Plug Power Investor Presentation
NASDAQ listed in 1999

- Over $1B in capital deployed
  - Substantial improvement in cost and reliability
- Financial Performance:
  - Full Year 2018: $185 M gross billings
  - 40%+ increase vs. 2017
  - EBITDAS breakeven in Q4
  - 2019 Targets: $235 - $245 M gross billings
  - Adjusted EBITDAS positive for full year
- 80% Blue Chip Customer Base –
  - WMT, AMZN, Carrefour
- Targeting $500M in Revenue in 2022
  - Substantial operating leverage

1st to create a market for HFC technology
25,000+ GenDrive units shipped
80+ hydrogen fueling stations built
20+ T of liquid hydrogen used daily
  - Surpassed NASA in 2018
19 M+ hydrogen fills from GenFuel stations
  - Most in the world –
    1 hydrogen fill every 3 seconds

Pioneered a Rapidly Growing Industry.
Material Handling: First Large and Growing Market

- Servable market in NA is $4.5 Billion
- Europe doubles the served opportunity
- Total addressable market >$30 Billion

(SAM defined as sites > 50 trucks; in $ millions)
First Market: Full Suite of Products Accelerates Customer Adoption

**Powerful Benefits:**

- **Increased Productivity** - higher throughput per shift
  - 5% - 15% more capacity

- **Lower Operational Costs** - eliminate battery changeout
  - 3% - 5% improvement from fast refueling

- **More Operation Space** - battery room eliminated
  - 5% - 7% more space reclaimed

- **Reduced Peak Power Demand** – high-cost demands eliminated
  - New buildings save over $1 million dollars by not building an electric battery infrastructure

- **Reduced Site Emissions** - safe, clean, zero-emission power
Success in Our First Market: Loyal and Repeat “Blue Chip” Customers

- Walmart
- Amazon
- Mercedes-Benz
- BMW
- P&G
- Carrefour
- TOYOTA
- GM
- HONDA
- LOWE’S
- Wegmans
- IKEA
- ULINE
- colruyt
- STIHL
- Kroger
- FM Logistic

multi-site customer
Plug Power’s relationship with Walmart represents the largest hydrogen enabled fleet in the world

2014
- Initial agreement signed for multiple sites
- GenKey installed in 6 distribution centers with 1,700 GenDrive units in 2014

2015
- 9 GenKey sites added
- >1 million fuelings over the year

2018
- 8,000 GenDrive units deployed
- Total of 38 GenKey sites deployed to date
- > 10T on hydrogen usage per day

2019 and beyond
- Have over 150 NA distribution centers
- Continuing to expand with Plug Power
- Potential 35T per day of hydrogen usage
- Expansion into delivery vans, drayage trucks

“We are pleased with the performance of the hydrogen fuel cells that we have been operating and are excited to expand our program with Plug Power.”

– Jeff Smith, Senior Director for Walmart Logistics
Amazon: Another Strategic Partner
First Market Success

Background
• Plug Power and Amazon actively engaged in 2016
• Amazon recognized Plug’s value proposition, including the ability to enhance productivity

First Site Success
• First site went live in Q4 2016
• Completed system installation in 8 weeks

Present Situation
• Over 20 GenKey sites deployed to date
• Using 4T on hydrogen per day
• Potential to Expand to 100 sites
  • 20T of hydrogen per day
• Focus on potential new applications

Amazon establishes multi-year, multi-site customer agreement with Plug Power
Value of Implementing a Fuel Cell Fleet

- A new 1 M sqft Distribution Center: cost between $55 - $75 Million
- Increases in operational capacity / efficiency
  - 5% - 15% or more improvement
- Additional revenue generating space

Business Case Summary:

<table>
<thead>
<tr>
<th></th>
<th>Subscription</th>
<th>Direct Sale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payback Period</td>
<td>Immediate</td>
<td>&lt; 2 years</td>
</tr>
<tr>
<td>Capital Spend (if any)</td>
<td>NA</td>
<td>$2.3 M - $8.5 M</td>
</tr>
<tr>
<td>Cumulative 10 Yr Savings</td>
<td>$1 M – $7 M</td>
<td>$1.2 M - $8 M</td>
</tr>
</tbody>
</table>

Distribution Center Budget

- Operator Labor: 77%
- Vehicle Cost: 11%
- Maintenance Labor: 5%
- Insurance: 3%
- Parts: 3%
- Energy: 1%
Our Foundation is Established and Best in Class

Our Foundation is Critical Toward Addressing Electrification in the Broader Transportation Industry

$300B + : Light / Medium / Heavy Duty Vehicles

We are building off of our foundation:

- 70% reduction in costs (less than 10 years)
- 200M hours of field experience
- Our current stack technology can serve / scale and be used in the entire light / medium and heavy duty market

$30 B : Material Handling
## Why EVs

1. Design Simplicity  
2. Higher Reliability  
3. Lower Total Cost of Ownership  
4. Self-Driven Vehicles / Autonomy  
5. Climate Change  

## Why FCEVs

1. Power Density  
2. Asset Utilization  
3. Sharing Economy  
4. Fast Fueling/Infrastructure  
5. Range  

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**FCEVs** are ideal for **asset-intense logistics applications**.
FCEV: Role in Vehicle Electrification

- **Power Density**: Enabling better vehicle designs in smaller packages

- **Asset Utilization**: Achieve lowest total ownership costs

- **Fast Fueling**: 10x Faster

- **Infrastructure**: Leverageable to larger fleet, multiple benefits

- **Range**: Excellent compliment to BEV for range
Leverage Modular Products: Targeting Multiple Markets

15 - 30 kW: Airport GSE

30 kW: Light Duty Trucks, Small Transit Buses

60 - 100 kW: Trucks, Full size Hybrid Buses

80 - 100 kW: Small and Midsize Auto
Standard Products Based on In-house MEA Technology

- Purchased American Fuel Cell (AFC)
- Key skills from GM fuel cell program
- Vertically integrated in key component
- Successfully ramped manufacturing
- Largest US based MEA manufacturer by EOY 2019
Next Market: Fleet Transportation
ProGen-Powered FedEx Delivery Van

- **ProGen engine**-powered Workhorse Class 5 zero emission EGEN delivery van

- **17,500+ miles** on-road by FedEx delivering packages

- **Refuels** at Plug Power’s HQ, Latham, NY

- **Operates** in standard commercial environment
  - 160 miles per delivery cycle
  - 166% increase over standard battery power
  - Safe and sustainable transportation solution

- **Significant Deal to be announced in 2019**
Market Opportunities

Market Value (Billions)

- Material Handling and Airport Equipment
- Fleet Vehicles and Buses
- Medium and Heavy Duty Vehicles
- Light Duty Vehicles

2019 2022 Medium Term Long Term
### Financial Targets

#### Full Year 2019 Guidance

<table>
<thead>
<tr>
<th>Metric</th>
<th>Target</th>
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<tbody>
<tr>
<td>Gross Billings Range</td>
<td>$235M to $245M</td>
</tr>
<tr>
<td>Adjusted EBITDA</td>
<td>Positive for full year 2019</td>
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</table>

#### Medium Term Target

<table>
<thead>
<tr>
<th>Metric</th>
<th>Target</th>
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</thead>
<tbody>
<tr>
<td>Gross Billings Range</td>
<td>$450 to $550</td>
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<tr>
<td>Target EBITDA Margin</td>
<td>18-22%</td>
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</table>

#### Key Metrics to Track

- Margin Expansion in Material Handling
- Expansion into On-Road Vehicle Market
Summary

• Success in first target market – material handling
• Room for substantial growth and margin expansion
• Entry and growth in new adjacent market: fleet transportation
• Meaningful operating leverage in the financial model
• Optionality in multiple mega-markets
• Team and technology in place to delivery

Plug Power Fuel Cell Engine: Facilitating Vehicle Electrification