



# CERAMIC FUEL CELLS LIMITED

*Clean power for your home*

27 April 2011

## **Ceramic Fuel Cells Limited**

### **Quarterly Cashflow Report and Trading Update**

Ceramic Fuel Cells Limited (AIM / ASX: CFU) a leading developer of high efficiency and low emission power products for homes, today released its quarterly cashflow report for the period ended 31 March 2011.

The cashflow report is available at [www.cfcl.com.au](http://www.cfcl.com.au).

#### **Highlights**

- Started deploying integrated home power and heating products with EWE as part of the order for up to 200 units
- Further BlueGen sales in Germany, United Kingdom and Australia
- Progress towards MCS accreditation in United Kingdom
- Robust and repeatable performance - all BlueGen units have achieved electrical efficiency of 60 percent

#### **Operational Review**

##### **Order for 200 integrated products**

In December the Company received a conditional order for up to 200 integrated power and heat generators from German energy service provider EWE. This is the largest order the Company has received, with total revenue of up to EUR 4.9 million over two years. The order is conditional on EWE receiving partial funding under the German government's national hydrogen and fuel cell technology innovation program. This Government program is providing EUR 700 million between 2008 and 2018.

The Company is pleased to announce that EWE has received a letter of intent from the funding body confirming the intention to fund the project. Based on this letter of intent EWE and CFCL have begun installing integrated units in homes as part of the project.

Subject to formal funding approval and to the units meeting agreed performance targets, EWE will order 72 units for delivery in 2011 and 130 units for delivery in 2012. The Company will update shareholders further when a final response is received from the funding body.

The integrated units use Ceramic Fuel Cells' patented technology to convert natural gas into electricity, hot water and space heating, with the world's highest level of electrical efficiency in small scale generators.

Ceramic Fuel Cells will supply the core Gennex fuel cell module and related components. Ceramic Fuel Cells and its local manufacturing partner, Gebrüder Bruns Heiztechnik GmbH, will integrate the fuel cell module with a boiler into an integrated power and heating product for supply

to EWE. EWE will then install the units in homes in the Lower Saxony region in northern Germany.

This is a significant follow-on order from EWE, the Company's longest standing utility customer. EWE is one of the largest utilities in Germany, with 6,400 staff and revenues of EUR 5.8 billion. Based in Northern Germany, EWE also has operations in other German states as well as Poland and Turkey.

### **Further BlueGen sales**

Apart from the integrated product, the Company has also developed a modular power and heat generator called BlueGen, to provide low emission power plus heat for hot water. One BlueGen can provide about double the electricity the average home needs – excess power can be exported to the grid – plus hot water for an average family's needs.

Like the integrated product, BlueGen uses the Company's Gennex fuel cell module to achieve electrical efficiency of 60 percent – far higher than any other small scale generator. The Company believes this very high electrical efficiency will deliver significant value to BlueGen customers, and will create a significant competitive advantage in the fast growing global market for small scale power generation.

During the March quarter the Company continued to make sales of BlueGen units to leading energy companies and other foundation customers in several markets. For confidentiality and competitive reasons the Company is unable to reveal the identity of some of its customers at this time.

As at 27 April 2011 the Company has received orders for 70 BlueGen units, from a total of 31 customers in Europe, Japan, Australia and the USA.

Highlights during the March quarter and up to date include:

#### ***BlueGen installed in Amsterdam***

A consortium of innovative companies has installed a BlueGen in a 17th century canal house "De Groene Bocht" in the centre of Amsterdam. BlueGen is expected to produce all the electricity the site needs whilst reducing carbon emissions by more than 50 percent compared to the local power grid.

The members of the consortium, which has a strategy to accelerate the transition to clean energy, include Cool Endeavour, which initiates the rollout of sustainable technologies, and Amsterdam Smart City, a joint venture between the Municipality of Amsterdam and leading Amsterdam companies.

Several leading energy companies in The Netherlands are also members of the consortium: Eneco generates, distributes and sells electricity, gas, heating and cooling to approximately two million business and residential customers; Liander is a distribution company with 2.9 million electricity customers and 2.1 million gas customers; and GasTerra is an international natural gas trading company with revenues of EUR 18 billion. GasTerra is owned by Royal Dutch Shell, Exxon Mobil and the Dutch Government. A BlueGen unit is also installed at the home of a Director of GasTerra.

#### ***Durham University, UK***

During the quarter a BlueGen unit was chosen as an integral component of Durham University's GBP 54 million low-carbon Smart Grid project. The Smart Grid project involves 14,000 homes and businesses and will assess the impact of low carbon distributed generation technologies such as BlueGen on the low voltage electricity grid. The project is designed to help shape the

future for a low-emission, more efficient power grid across the United Kingdom. The BlueGen will be housed in the Durham Energy Institute research laboratory where the impact on the low voltage grid of different microgeneration technologies will be assessed.

### ***German Sales***

The energy companies WINGAS GmbH and Technische Werke Ludwigshafen (TWL) AG have ordered a BlueGen for installation in a house in Ludwigshafen, Germany.<sup>1</sup>

WINGAS is active in natural gas trading and distribution in Germany, Belgium, France, Great Britain, Austria, the Czech Republic and Denmark. WINGAS operates over 2,000 kilometers of natural gas pipelines and operates the largest natural gas storage facility in Western Europe. Its customers include municipal utilities, regional gas suppliers, and large-scale industrial users. WINGAS is a joint venture of Germany's largest crude oil and natural gas producer, BASF subsidiary Wintershall Holding GmbH, and Russia's OAO Gazprom.

TWL is the local "Stadtwerke" (city utility) in the Ludwigshafen region, providing a range of services, including electricity, natural gas, heating, cooling and water, to residential and business customers.

In addition, two BlueGens were sold to an innovative distributor and retailer of new energy products. One BlueGen is installed with the retailer and the second unit is installed with a leading German provider of services to the energy and telecommunications industries.

In April a further BlueGen unit was sold to Fachhochschule Köln, the Cologne University of Applied Sciences.

### ***Australian Sales***

In the March quarter the Company sold a BlueGen unit to GV Community Energy Pty Ltd (GVCE) for installation in a nursing home in Kyabram (Warramunda Village), in regional Victoria, in a project funded by Sustainability Victoria. GVCE is a community not for profit company, assisting residents, businesses, community organizations and government authorities to reduce their carbon footprint through the introduction of renewable and low emission energy technologies and adoption of energy efficient practices.

Over the last two and a half years, GVCE has successfully deployed solar hot water units and solar PV units to more than 2,800 homes and small businesses through community purchasing schemes. GVCE is supported by the local Councils of Greater Shepparton City Council, Rural City of Benalla, Campaspe, Moira, Strathbogie and Murrindindi in regional Victoria.

The Company has also sold a BlueGen to the local head office of one of the world's largest manufacturers and distributors of motor vehicles and power products. The Company is in discussions to secure further Australian orders and will make further announcements in due course.

### ***Victorian Government Project***

During the quarter the Company continued to work with the Victorian Government Office of Housing to deploy their order of 30 BlueGen units. All the sites in Melbourne and Shepparton have been selected and inspected. Three units have been installed in homes, and the remaining units will be installed in this quarter.

One of the BlueGen units has been installed in a three bedroom house in Melbourne as part of the AusZEH project. This project is to upgrade an existing housing property to a zero net

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<sup>1</sup> <http://www.wingas.de/1723.html?&L=1>

emissions standard. The results of the upgrade will be used to improve the Environmentally Sustainable Design aspects of existing residential housing stock.

The Company is also working with the Office of Housing and leading Australian energy retailer Origin Energy, who is providing the Office of Housing clients with a one-for-one feed in tariff for the electricity generated by the BlueGen units. This means that an Office of Housing tenant who exports power to the grid will get a credit on their bill equal to the normal retail rate of electricity.

### ***BlueGen Distribution and Service in Australia***

As reported in the last quarterly trading update, in January the Company signed an agreement with Adelaide-based Hills Holdings Limited (ASX: HIL) for Hills to sell and service the BlueGen product. Hills will distribute BlueGen, initially in South Australia, and will also provide installation and after-sales service for BlueGen products Australia-wide. Hills is a leading manufacturer, distributor and installer of home products including premium solar hot water products. The company had revenues last financial year of AUD 1.1 billion.

### **United Kingdom Market**

The Company is in advanced discussions with a prospective distribution, installation and service partner in the United Kingdom market, and will make a further announcement in due course.

During the quarter the Company continued to make progress towards having BlueGen certified under the Microgeneration Certification Scheme ("MCS"). All microgeneration products must be accredited under MCS in order to be eligible for the UK Government's feed in tariff.

The MCS accreditation process involves an extensive and rigorous third party review of all the procedures involved in manufacturing, installing and maintaining a microgeneration product. In many cases the MCS process requires additional procedures to be formalised, over and above the thorough procedures already in place for CE safety approval.

Over the last six months the Company has invested a significant amount of resources into meeting the MCS requirements. As part of the MCS process, more than 400 procedures have been written, more than 150 pieces of equipment have been tested and calibrated, and 15 test rigs have been built for quality control testing of subassemblies.

The Company expects the MCS accreditation process to be completed during the current quarter. We expect to be the first fuel cell manufacturer to have a product accredited by MCS and eligible for the UK feed in tariff.

### **Japan**

The Company's current projects are progressing well with customers validating BlueGen's efficiency and performance characteristics. The Company is also working to secure additional sales of BlueGen to new long-term prospects who have a clear strategy for microgeneration products.

During the quarter the earthquake and tsunami tragedy in Japan, and the breakdown of the Fukushima nuclear power plant, has sparked renewed interest in small scale power generation and fuel cells.

## **BlueGen Performance Data**

As at 27 April 2011, 43 BlueGen units are installed at sites in Europe, Japan, USA and Australia. In aggregate, these units have been operating for more than 156,000 hours (more than 17 years of collective operation). The earliest installed units have been operating for more than 11,000 hours.

All of these 43 BlueGen units have achieved starting electrical efficiency of 60 percent or more, demonstrating robust and repeatable performance in many different real world conditions. Over time the electrical efficiency reduces and the thermal output of the fuel cell stack increases. Electrical efficiency is also affected by how the customer wishes to operate the BlueGen unit: efficiency will be lower if the customer modulates the output of the unit or operates the unit at a lower power level. Even with these tradeoffs, the electrical efficiency of BlueGen is far higher than any other microgeneration product. The Company believes this presents a clear and sustainable competitive advantage in the growing global market for small scale power generation products.

## **Marketing**

Over the last year the Company has invested in additional product marketing activities, in order to support the deployment of products and increase sales. During the March quarter several of these activities were finalised. The Company has appointed a Marketing Communications Manager to manage the Company's increasing marketing activities.

### ***BlueGen Marketing***

The Company has developed and now launched the BlueGen-*net* website. This is a web-based customer portal for monitoring BlueGen units installed world-wide. BlueGen customers can log-on and view their unit virtually anywhere, anytime. The website is now live at [www.bluegen.net](http://www.bluegen.net). The multi-language website contains aggregate data on all systems operating, which is available to the general public, and data on individual units, which is available to the particular customer.

CFCL product support engineers also use BlueGen-*net* to monitor the performance of each unit, remotely diagnose and pre-empt faults, and modulate the power output of the unit.

BlueGen-*net* is a very powerful and important tool to support the larger rollout of BlueGen units whilst reducing the cost of supporting each unit. All the BlueGen-*net* software has been developed in-house by CFCL. The Company will continue to enhance the website and add new functionality and features.

The Company has also launched a BlueGen product website, [www.bluegen.info](http://www.bluegen.info), initially in German language, and now also in English and Dutch. This website creates a portal for BlueGen product information separate to the Company's main corporate website. The Company will continue to enhance the functionality and features of the BlueGen website.

To support the BlueGen product rollout, the Company has developed user-focussed and language specific product documentation, including installation and user manuals, and is also developing maintenance manuals for external parties. This new documentation will be used to train local installation and service partners. This 'behind the scenes' documentation and training work is important to lay the groundwork for larger deployments of units.

## ***Industry Events***

During the quarter the Company exhibited at several industry events:

- E-World Energy and Water, Essen, Germany: 544 exhibitors from the energy and water industries in 20 countries, with 19,700 visitors from the energy and water industries. A BlueGen unit was on display, and the website [www.bluegen.info](http://www.bluegen.info) was launched.
- Hannover Messe, Germany: The Hannover Messe is Europe's largest industry exhibition attracting over 230,000 visitors across 13 exhibition sectors. A BlueGen unit was on display at the booth sponsored by the Government of North Rhine Westphalia. Gebrüder Bruns Heiztechnik GmbH was also displaying an integrated power and heating product using the Company's technology, of the type which is being installed in the EWE project.
- Ecobuild, UK: Ecobuild is the world's biggest event for sustainable design, construction, and the built environment attracting over 55,000 visitors. A BlueGen unit was also on display here, at a booth sponsored by leading energy utility E.ON.
- FC Expo in Japan: Part of Japan Renewable Energy Week, FC EXPO attracts over 90,000 visitors to see the latest cutting edge Fuel Cell technologies.

## ***DuPont Innovation Award***

In March the Company's achievements were publicly recognised when it was selected as a finalist in the 2010-11 Du Pont Australia and New Zealand Innovation awards. The DuPont awards recognise the commercialisation of outstanding science and technology. The Company's BlueGen product has been selected as one of three finalists in the 'Design for a Sustainable Future' category. The winner of the award will be announced on 13 May 2011.

## ***RMIT report***

During the quarter a team at RMIT University's Centre for Design, in Melbourne, compiled a report on the opportunities for the Company's products in the Australian commercial building sector. The Company will release the report shortly.

## **Manufacturing**

The Company is currently making fuel cell stacks at its volume plant in Heinsberg, Germany, and in Melbourne. During the quarter the Company shipped three additional furnaces from Melbourne to Heinsberg, to increase furnace capacity. These additional furnaces are all fully operational.

As reported in previous updates, in order to further increase the volume of fuel cell stack production the Company intends to use larger furnaces already installed at the Heinsberg plant. During the quarter the Company worked with the furnace supplier to identify changes needed to ensure the furnaces will produce fuel cell stacks in larger volumes at acceptable quality standards. The parties have identified several ways of optimising the furnace operation, which the Company intends to implement during the June and September quarters. These large scale furnaces are not currently constraining production. The additional furnaces now operating at the Heinsberg plant have sufficient capacity to meet the forecast increase in production during this period.

The Heinsberg plant is now also making complete BlueGen units. During the quarter the Company completed the process of transferring the BlueGen assembly operation from its Melbourne research and pilot production plant to the Heinsberg plant, in the same building as the fuel cell stack assembly operation. The Company has expanded the Heinsberg plant, installed assembly and materials handling equipment and hired additional staff.

The first BlueGen unit made in the Heinsberg plant, installed with a fuel cell stack also made in the same plant, is installed and operating in the Heinsberg facility.

As noted in the last quarterly update, the Company has entered into a volume supply agreement with HC Starck for the supply of fuel cell components. During the March quarter the Company and HC Starck began implementing this supply agreement, with HC Starck providing production samples to ensure that it can continue to supply cells to meet the Company's quality requirements.

## **Financial Review**

Net operating cash outflow for the March quarter was AUD 5.7m (GBP 3.7m) which was lower than last quarter due to the timing of inventory purchases partially offset by reduced receipts from customers.

Receipts from customers for the quarter were AUD 0.5m (GBP 0.3m).

The net cash outflow after investing and financing activities for the March quarter was AUD 6.3m (GBP 4.1m).

During the quarter cash outflow from investing activities was AUD 0.5m (GBP 0.3m) for payments relating to the Company's manufacturing plant in Germany including the establishment of the BlueGen assembly operations there.

Cash at 31 March 2011 was AUD 24.3m (GBP 15.7m).

The quarterly cashflow report is also available on the Company's website at [www.cfcl.com.au](http://www.cfcl.com.au).

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### **For further information please contact:**

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**About Ceramic Fuel Cells Limited:**

Ceramic Fuel Cells Limited is a world leader in developing fuel cell technology to provide highly efficient and low-emission electricity from widely available natural gas. Ceramic Fuel Cells is developing fully integrated power and heating products with leading energy companies E.ON UK in the United Kingdom, GdF Suez in France and EWE in Germany. Ceramic Fuel Cells has also sold more than 60 BlueGen gas-to-electricity generators to major utilities and other foundation customers in Germany, the United Kingdom, Switzerland, The Netherlands, Italy, Japan, Australia and the USA.

Ceramic Fuel Cells is listed on the London Stock Exchange AIM market and the Australian Securities Exchange (code CFU). [www.cfcl.com.au](http://www.cfcl.com.au)

***Register to receive email alerts of CFCL announcements and industry news, at  
[www.cfcl.com.au/register](http://www.cfcl.com.au/register)***



# Appendix 4C

## Quarterly report for entities admitted on the basis of commitments

Introduced 31/3/2000. Amended 30/9/2001

Name of entity

**CERAMIC FUEL CELLS LIMITED**

ABN

**82 055 736 671**

Quarter ended ("current quarter")

**31 MARCH 2011**

### Consolidated statement of cash flows

Cash flows related to operating activities	Current quarter \$A'000	Year to date (9 months) \$A'000
1.1 Receipts from customers	463	2,117
1.2 Payments for		
(a) staff costs <sup>1</sup>	(2,541)	(7,447)
(b) advertising and marketing <sup>2</sup>	(125)	(257)
(c) research and product development <sup>3</sup>	(934)	(3,217)
(d) leased assets	-	-
(e) other working capital	(2,948)	(9,137)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	-	-
1.5 Interest and other costs of finance paid	(28)	(86)
1.6 Income taxes paid	-	-
1.7 Other		
- Net GST/VAT Received/(Paid)	336	948
- Sundry income received	38	4,012
<b>Net operating cash flows</b>	<b>(5,739)</b>	<b>(13,067)</b>

#### Notes

1. 'Staff costs' includes all labour and associated headcount costs, and therefore incorporates all Research & Product Development (R&PD) staff, Sales & Marketing (S&M) staff and General & Administrative (G&A) staff.
2. 'Advertising and marketing' excludes all S&M staff costs (as per note 1 above).
3. 'Research and product development' costs includes all R&PD costs as defined in Note 1(e) to the Financial Statements for the year ended 30 June 2010, but excludes all R&PD staff costs (as per note 1 above).

**Appendix 4C**  
**Quarterly report for entities**  
**admitted on the basis of commitments**

	Current quarter \$A'000	Year to date (9 months) \$A'000
1.8 Net operating cash flows (carried forward)	<b>(5,739)</b>	<b>(13,067)</b>
<b>Cash flows related to investing activities</b>		
1.9 Payment for acquisition of:		
(a) businesses (item 5)	-	-
(b) equity investments	-	-
(c) intellectual property	-	-
(d) physical non-current assets	(504)	(1,379)
(e) other non-current assets	-	-
1.10 Proceeds from disposal of:		
(a) businesses (item 5)	-	-
(b) equity investments	-	-
(c) intellectual property	-	-
(d) physical non-current assets	-	-
(e) other non-current assets	-	-
1.11 Loans to other entities	-	-
1.12 Loans repaid by other entities	-	-
1.13 Other – Security deposits decreased (increased)	-	(50)
<b>Net investing cash flows</b>	<b>(504)</b>	<b>(1,429)</b>
<b>1.14 Total operating and investing cash flows</b>	<b>(6,243)</b>	<b>(14,496)</b>
<b>Cash flows related to financing activities</b>		
1.15 Proceeds from issues of shares	-	30,217
1.16 Proceeds from sale of forfeited shares	-	-
1.17 Proceeds from borrowings	-	-
1.18 Repayment of borrowings	(70)	(192)
1.19 Dividends paid	-	-
1.20 Other - Financial assets: Net proceeds/(Net payments) <sup>1</sup>	(109)	(2,463)
Other - Share issue costs	(18)	(1,314)
Other - Interest received	125	275
<b>Net financing cash flows</b>	<b>(72)</b>	<b>26,523</b>
<b>Net increase (decrease) in cash held</b>	<b>(6,315)</b>	<b>12,027</b>
1.21 Cash at beginning of quarter/year to date	27,465	11,474
1.22 Exchange rate adjustments on foreign currency cash balances	646	(1,705)
<b>1.23 Cash at end of quarter</b>	<b>21,796</b>	<b>21,796</b>
Funds held in Financial Assets <sup>2</sup>	2,462	2,462
<b>Total Cash and Financial Assets</b>	<b>24,258</b>	<b>24,258</b>

- The net proceeds from/(payments for) the disposal and purchase of the company's investments are at item 1.20
- An amount of A\$2.462m (€ 1.8m) has been invested in a CFCL Group bank term deposit. This amount is pledged to support a bank guarantee issued in relation to a government grant received during the quarter ended 31 December 2009 and, as such, is unavailable for use by the CFCL Group.

**Payments to directors of the entity and associates of the directors**

**Payments to related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.24	Aggregate amount of payments to the parties included in item 1.2	97
1.25	Aggregate amount of loans to the parties included in item 1.11	-

1.26 Explanation necessary for an understanding of the transactions

Item 1.24 - Directors' fees.

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

NIL

2.2 Details of outlays made by other entities to establish or increase their share in businesses in which the reporting entity has an interest

NIL

**Financing facilities available**

*Add notes as necessary for an understanding of the position. (See AASB 1026 paragraph 12.2).*

		Amount available \$A'000	Amount used \$A'000
3.1	Loan facilities	-	-
3.2	Credit standby arrangements	-	-

### Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
4.1 Cash on hand and at bank	18,796	20,465
4.2 Bank term deposits (up to 3 months duration)	3,000	7,000
4.3 Bank overdraft	-	-
4.4 Other	-	-
<b>Total: cash at end of quarter (item 1.23)</b>	<b>21,796</b>	<b>27,465</b>
Financial Assets (Bank term deposits of more than 3 months duration)	2,462	2,354
<b>Total Cash and Financial Assets at end of quarter</b>	<b>24,258</b>	<b>29,819</b>

### Acquisitions and disposals of business entities

	Acquisitions <i>(Item 1.9(a))</i>	Disposals <i>(Item 1.10(a))</i>
5.1 Name of entity	Not applicable	Not applicable
5.2 Place of incorporation or registration		
5.3 Consideration for acquisition or disposal		
5.4 Total net assets		
5.5 Nature of business		

### Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act (except to the extent that information is not required because of note 2) or other standards acceptable to ASX.
- 2 This statement does give a true and fair view of the matters disclosed.

Sign here: ..... Date: 27 April 2011

Print name: John Dempsey  
 Director

## Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
2. The definitions in, and provisions of, *AASB 1026: Statement of Cash Flows* apply to this report except for the paragraphs of the Standard set out below.
  - 6.2 - reconciliation of cash flows arising from operating activities to operating profit or loss
  - 9.2 - itemised disclosure relating to acquisitions
  - 9.4 - itemised disclosure relating to disposals
  - 12.1(a) - policy for classification of cash items
  - 12.3 - disclosure of restrictions on use of cash
  - 13.1 - comparative information
3. **Accounting Standards.** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.