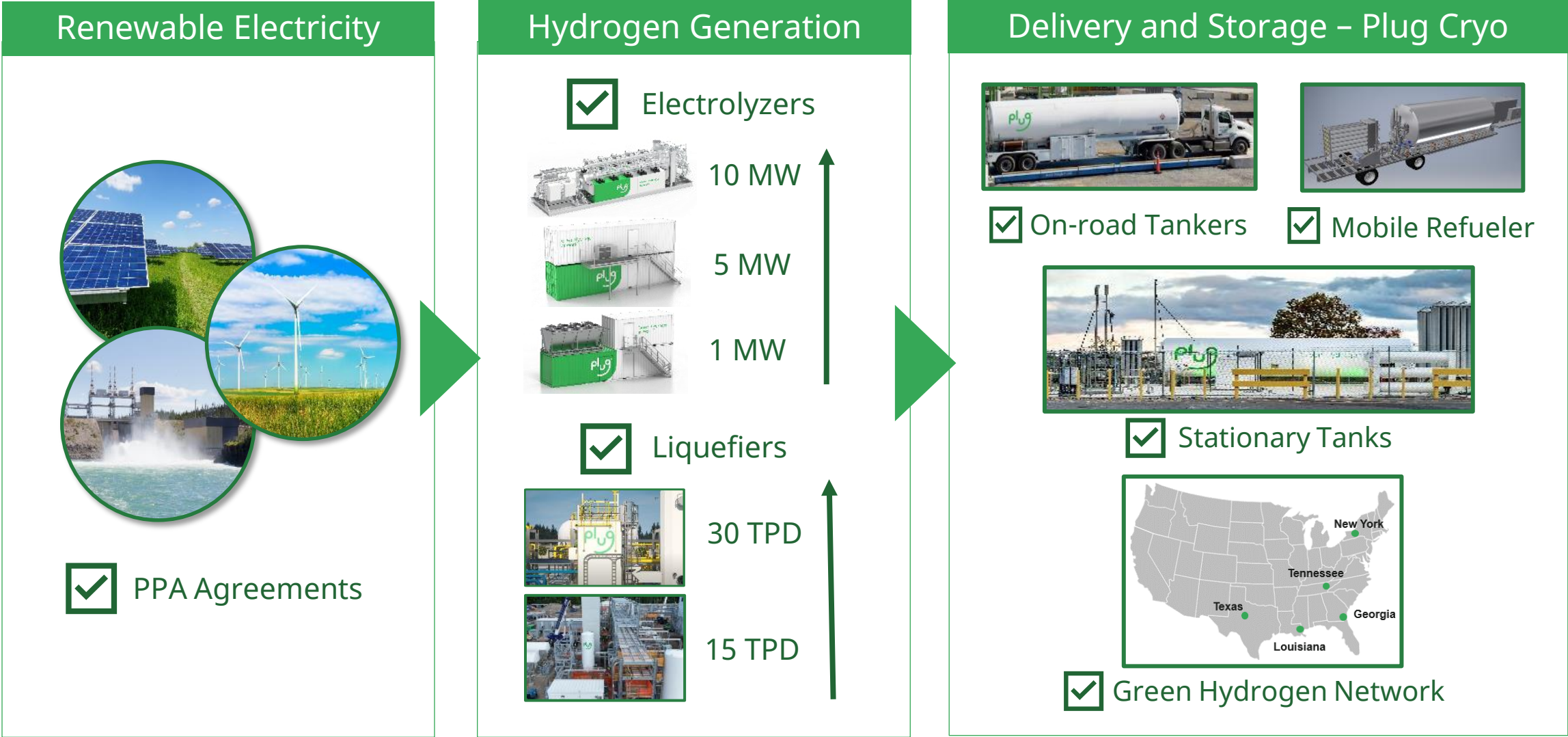
# Energy Business Overview

Sanjay Shrestha, CSO and General Manager of  
Energy Business

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# Controlling the Green Hydrogen Ecosystem



Portfolio of offerings and generation assets = robust customer solutions



# Peachtree Green Hydrogen Plant - Camden County, Georgia



Jul 2022



Sep 2022



Dec 2022

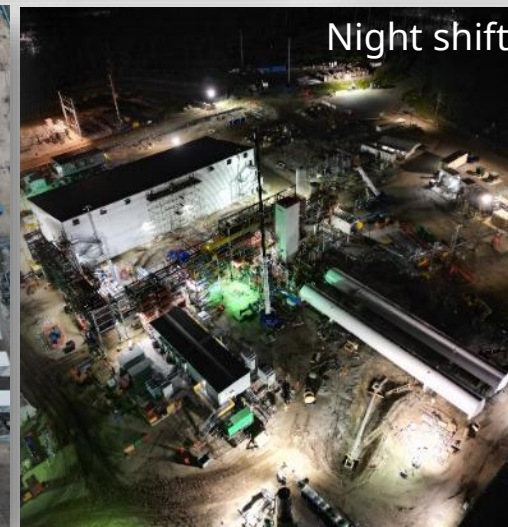


Mar 2023

- 15 TPD  $\text{LH}_2$  (Future expansion to 30 TPD)
- Grid connected
- In-person sales showcase: product portfolio in action, customer training, construction details and planning
- Design optimization and EPC benefit for other plants
- Start-to-finish timeline of 12 months versus an industry average of 48 months



May 2023



Night shift



Pipe racks



LIQ Cooling Towers

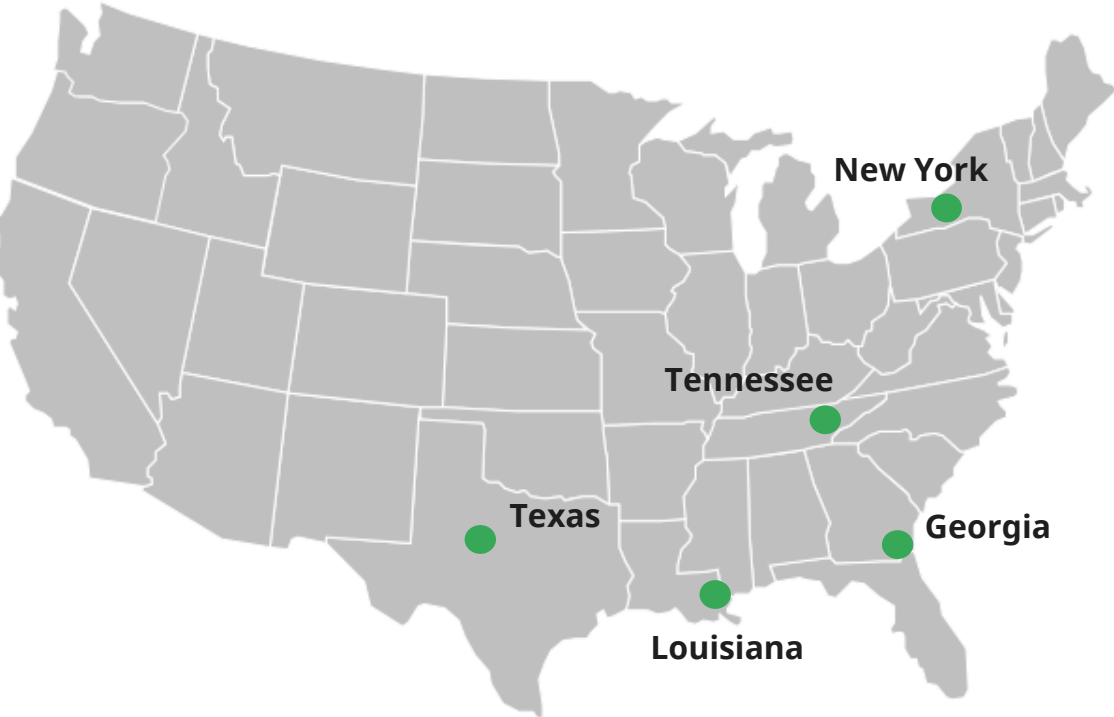




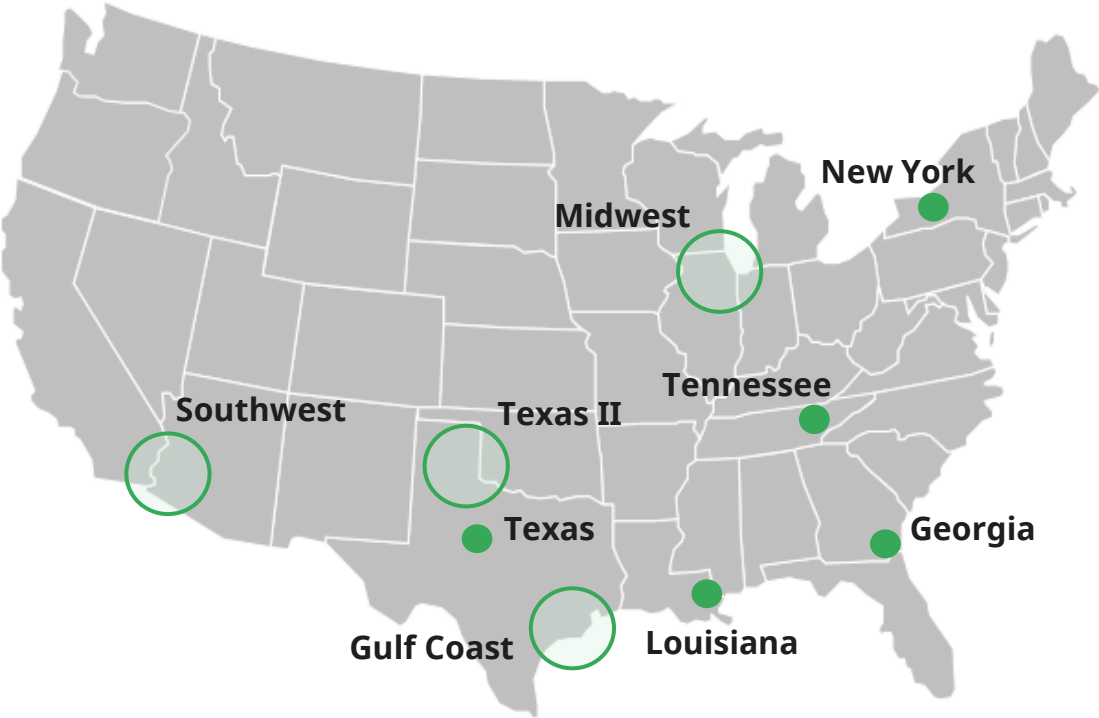
# Path to 500 TPD by 2025

2023

Projects Currently Under Construction and In Operation



YE 2025 – 500 TPD



# Plug's Hydrogen Delivery Network and Logistics Capabilities

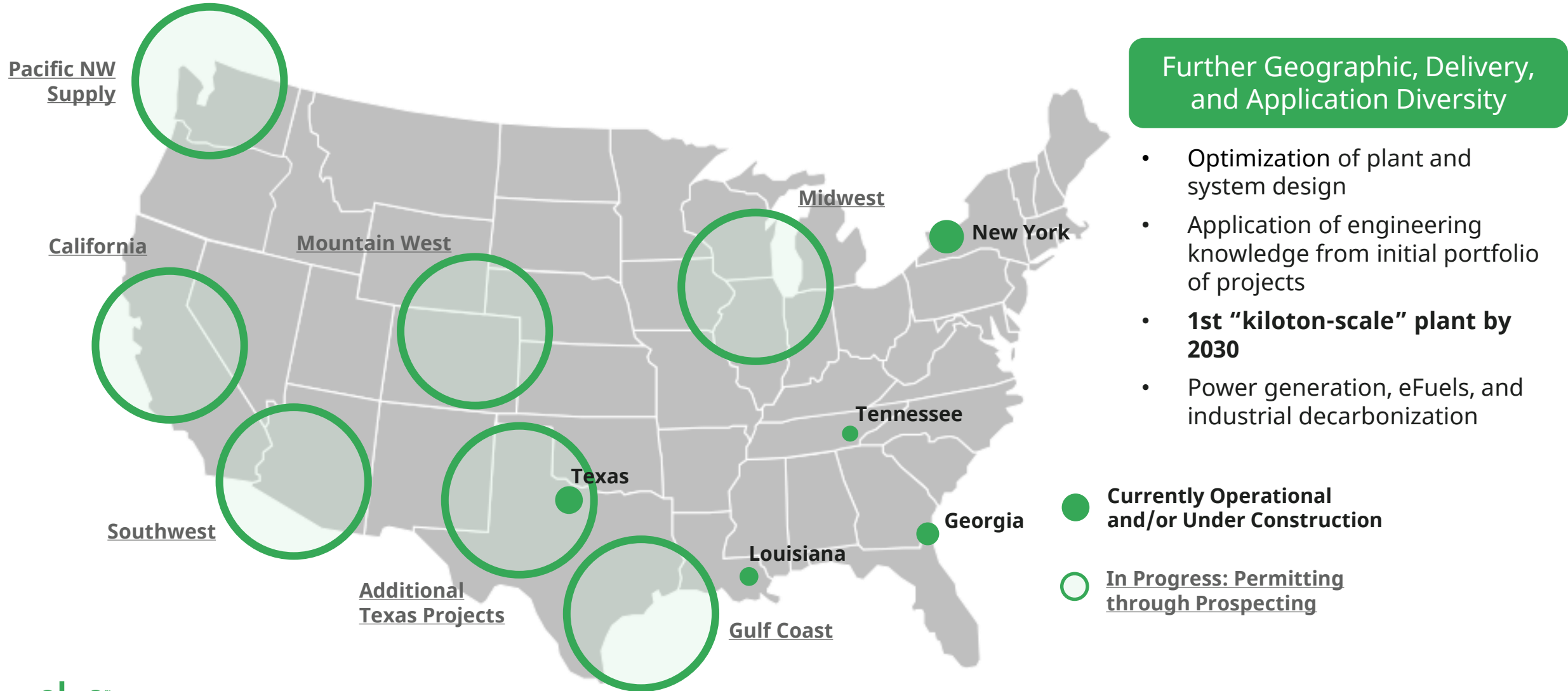


- **Delivery economics come down to demand:** how much hydrogen are you consuming daily and how far do you need to transport it?
  - Plug operates a robust hydrogen delivery network serving over 200 customer sites
  - **With the largest fleet of HPTT in North America** and 40 liquid tankers
    - One liquid hydrogen tanker contains more hydrogen than sixteen standard gas tube trailers
- Innovative equipment designs allow for a range of industrial, commercial, and chemical applications that use hydrogen

The Plug hydrogen tanker is the largest and lightest trailer ever manufactured, with unprecedented over-the-road payloads



# Green Hydrogen Generation Network Beyond 2025





# Generation Roadmap to 2030

## Path to 300TPD by 2027

50 TPD by year-end 2025

120 TPD by year-end 2026

300 TPD by year-end 2027

500 TPD by year-end 2028

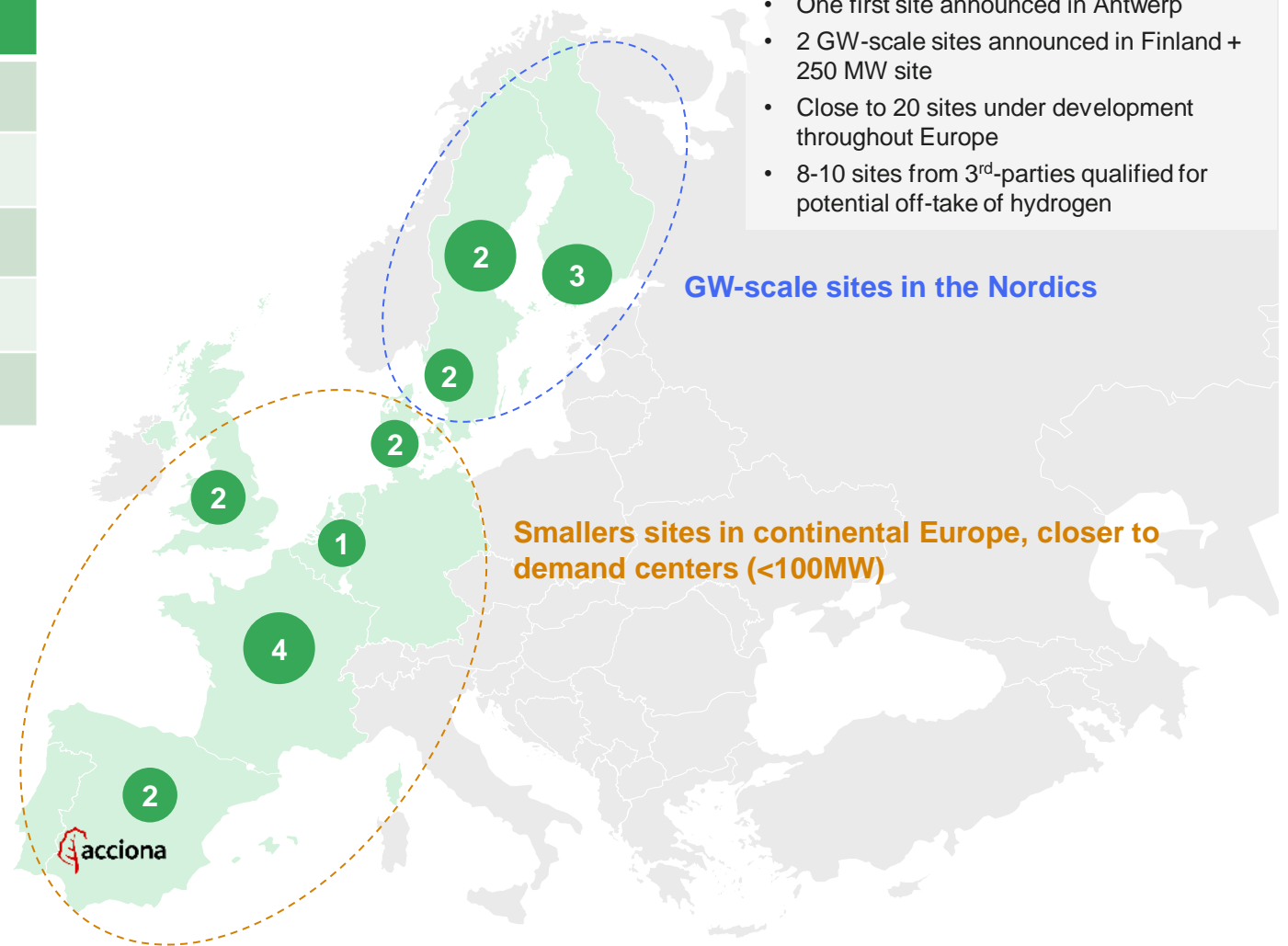
1,500 TPD by year-end 2030

### Hydrogen generation sites

- One first site announced in Antwerp
- 2 GW-scale sites announced in Finland + 250 MW site
- Close to 20 sites under development throughout Europe
- 8-10 sites from 3<sup>rd</sup>-parties qualified for potential off-take of hydrogen

### GW-scale sites in the Nordics

### Smaller sites in continental Europe, closer to demand centers (<100MW)



# Energy Business – Key Objectives

## **Electrolyzers:**

- Successfully execute on existing backlog of product and large project business
- Build strong bookings for both product and large project business globally

## **Cryogenic Business:**

- Strong growth in liquefier, hydrogen trailer and tanker businesses

## **Green Hydrogen Plants:**

- Georgia plant reaches 15TPD of liquid hydrogen production
- Project execution at Louisiana hydrogen plant
- Commission/construct multiple additional green hydrogen plants

Collectively results in substantial revenue growth and meaningful margin expansion exiting 2023 and into 2024





Green Hydrogen at Work<sup>TM</sup>





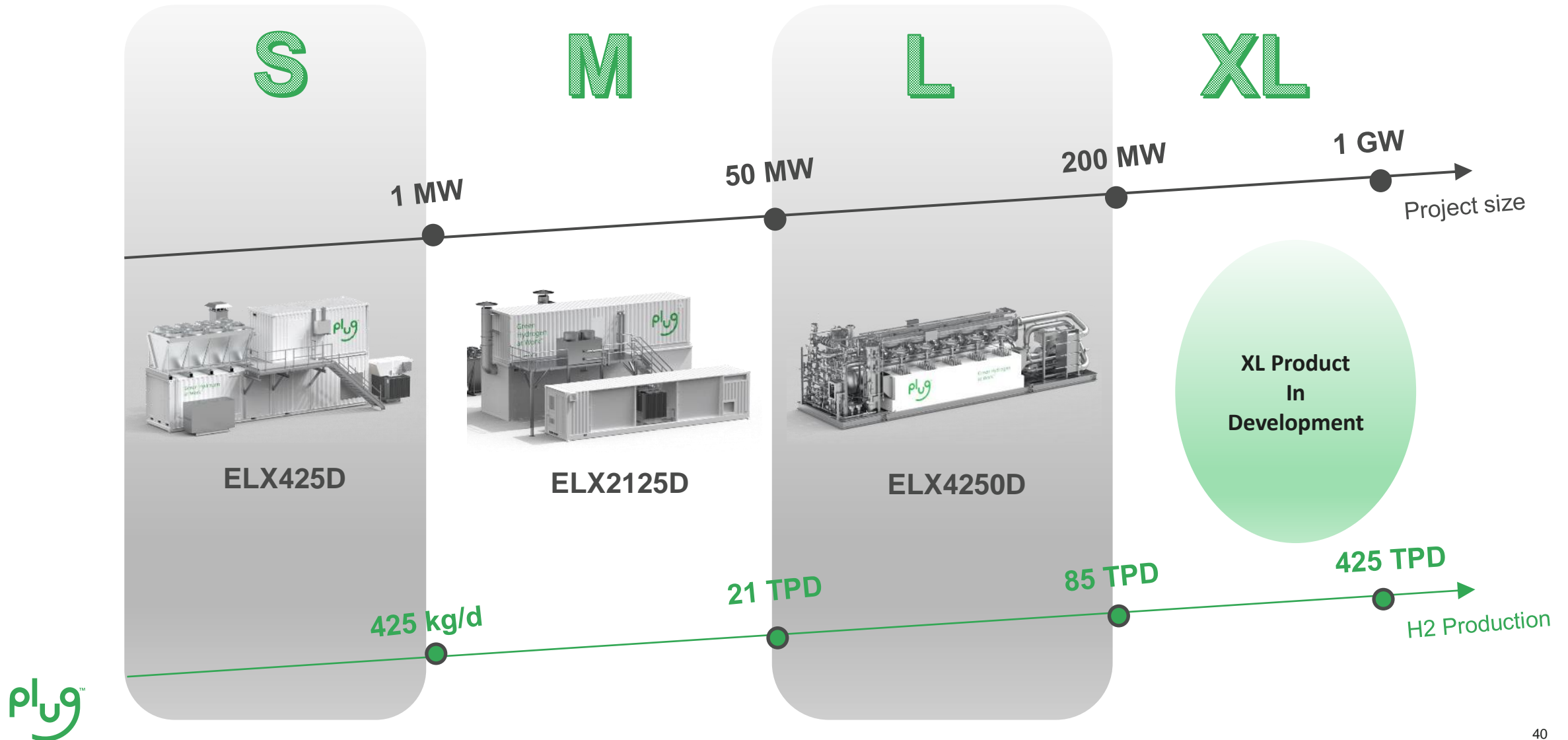
# Electrolyzer Discussion

Bruno Forget  
VP, Strategy & Operations Management

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# Products by Scale of Opportunities





# Deployments Already Producing Globally

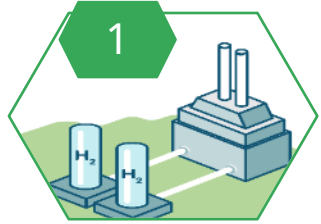


Until the end of this decade, it is all about  
**Speed, Capability & Capacity!**





# Market Focus for ELX Scaling - Twelve Month to FID Opportunities >\$4B

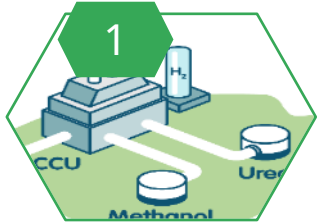


## Industrial (Refining, Steel, Semi-Con)



- Industry will go Green

- 5MW Product success
- EX: MOL, Ardagh, Apex, Hydro, Havrand, Irving, India Refiners, Linde

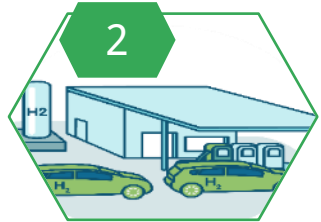


## Green Chemicals & Fuels (NH3, MEOH, SAF, SNG)



- “Go big or Go home” market.

- Ideal for ELX for Scaling
- Infinium, Fertiglobe

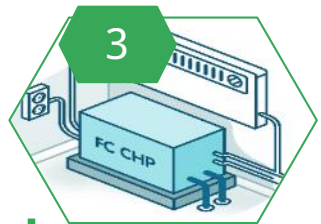


## H2 Mobility (HDV, LDV, MHE)



- Plug is the leader

- 1MW Product Success & Enterprise Sales Opportunities
- Atco, Ark, Hiringa, Lhyfe, Ganzair, Hyvia



## Power & Energy (Power, Back-up/ Peak, PtG)



- Plug Ecosystem

- Enterprise Sales Opportunity
- Utility NZ, Amazon

# Plug's Supply Chain: Four key pieces to Plug's successful supply chain execution



# Plug Uniquely Positioned To Deliver on Robust Prospects:

## **Dedication to Green Hydrogen → Green H2 at work today !**

- Plug created its own Demand (Worlds largest Merchant H2 user)
- To satisfy this demand, Plug is building with its own technologies a Green H2 plant network\*
- **Systems** via Global Network of Fabrication Partners
  - Total Capacity for 1.8GW per year = 255 Systems and growing

## **Execution Capacity & Flexibility**

- Dissociated System & Stacks manufacturing
  - Stack: Gigafactory Operating at GW level today.
  - System: Regional, flexible, scalable, proven compliant manufacturing network + Strong dedicated experienced team



- Globally driven Supply chain





Green Hydrogen at Work<sup>TM</sup>



# Finance Update

Paul Middleton, CFO

# What Will Plug Look Like in 2026 and 2030?

2026

**\$5B+**

In Annual Sales

**30%+**

Gross Margin

**17%+**

Operating Income

2030

**\$20B+**

In Annual Sales

**35%+**

Gross Margin

**20%+**

Operating Income

A Global Hydrogen Ecosystem Market Maker Poised for Continued Substantial Growth

Diversified  
Technology Company

Global Hydrogen  
Solution Platform

Generating Significant  
Earnings & Cash Flows

Differentiated Market  
Position in Large Global  
Markets





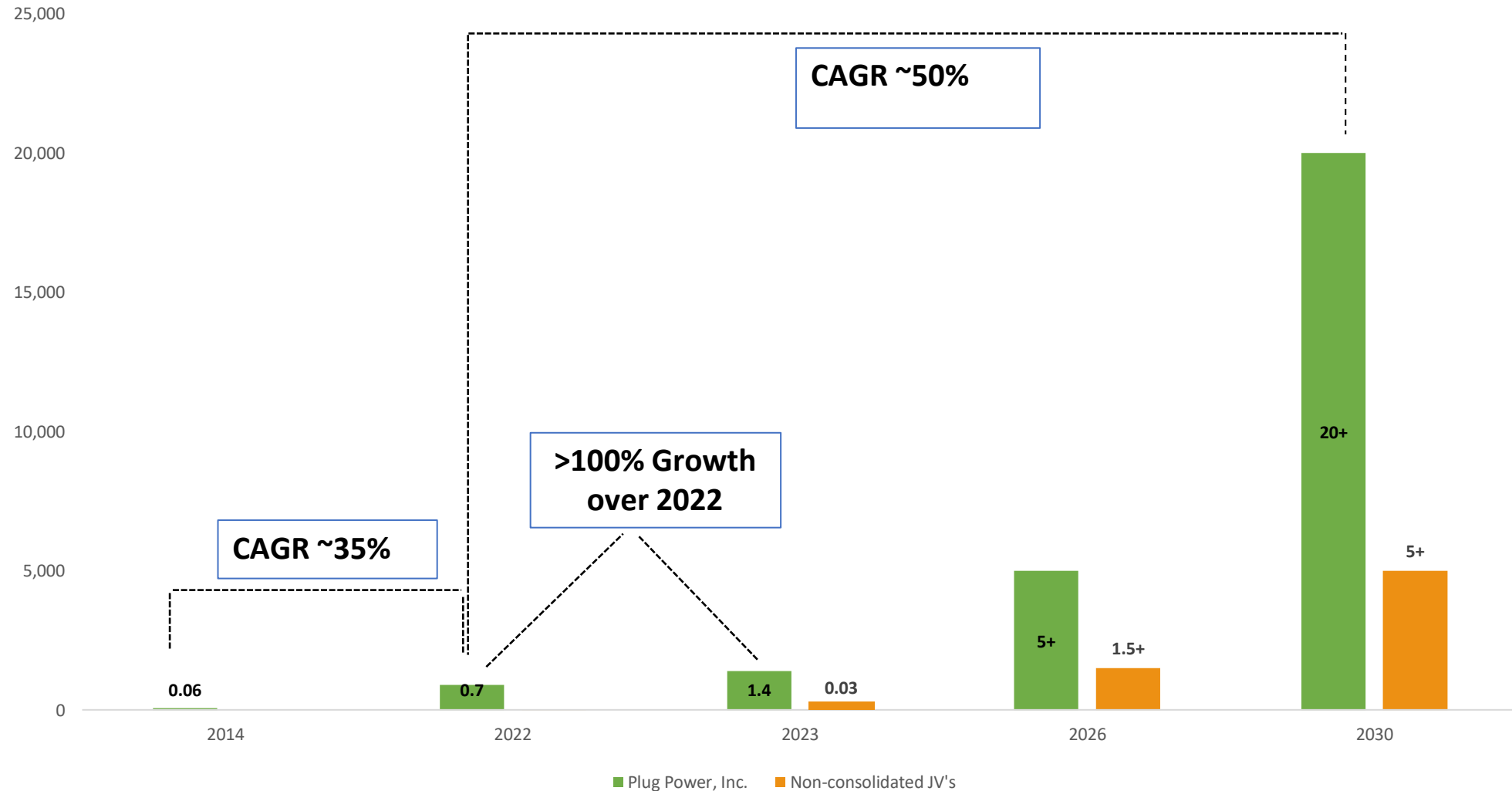
# Plug's Building Blocks to Drive Growth

1. Large global markets accelerating the hydrogen economy
2. Broad product platform and traction with industry leaders
3. Green hydrogen platform will be a new market and driver in other product lines
4. Investing in capabilities to expand industry and geographic footprints
5. Driving the cost curve through overhead leverage, supply chain, & design enhancements

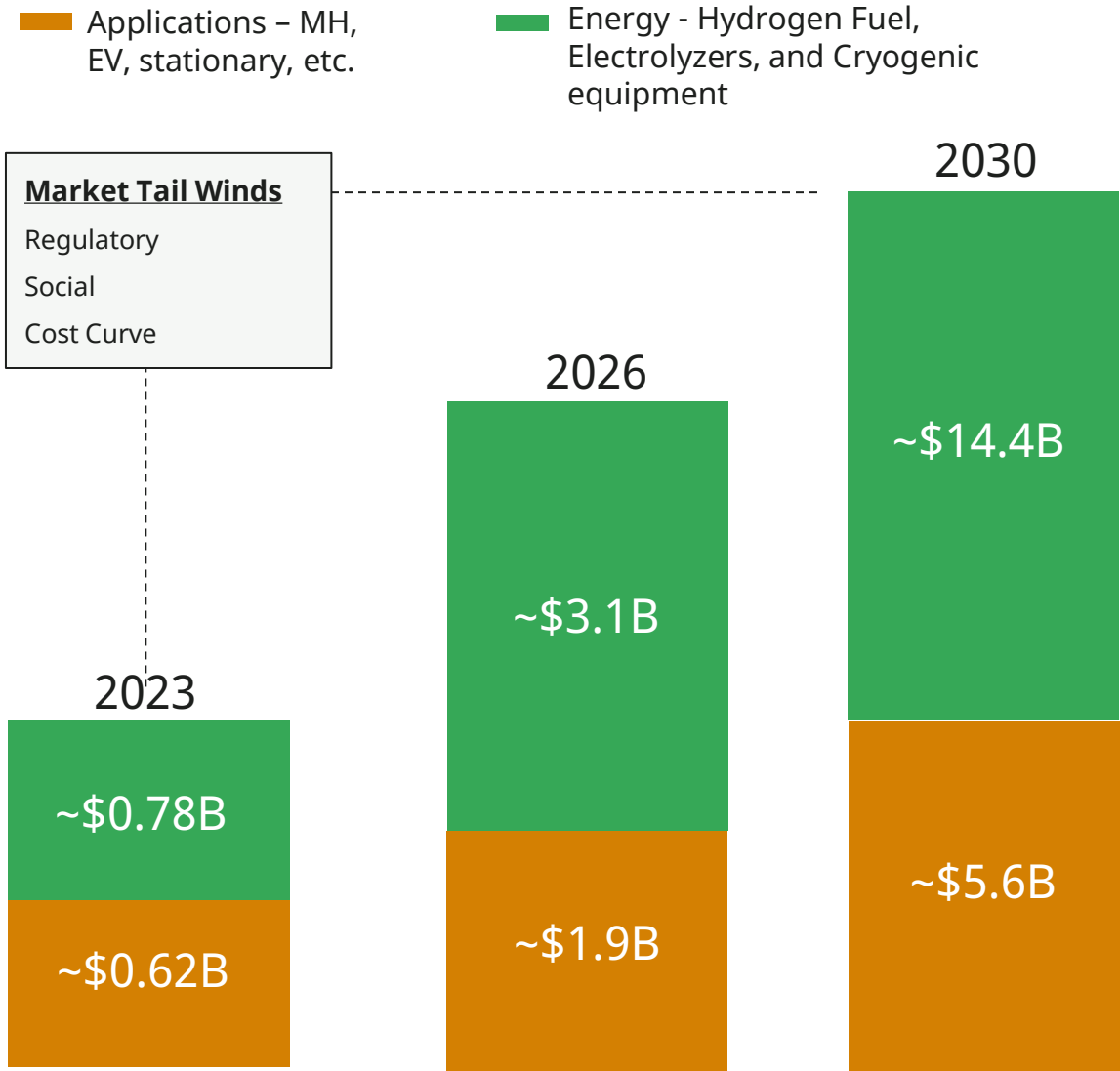


# Hydrogen Investments Accelerating Revenue Growth

(\$s in billions)



# Revenue Forecast Outlook



## Action Plans

- Expand market channels - customers & partners
- Grow new markets – EV, Stationary Power, Aerospace
- Leverage global market for electrolyzers
- Build on cryogenic platform & converge on the pipeline
- Utilize flexible business models
- Develop new hydrogen solutions to accelerate adoption
- Cross sell using full hydrogen solution offering
- Scale capabilities (supply chain, mfg, green H2, etc.)
- Continue investment in cost downs & improved performance



# 2026

Target business model

>30% gross margin

~13% OPEX leverage

Continue innovation

Vertical integration

Supply chain leverage

OPEX leveraging



# Gross Margin Map from Point A to Point B

## Equipment Improvements

Higher volume = better leverage of fixed cost & supply chain pricing

Vertical integration to increase reliability and reduce costs

Innovation leading to simpler design of fuel cells

## Service Improvements

Stack enhancements to increase reliability and reduce costs

Utilizing analytics for predictive maintenance & performance improvement

Leverage labor with cluster of customers in a dispatch model

## Fuel Improvements

Hydrogen generation vertical strategy yields improved margins

Infrastructure design improvements increasing site efficiency & reducing costs

New PTC Incentives

# Success Yielding Improved OI and Operating Cash Flows (% of Revenue)

## Drivers

---

- ✓ Sales & Operating Margin Growth
- ✓ Core Business is not Capex Intensive
- ✓ Developing the Supply Chain Enables More Effective Working Capital Strategies
- ✓ Growth Drives More Efficient Cost of Capital Solutions

## 2026 Target Business Model

Operating Income	17%
Operating Cash Flows	>15%





# Substantial Growth 2023

Electrolyzers

Stationary power

On-road

Green hydrogen

Material handling



# Key 2023 Execution

- Successful execution of the electrolyzer business systems
  - Building systems at scale
- Building green hydrogen plants beyond Georgia
- Start ramp of stationary products for expansion in 2024
- Develop financing solutions for the hydrogen plants
  - Project equity and/or debt solutions
  - Corporate level debt solutions
  - No dilution of present shareholders
- Continual focus on government policy



# Near Term KPIs for 2023 Forecast

- |  |                       |
|--|-----------------------|
| 1. Ramp ELX stack manufacturing to > 100 MW/month            | DONE (May 23 > 100)   |
| 2. Deploying first largescale stationary solutions           | Within 30 Days        |
| 3. Commission 1 <sup>st</sup> green hydrogen plant (Georgia) | Within 30 Days        |
| 4. Leverage MH pipeline to grow 2023 deployments by >50%     | DONE Pipeline > 50%   |
| 5. Build cryogenic pipeline to grow 2023 ~300%               | DONE (Pipeline >300%) |



# Mid Term KPIs – 2<sup>nd</sup> half 2023

1. Ramp ELX container supply chain/fabrication/customer deployment to deliver >27 systems
2. Close on cryogenic sales pipeline (liquefiers, mobile refuelers, stationary storage, etc.)
3. Close additional largescale MW/GW plant sales opportunities in next 90 days
4. Deliver on upside MH opportunities
5. Drive key short term cost downs initiatives – supply chain, reliability, fuel, etc.
6. Nurture final government IRA guidance & leverage opportunities





# 2023 Financial Projections

Condition	2023 Revenue	2023 Gross Margin	Comment
<b>Expected</b>	<p>\$1.4B</p> <p>Applications: \$620M</p> <p>Energy: \$780M</p>	\$140M	<p>Key Items</p> <ul style="list-style-type: none"> <li>• Shipping 27 5MW electrolyzer containers</li> <li>• Sell an additional 60T of liquefiers</li> <li>• Sell one more 500MW plant in the next 90 days – many are in the works</li> <li>• Other opportunities in the works</li> </ul>
<b>Lower Case</b>	<p>\$1.2B</p> <p>Applications - \$610M</p> <p>Energy - \$590M</p>	\$50M	



# Liquidity Planning

## – Targeting \$1B annually Green H2 Investment

### Leverage Opportunity

- ~\$6B Total assets
- ~\$2.5B Cash/ST investments
- ~\$1B Property/Equipment
- ~\$9M Long-term debt

### Lucrative Project Portfolio

#### GA Plant Example

- 15 TPD
- ASP \$6 to \$8 /kg
- PTC Opportunity
- COGS ~ \$2 /kg (net)
- \$35M Annual Net Positive Cashflows
- Ability to upsize to 30 TPD

### Range of Solutions

- Project Finance
- Project Equity (strategic)
- Corporate Debt
- DOE





Plug™