



CERAMIC FUEL CELLS LIMITED

Clean power for your home



Clean Power for Your Home

Presented to

Numis
New Energy conference

Brendan Bilton
CEO

Ceramic Fuel Cells (Europe) Limited
10 May 2007



Disclaimer

This Presentation has been prepared by, and is proprietary to, Ceramic Fuel Cells Limited ('CFCL').

This Presentation does not constitute or form part of an offer for sale or subscription or an invitation or solicitation of an offer to subscribe for or purchase any securities and neither this document nor anything contained herein shall form the basis of any contract or commitment whatsoever.

No representation or warranty, express or implied, is given by CFCL, its Directors, employees or professional advisors as to the accuracy, fairness, sufficiency or completeness of the information, opinions or beliefs contained in this document. Except in the case of fraud, no liability is accepted for any loss, cost or damage suffered or incurred as a result of the reliance on such information, opinions or beliefs.

The information in this Presentation reflects prevailing conditions and the views of CFCL as of this date, which are subject to change.



Overview

- **Introduction to CFCL**
- **Focused Strategy**
- **Large market opportunity**
- **Technology progress**
- **Developing Products**
- **Manufacturing Scale-up**
- **Financials**
- **2007 Outlook**



Introduction to CFCL

- Formed in 1992, 110 employees
- Based in Melbourne, Australia.
 - UK office September 2004
 - German subsidiary formed 2006
- Extensive experience & knowledge of:
 - solid oxide fuel cells
 - ceramics, powders
 - material science and systems
- Broad IP portfolio: 29 patent families globally
- Extensive research, product development, testing and pilot production facilities
- Dual listed (code CFU)
 - ASX IPO July 2004
 - London AIM March 2006





Focused Strategy

CFCL will be the supplier of choice for **reliable** and **high electrically efficient** solid oxide fuel cell products which manufacturers can **easily integrate** into micro generation **appliances**.

Initial product - Fuel cell module for 1kW micro CHP and other distributed power generators for homes.

Initial market – Europe.

Consistent, disciplined strategy since presented in October 2005.





Large Market Opportunity with Strong Drivers

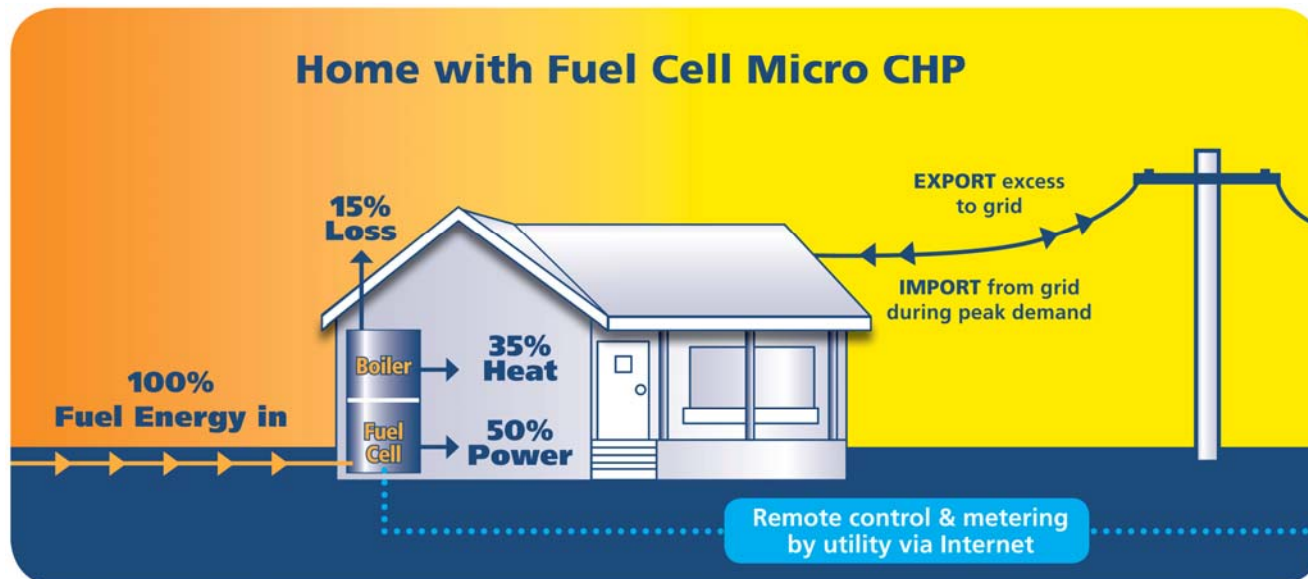
- Large EU market for micro CHP (£1.5 bn by 2010 - Cambridge Consultants, 2004)
- Attractive for solid oxide fuel cells: highest efficiency, more power / less heat
- European energy market flux creates opportunities
 - Clear policy mandate for cleaner and more secure power
 - Mainstream Consensus – Stern Report, IPCC report
 - Broad Policy response
 - EU Commission new Energy Policy + ‘Energy Technology Plan’
 - UK Bill to cut greenhouse gases by 60% by 2050
 - Specific support for microgeneration
 - London Climate Change Action Plan
 - UK DTI Report: 30-40% of UK power from microgeneration by 2050
 - German Gov. Fuel Cell programme: €1bn over 10 years
 - Increasing financial implications for EU energy sector
 - Energy market de-regulation and M&A
- But...being ‘green’ is not enough. Alternatives must create value.



Micro-CHP Distributed Generation

Making fuel cell systems to meet market & product requirements

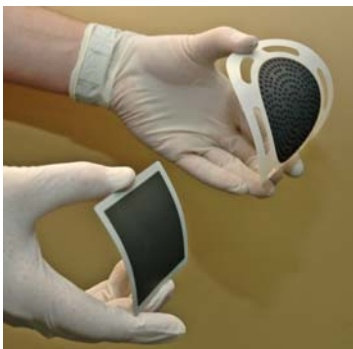
- Maximize electrical efficiency, reduce parasitic losses
- Heat is a useful by-product - **electricity is the main game**
- To **maximize running hours**, reduce the thermal output
- Flexible modular design is **easy to integrate** into appliances
- First CHP products will be part of a distributed generation **network**
- Use existing fuel infrastructure now (Natural Gas), renewables in the future





Technology Progress

- New anode supported cells are meeting our specification
- Manufacturing new 1kW stacks from Q2
- New Gennex fuel cell modules in NetGen units for delivery in 2007
- Electrolyte supported cells continue in field trials
- **Collaboration Agreement with Julich Research Centre, Germany**
 - Leading fuel cell researchers
 - Accelerated lifetime testing and other agreed projects
 - Combine CFCL industry and Julich academic experience



To make fuel cells reliable and efficient, in real world conditions, we are pursuing commercially focused research and product development, peer benchmarking, & leveraging our broad technology and IP portfolio.





Developing Products

Field Trials

- Real world operating experience validates technology and drives ongoing improvement

Product Development projects

- Partnerships with key utility customers and appliance makers
- Integrate CFCL fuel cells into home CHP systems and other products

Commercial products...

- Manufacturing in volume, reduce unit costs, commercial performance

Selecting 'launch partners' in key European markets

To avoid utilities taking too long or 'sidelining' the technology, we are choosing partners carefully, aligning interests, & developing alternatives.



Key Partners - Germany

- Leading market for CHP / fuel cells
- EWE - Field trial of 2 'standalone' CFCL units from January 2006
- EWE and Bruns - Product Development Agreement signed March 2007



- Top 5 German energy company
- Diversified: gas, power, telco, water, IT...
- >1M power customers, >750,000 gas
- Experienced in DG and fuel cells
- 5,200 staff, revenue of €7B



- Specialist heating appliance manufacturer for over 40 years
- Contract manufacturer for leading brands
- Existing relationships with EWE and others



Key Partners - France

- Electricity market de-regulation creates strategic opportunities
- Product Development Agreement signed December 2006



- Europe's No 1 gas company
- Moving into the electricity market
- 11M gas customers in France
- Leading the €30M EU-DEEP program on distributed generation
- 53,000 staff, revenue of €22B



- France's No 1 gas heating appliance manufacturer
- Strong R&D capability
- Large sales, installation and service network
- Part of the global Remeha group (2,500 staff, revenue of €40M)



Product Development Projects

Phase 1 - Alpha prototype unit

- Demonstrates how a fuel cell and boiler will work together:
 - Thermally, Electrically, Safety systems, Reliability.
- Boiler and fuel cell system thermally & electronically connected (not 'physically integrated')
- Limited field trials

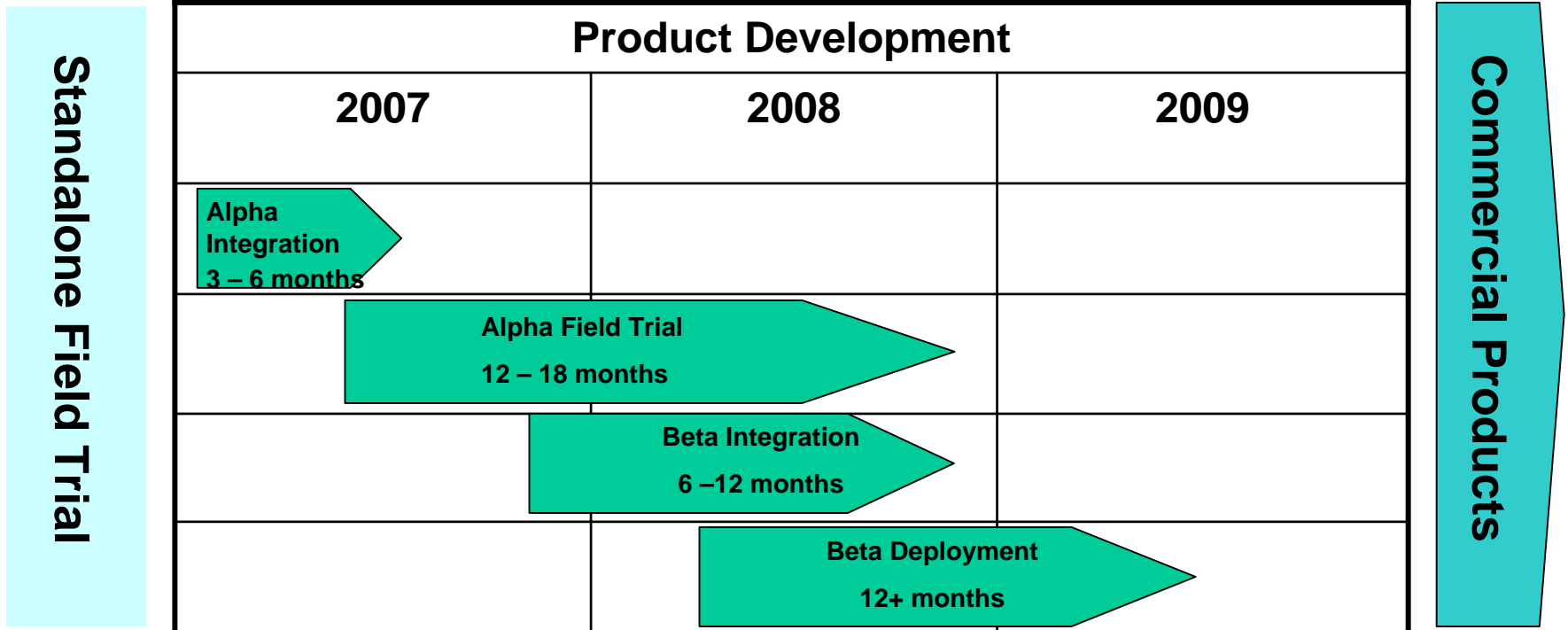
Phase 2 - Beta 'near commercial' unit

- Physical integration to make two appliances become one unit almost ready as a consumer product
- Appliance Partner expertise:
 - Design, Product development process, Supply chain & component sourcing, investment in manufacturing equipment
 - Build Distribution network, Service & maintenance.
- Larger numbers in controlled external deployment

To manage project risks, we are building resources (local hires + relocations), leveraging across projects, tightly managing projects and building intimate partner relationships.



Typical Product Development Timeline



- Alpha unit field trial and Beta unit specification and design run in parallel to save time.
- Accelerated development of ~24 months from Alpha start to Beta end.
- Actual timing will vary between projects: partner capabilities, scope of work.
- Leverage off early projects to save time & costs and reduce risks of later projects.



Manufacturing Scale-up

Upgrade Australian plant

- Support field trials and product development units
- Install new foundry equipment to validate design

UK powder plant, Bromborough, Merseyside

- Site works & equipment installation Q2 2007
- Powder produced Q3 2007

European fuel cell plant, Heinsberg, Germany

To get consistent high quality inputs we have developed a proprietary powder technology.

To make lots of fuel cells, cheaply, we will use standard manufacturing processes & equipment and consider selective outsourcing.

To get the best funding mix we will look at a range of alternatives.





Fuel Cell Manufacturing

European fuel cell plant, Heinsberg, Germany

- Generate revenue; economies of scale; penetrate target markets.
- Location & €3.2m NRW Government funding announced December 2006.
- Significant investment of shareholders' funds = Careful planning.

Current Activities

- Site preparation works by Nuon.
- Environmental and planning consents.
- Refresh plans (scope, timing & cost) based on location.
- Build on outputs from installation of new manufacturing equipment in Melbourne.
- Setting up Heinsberg Project Office – hiring local staff.





Financials

Interim results to 31 December 2006

- Increased Revenue £1.008 million (H1 2005/6: £0.20 million)
 - Field trials £0.1 million (H1 2005/6: £0.08 million)
 - Interest income £0.9 million (H1 2005/6: £0.09 million)

- Expenditure
 - R&D £2.31 million (H1 2005/6: £2.12 million)
 - G&A £1.48 million (H1 2005/6: £1.11 million)
 - S&M £0.39 million (H1 2005/6: £0.24 million)

- Lower net loss £3.17million (H1 2005/6: £3.47 million)

Third Quarter cashflow to 31 March 2007

- Net operating cash outflow £1.3 million (Q2: £1.9 million)
- Net cash and financial assets at 31 March 2007 of £27 million



2007 Outlook

Building Demand: Products and Customers

- ✓ **Deliver field trial units to utility customers**
- ✓ **Develop products with Appliance partners**
 - ✓ Build and deploy Alpha Units
 - ✓ Early work on Beta Units
- ✓ **Secure 'launch' customers in key European markets**

Building Supply: Materials and Manufacturing

- ✓ **Upgrade Australian plant**
- ✓ **Make new Gennex fuel cell modules**
- ✓ **Commission UK powder plant**
- ✓ **Prepare Europe fuel cell manufacturing plant**

www.cfcl.com.au

