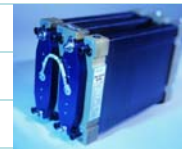
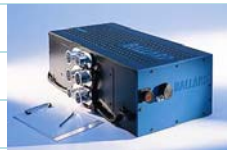




making fuel cells a commercial reality



# Ballard Profile

1

**BALLARD®**

- CLEAN ENERGY FUEL CELL PRODUCTS...
  - OUR COMPANY
    - About 500 employees
    - World-leading R&D & manufacturing facilities
  - OUR BUSINESS
    - Design, manufacture, sale & service of hydrogen fuel cell products
  - OUR CUSTOMERS
    - System integrators and OEM's addressing end-user needs
  - OUR FOUNDATION
    - Technology leadership
    - Production expertise
    - Expanding go-to-market capabilities

# Lines of Business

2

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## Fuel Cell Growth Markets

- ▷ Materials Handling
- ▷ Backup Power
- ▷ Residential Cogeneration

## Supporting Business Segments

- ▷ Carbon fiber materials
- ▷ Fuel cell bus programs
- ▷ AFCC\* technical services & contract manufacturing

**FOUNDATION:** → Technology Leadership  
 → Production Expertise  
 → Expanding Go-to-Market Capabilities



*\*Private company owned 50.1% by Daimler, 30% by Ford, 19.9% by Ballard*



# Backup Power

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## ■ Market

- Addressable market estimated at 30-40% of \$2B annual spend on batteries & gensets
- Initial focus on wireless telecom

## ■ Drivers

- Extended run time at lower cost, relative to batteries
- Regulatory-driven extended run time
  - Tetra-standards based telecom networks in Europe
  - FCC requirements for U.S. telecom networks

## ■ Focus

- Ramp up sales to existing customers; add Systems Integrator customers & OEM relationships

making fuel cells a commercial reality

Develop reformate based solutions



# Residential Cogeneration

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- Market
  - Electricity and hot water for up to 1.8M Japanese homes per year (multi-billion dollar market)
- Drivers
  - Primary energy consumption reduced by 20-30% (annual savings to homeowner ~\$600)
  - 2005-08 subsidies total \$110M
  - Reduction of CO<sub>2</sub> emissions by 30-40%
- Focus
  - Strengthen relationships with customers
  - Launch V3 product in 2008, leading to start of commercialization phase in 2009





# Automotive Scope

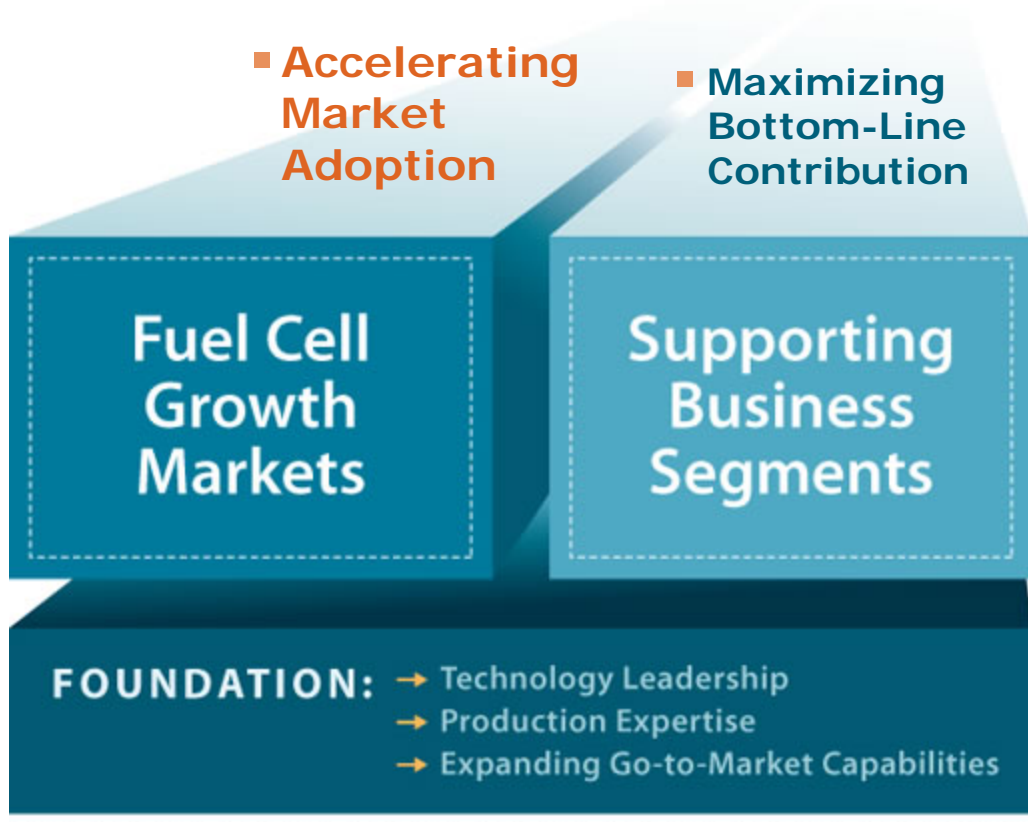
7

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- Automotive challenge: High cost of development and long time to commercialization
  - Automotive fuel cell assets sold to Daimler & Ford in January 2008
  - No ongoing funding obligations
- Ballard's automotive scope today...
  - Fuel cell technical services & contract manufacturing to AFCC
  - Fuel cell bus programs



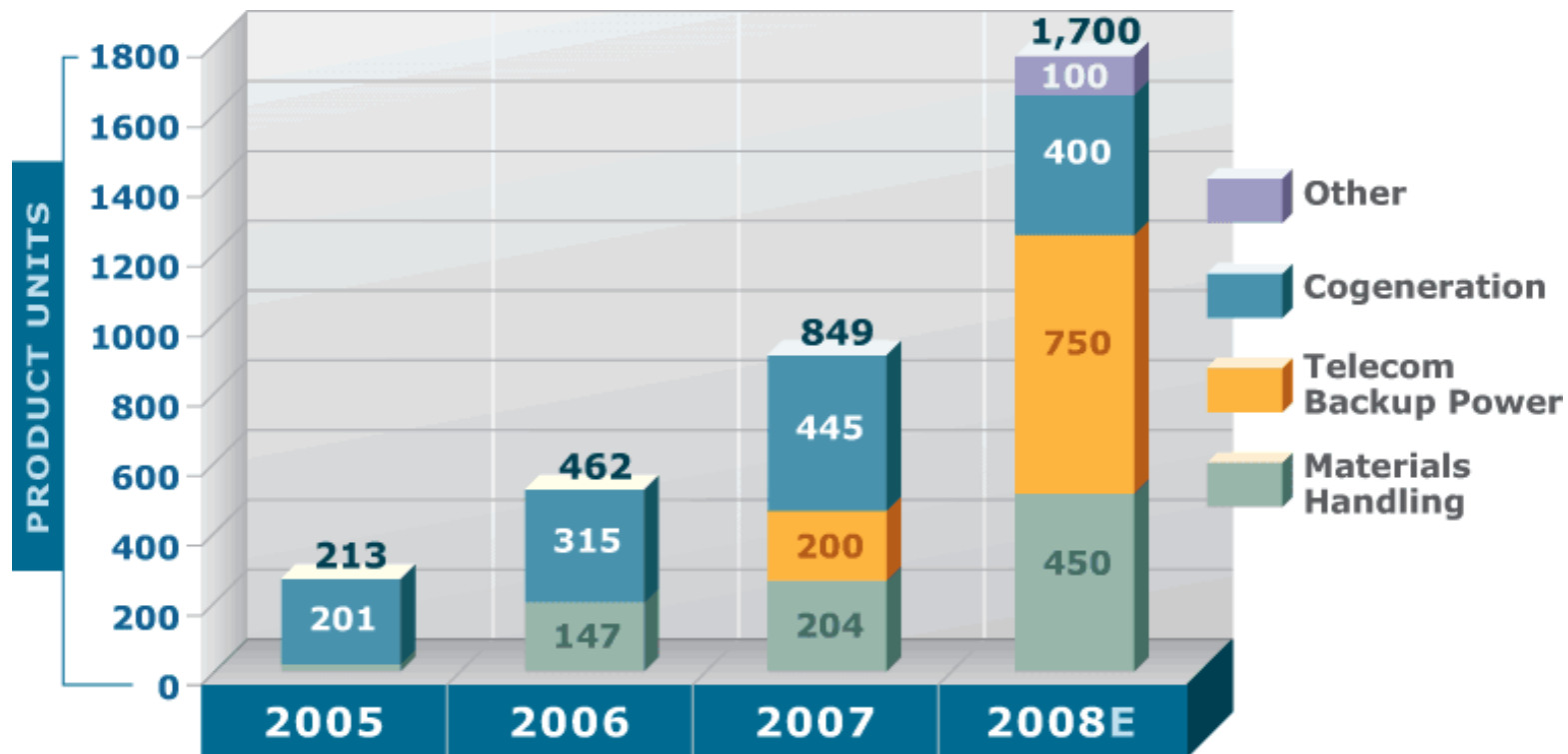
# 2008 Business Focus



# Growth Outlook 2008 Product Shipments

9

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# Government as a Commercialization Partner

10

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- R&D&D
- ~~Codes & Standards~~
- Transition to Market
  - Funding EPACKT05 Procurement Program
  - Tax Treatment for Early Applications

**CRITICAL TO BUSINESS AND POLITICAL CASE  
FOR FUEL CELL TECHNOLOGY**

# Strategic Tax Credits: High Impact, Low Score

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- Opportunity exists to advance coordinated set of FC & H2 tax treatments that target today's applications (e.g. forklifts, stationary power, buses) while laying the foundation for broader utilization across economy (e.g. vehicles).
- By focusing on select near-term 'niche' applications budget score is kept low yet impact is significant

# What does a “Strategic” Tax Package Look Like for h2 and FC technology?

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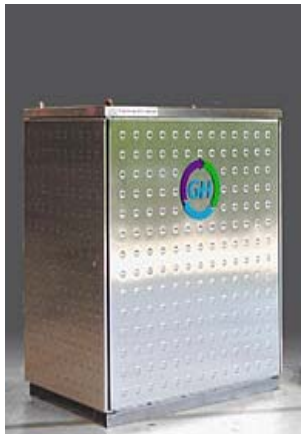
- Concerned with the complete value chain from hydrogen production to consumption in *near-term applications*. For example, with forklift application using on-site generation....
  - Capital (Equipment) Costs: H2 Generation, Compression, Storage, Dispensing, Fuel Cell
  - Operating Cost: H2 fuel

# What does a "Strategic" Tax Package Look Like?

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- IN PICTURES (using forklift app. as an example)....



**H2 Gen, Compression, Storage**



**H2 Dispensing**



**H2 Fuel Consumed**

30% Tax Credit  
(limit increases w/kW)



**Fuel Cell**

30% Tax Credit  
(\$1000/kW)

30% Tax Credit  
(up to \$200K)

# Existing Fuel Cell Tax Credit

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- EPACT05 includes 30 % of cost up to \$1000/kW for eligible fuel cell power purchases;
- Minimum power requirement - 500 watts;
- Congressional Intent is for broad range of non-automotive applications, including stationary, portable, industrial (e.g. forklifts), Auxiliary Power Units, etc.
- Accelerated Depreciation
- Expires December 31, 2008

# Extension of Fuel Cell Tax Credit

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- HR 6049 “Energy and Tax Extenders Act of 2008” (passed)
- S. 3125 “Energy Independence and Tax Relief Act of 2008” (not passed)
- Extends Fuel Cell Tax Credit through 2014
- 30% but increases limit from \$1000/kW to \$3000/kW
- Allows public utilities to access
- Allows credit to be used to offset AMT

# H2 Tax Incentive

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- In last 18 months, 3 h2 tax credit bills introduced
  - HR 805      Representatives Doyle and Terry
  - S. 2129     Senators Dorgan and Graham
  - HR 5746    Representatives Larson
  
- In each case, purpose is to advance 3 key milestones for hydrogen commercialization
  - Volume production of h2 fueling stations & fuel cell technology for purposes of lowering costs and maturing supply chain
  - Market-driven installation of hydrogen fueling infrastructure
  - Public acceptance of h2 and fuel cell technology

# H2 Tax Incentive: Mechanics

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- H2 Infrastructure: 30% tax credit, not to exceed \$200K.
- H2 Fuel Costs: 30% tax credit with the following limitations per kW level of Energy Conversion Device (fuel cell or Internal Combustion Engine)
  - 25 kW or less: \$2000
  - 25 – 100 kW: \$4000
  - 100 kW or greater: \$6000
- 3 Year duration for (industry) estimated cost of \$85 M

# What We Achieve

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- Early Traction
  - Tax Credits Matter...Examples...(Battelle Survey)
    - Back-up Power: 41% of surveyed customers in back-up power market consider government incentives
    - Speciality Vehicles: 56% of surveyed customers in speciality vehicle market (includes forklifts) consider government incentives
- Early Volumes
- Maturation of Supply Chain
- Lower Costs
- Customers

# What We Achieve (More Broadly)

19

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- A market-driven version of the “lighthouse” model of deployment
  - Points of hydrogen generation and use across the country
  - Codes & Standards Development
  - Customer Acceptance
- Accelerated market entry of Big Ticket H2 Economy Items (i.e. transportation applications) ... as costs decline across FC & H2 supply chain

# Contact Information

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