# **POWER**Ahead with Commercial Fuel Cells

President and CEO, Andy Marsh

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Today's Fuel Cells for proven, reliable power.

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#### **Premier System Integrator of PEM Fuel Cells**

Leader in development and production of clean, commercial energy solutions for the material handling industry.

- Founded in June 1997
- World class manufacturing facility in upstate NY
- Global Supply Chain
- Over 150 employees
- 152 issued patents
- Over 5,000 GenDrive<sup>®</sup> fuel cell units in the field, accumulating over 20 M hours runtime
- Plug Power holds over 90% of the fuel cell market in the material handling industry
- European expansion through the JV with Air Liquide







- GenKey: makes transition to fuel cells seamless
- "One-stop-shopping" option couples:
  - GenDrive® hydrogen fuel cell system
  - GenFuel hydrogen infrastructure and fuel
  - GenCare customer service
- Plug Power handles power, fueling and service so customer doesn't have to
- GenKey model paves the way for market expansion of fuel cell systems

#### Value per site: \$8-12M





# Series 1000

 3-Wheel Sit-Down 4-Wheel sit-Down

# Series 2000

- Stand-Up Reach
- Stand-Up Counterbalanced
- Turret Trucks

#### Series 3000

- End Rider Pallet
- Center Rider Pallet
- Man-Up Orderpickers
- Tow Tractors

#### **Current POWER solution for the GenKey package!**



GenDrive









#### **GenDrive Products**

#### **GenDrive**

Class 1 Suite Sit-down Lift Trucks 8 kW, 10 kW





## Stand-up Reach Trucks



#### Value Proposition

#### Improve Productivity by up to 15%

Save Commercial Space by eliminating Battery Room

**Reduce Carbon Footprint by** up to 80%



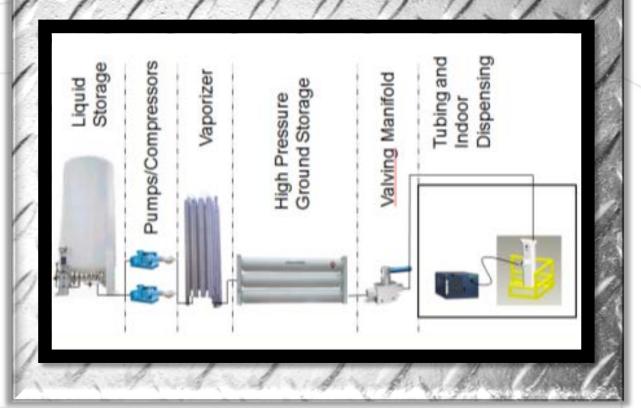


- Hydrogen infrastructure
  - Compression system designed for deployments
- Hydrogen re-sell
  - Bulk purchase of hydrogen
- Supply chain for GenFuel infrastructure secured
- Hydrogen system build can be installed in approximately <4 months</li>
  - Lead time in line with GenDrive<sup>®</sup> product deployment









Integration of refueling system with the GenDrive® product provides unmatched reporting to help GenDrive® users track performance.





- 5 Year Contracts
  - Labor
  - Parts
  - Hydrogen Infrastructure
- Knowledge acquired by on-site support drives continual product improvement
- Work towards 99% uptime at every site
  - Currently at 98% uptime
- Allows Plug Power to fully utilize technicians at various sites





# **Why GenKey Matters**

#### **To Customers:**

- Single-source vendor
- Ease and predictability of deployment
- Reassurance of qualified expert partner

#### To Investors:

 Recurring and increasing revenue stream expected to provide Plug Power a more predictable business model

#### To Plug Power:

- Expect to leverage volume to receive best pricing options from suppliers
- Manage entire site to ensure customer satisfaction







## **First GenKey Success**

#### December 2013: Kroger First GenKey Customer

- Over 200 GenDrive<sup>®</sup> units, hydrogen and service
- First deployment of GenDrive<sup>®</sup> units: Compton, CA
- Second largest food retailer in North America
- Kroger operates ~30 large distribution centers nationwide
- Distribution center conditions include freezer environments reaching -25 degrees F







#### **Milestone GenKey Contract**

#### February 2014:

#### Walmart Multi-site GenKey Contract

- Six sites in the United States
- 1,738 GenDrive<sup>®</sup> units
- GenFuel infrastructure and molecule
- Six-year GenCare service contract

"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.

# Walmart 🔀





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#### **Customer Base Continues to Grow**

- 44 total site deployments with 24 different customers
- 29 brownfield sites
- 15 greenfield sites
- More than 4,500 units shipped
- ~8,000 fills per day by customer
- More than 4,600 kg of H<sub>2</sub> dispensed per day
- More than 20M hours of runtime



#### **Market Expansion Through HyPulsion**

- HyPulsion has completed one year of business and product development activities
- Europe greater market opportunity than
  North America
- 7 collaboration projects in place:
  - Jungheinrich, Linde/Fenwhich, Still, Crown, NACCO, Toyota Material Handling Equipment
- Starting initial deployments with many customers including BMW and IKEA





# **Material Handling Business**

- Business works because we offer customer a solution to improve their business
  - Constant performance no battery droop
  - Hydrogen refueling in less than 2 minutes
  - Improved productivity, lower operating costs and reduced GHG
  - Elimination of battery room 6-7% additional space
- Full suite of fuel cell product to meet material handling customer needs
- Over 90% of the fuel cell market in the material handling industry\*\*

\*Sources: Analysis of 2009 Industrial Truck Association presentation, JVIA, and ongoing management discussions with OEM's Assumes fuel cell ASP of ~\$28k for Class 1, 2, 4 and 5 and ~\$12k for Class 3 forklifts \*\* FuelCells Bulletin, September 2010





#### Market Expansion Opportunities –

#### Based on GenDrive Product Architecture: Adjacent Markets With

Same Dynamics as Materials Handling



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#### Transportation Refrigeration Units (TRU)

Application: Air conditioning of product transport in refrigerated trailers

Value: Offer a lower emission, lower noise, and lower OpEx solution

Market: 300,000 trucks, domestically

Current Demo Customer: Sysco Long Island



Ground Support Equipment (GSE)

Application: airport tuggers (baggage, cargo), belt loaders, auxiliary power units

Value: Comply with tightening emissions standards that require capital increases and operational interruption to diesel fleets

Market: 26,000 tuggers domestically;

Current Demo Customer: FedEx Express



#### **Range Extenders**

Application: Addition of a fuel cell to electric hybrid vehicles

Value: Extend the distance traveled between electric recharge

Market: includes parcel delivery trucks, taxis, port vehicles

Potential Demo Customers: FedEx, UPS, US Post Office, taxi fleets

# Summary

- Plug Power is the premier system integrator for PEM fuel cells
  - First Mover Advantage 90% Market Share for Fuel Cell Powered Forklift Trucks
- Prestigious Fortune 500 Customer List
  - Walmart Order Validates Business Case
  - Opportunities are abundant for the company in material handling
- Growth Opportunities Geographically and Adjacent Markets
- Expect to be EBITDAS breakeven in 2Q/3Q 2014





# POWERAHEAD



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