



# Transforming power



Annual Report & Accounts  
for the year ended 31 October 2012



We are the leading developer of low-cost alkaline fuel-cell systems using hydrogen to produce clean electricity.

# Electricity

Our aim is to become one of the lowest cost generators of electricity on an industrial scale.



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# Highlights



**In the space of 12 months, we have moved further than many companies have gone in decades.**

**Ian Williamson**  
Chief Executive Officer

[Read more – Operational Review P8](#)

## £10.94m

Cash (at 31st October 2012)

## £8.7m

investment from  
Ervington Investments

## €8m

Earmarked EU funding

### Technical

- Generated first electrical power with Beta system using industrially produced hydrogen
- Extended the life of fuel cells beyond three months in the laboratory
- Completed development of the Beta+ cartridge technology and established three operational demonstration systems based on the Beta+ technology
- Created a dedicated production facility and a team that has already produced cartridges which are currently under long-term test
- Received two further positive independent technical reviews from the Centre for Process Innovation ("CPI")

### Post-period Highlight

- Extended the life of fuel cells beyond six months in the laboratory
- Established a research relationship with Lancaster University

### Commercial

- Partnered with Industrial Chemicals Ltd ("ICL") for installation of up to 1MW (megawatt) of AFC Energy fuel cell systems
- Increased the protection of our intellectual property by filing further patents. In 2012 the number of filed patent families grew by almost 50% to 16

### Post-period Highlights

- Opened a South Korean sales office staffed by a team from Intralink, our sales channel partners
- Acquired assets and intellectual property of Diverse Energy Limited ("Diverse Energy"), to complement AFC Energy's EU funded ammonia-fed fuel system project

### Financial

- Secured an **£8.7m** investment from Ervington Investments Ltd ("Ervington"), a company beneficially owned by Roman Abramovich
- Cash as at 31 October 2012 **£10.94m** (31 October 2011: £5.97million)

### Post-period Highlights

- Awarded up to **€6m** from the European Union ("EU") to support the ICL project
- Awarded up to **€2m** from the EU to support a research project for the development of ammonia-fed alkaline fuel cell systems

[www.afcenergy.com](http://www.afcenergy.com)



# Chairman's Statement



**The company has never been in such a strong position.**

**Tim Yeo**  
**Chairman**

## Market Background

The deployment of fuel cell systems has continued to grow strongly over the past twelve months, with strong progress in particular in the US and South Korea. Stationary Industrial Power shipments rose from 8,300 units in 2010 (equivalent to 35MW) to 16,100 units in 2011 (equivalent to 85MW)\*. Further growth is confidently expected through 2012 and beyond, bolstered by increasing interest from other countries like Germany and Japan who are keen to accelerate the use of renewable energy.

There have been some high-profile adopters; both Apple and Ebay, for example, have installed fuel cell systems at data centres in the US. Coca-Cola is also using fuel cells to provide combined heat and power. The year also saw the development in South Korea of the world's largest fuel cell plant to date – an 11.2MW facility in Daegu.

Subsidies and beneficial feed-in tariffs remain an important part of the equation currently – notably in South Korea – with governments recognising the need to accelerate and incentivise the development and installation of alternative energy systems. This provides an opportunity in the short-term of course, but the longer-term challenge is to develop systems which are economic in their own right, which will be vital when markets develop and grow.

AFC Energy has had this longer-term perspective in mind throughout the development process to date. The Board believes that the choice of materials used, their recyclability and the overall design of the system will ensure that once volume production commences, the cost of electricity will be truly competitive against incumbent technologies. This will make AFC Energy very different from other fuel cell companies.

## Overview

It has been a year of marked technological progress, aided by ongoing results from our trials at AkzoNobel's chlorine plant in Bitterfeld and we remain extremely grateful to them for their continued support in many areas.

We commenced generating electrical power in late 2011 with the Beta system in Germany. Throughout 2012 we have successfully tested improved iterations. Importantly, the units can be fully monitored and stopped/started remotely meaning our development team are able to minimise their time away from our laboratory in Dunsfold.

We announced, in May, that we had extended the fuel cell electrode life to over three months in the laboratory and this was extended to six months in early 2013. We are achieving greater power density with greater longevity and are

closer to the optimum combination for full commerciality.

We were again pleased to receive two further independent reviews of our progress from the CPI, which is covered in more detail in the Operational Review. However, an even more significant endorsement of our technology was the commercial agreement with ICL to install a fuel cell facility at their newly commissioned chlorine facility in Essex, which we announced in June.

This will be the world's largest alkaline fuel cell energy generation system and the two companies were notified in November 2012 that a European Union grant of up to €6m had been earmarked, providing four years' financial support for the project, which is expected to commence in April 2013.

Another important milestone was the opening of our pilot production plant at Dunsfold. This was important for two reasons. Firstly, it is a vital step towards developing fully automated, in-line production. Secondly, with assembly moving over to a dedicated production team, it frees up the technical team to focus even more on system development.

Once again, the AFC Energy technical team, led by Gene Lewis are to be congratulated for the rapid progress made over the last year.

The Company has remained steadfast in managing its cash resources prudently through the year and decided in October 2012 to agree an investment of £8.7m by Ervington Investments, resulting in them holding 15% of the enlarged issued share capital of the company. Ervington's ultimate beneficial owner is Roman Abramovich.

AFC Energy's cash resources at the end of October were £10.94m (2011: £5.97m) putting the company in an extremely strong position to execute its growth strategy from this point.

### Our Partners

In terms of commercial impact, the company is focused in the near-term on driving delivery into its initial target market of the chlor-alkali industry and will be working ever more closely with both AkzoNobel and ICL to achieve this in 2013.

Medium-term opportunities in other areas remain substantial.

Since 2009, Waste2tricity Ltd ("W2T") has had a licence option from AFC Energy to deploy fuel cells on municipal waste to energy projects in the UK. We announced in April 2012 a commercialisation agreement with W2T which will result in AFC Energy receiving a non-refundable fee of £1m over 4 years of which £150,000 was received in the year just ended.

W2T is working on projects which, if successfully brought to fruition, could offer AFC Energy an exciting opportunity in the medium term, once volume production has commenced.

Elsewhere, the company continues to work closely with Linc Energy with a view towards deployment of fuel cells in underground coal gasification (UCG) as well as a number of other parties for other applications.

While the company is focused predominantly on large-scale industrial applications, we have always believed there are opportunities for deployment

on a smaller scale for use in primary, back-up or temporary power systems. In November 2012, we were therefore pleased to announce the acquisition of certain assets and intellectual property from Diverse Energy Ltd and at the same time a further EU grant of up to €1.96m for the development of ammonia fed alkaline fuel cells. Ammonia is easily converted into hydrogen, via catalytic "cracking", and Diverse Energy has been able to gain traction in delivering small-scale systems into the mobile phone mast power market within Africa.

### Management and Board

There were four changes at Board level during the year.

Sir John Sunderland joined the Board on 8th March 2012 as a Non-Executive Director, effectively replacing Simon Hunt who decided to stand down as from the AGM due to conflicts of business interests. Sir John's extensive business experience is already proving to be a valuable asset to the Company.

Adam Bond joined the Board on 1st June as Linc Energy's representative, replacing David Smith. At Linc, Adam is responsible for the execution and deployment of the company's clean energy, Underground Coal Gasification (UCG) to Gas to Liquids (GTL) projects around the globe and he is very familiar with AFC Energy.

### Summary and Outlook

2011 was by far the most successful year in the history of fuel cells and further strong growth in the industry worldwide is expected in 2012 and beyond. Right now, there is very strong growth occurring in the South Korean market and AFC Energy is actively pursuing its interests there. The global marketplace is already big and this is before any significant interest from China, for example. Notwithstanding the current "dash for (shale) gas", driven by perceived lower cost and improved availability, governments and industries across the world must increasingly look to reduce their carbon footprint further and faster.

I would like to thank all Board members and the ever-growing team of hard-working and enthusiastic people at AFC Energy for their efforts as well as our partners and suppliers for their support.

Also, a word of thanks to our shareholders for both their support and patience. The path we are treading may sometimes seem long, but we will not cut corners to try to arrive at our destination more quickly only to find we have taken the wrong path. We are developing a product and a company that we believe will be substantial and every step must therefore be measured and in the right direction.

There is no question that alkaline (and indeed other) fuel cell technologies work. However, history shows us that smart design, reliability and lower cost are the necessary attributes of a market-leading product and AFC Energy has made very substantial progress in 2012 towards achieving this. From a technological, managerial and financial standpoint, the Company has never been in such a strong position and its commercial position is strengthening all the time. The coming year promises to be a very exciting one for AFC Energy.



**Tim Yeo**  
Chairman

1 March 2013

[www.afcenergy.com](http://www.afcenergy.com)





# Revolutionary



## Fuel cells that will displace conventional power generation

Fuel cells convert fuel directly into electricity. Alkaline fuel cells are the oldest and most effective of all fuel cell chemistries achieving up to 60% electrical efficiency. AFC Energy is re-engineering this effective technology using modern materials and catalysts readily available today. Our systems are aimed at the distributed and industrial power generation markets which are recognised as the fastest growing sectors for fuel cell applications.\*

- **More efficient – at all levels of utilisation**

They do not burn a fuel like in an internal combustion engine or turbine so they do not need to drive pistons or blades. The avoiding of this intermediate mechanical step and having a direct conversion route to electricity is what makes fuel cells so efficient. They are 'scaleable' without impacting efficiency unlike many of the world's existing power production technologies.

- **Quiet and clean at point of generation**

A fuel cell has very few moving parts. Small electrical pumps and blowers move gases and liquids around the system. Therefore, it is quiet compared to traditional technologies. Its two main exhausts are water and oxygen scrubbed air.

- **Produce water rather than consume it**

An AFC Energy fuel cell which is continuously fed hydrogen will chemically react the hydrogen with scrubbed air to produce water, heat and electricity. This production of water is seen as a benefit in specific regions around the world.



# Our Business

The production of low-cost electricity that is competitive against mainstream forms of electricity generation has enormous market potential from a wide range of industrial settings, sectors and regions.

- Solid
- Gas
- Regions

We are focused on those markets where: hydrogen is easily available and possibly free as a waste product from the manufacturing process...

<p><b>Chlor-alkali</b></p> <p>Hydrogen is a by product of chlorine manufacture. Around 15% is wasted and the remainder typically has low value. Alkaline fuel cells powered from this hydrogen are chemically compatible with chlorine manufacture. Using AFC Energy's alkaline fuel cell systems both electrical costs and carbon emissions can be reduced by up to 20%.</p>	<p><b>1%</b></p> <p>of world electricity consumption</p>	<p><b>77</b></p> <p>manufacturing sites in Europe</p>	<p><b>625</b></p> <p>MW of waste hydrogen in Europe</p>
<p><b>Energy from Waste (EfW)</b></p> <p>Hydrogen can be generated economically from domestic and commercial waste – due to its high hydrocarbon content. AFC Energy's alkaline fuel cell systems have the potential to generate c. 40% more electrical power from the same waste, lowering carbon emissions by the same amount.</p>	<p><b>1.3</b></p> <p>billion t/Yr amount of MSW* worldwide</p>	<p><b>40%</b></p> <p>more power than a turbine</p>	<p><b>140</b></p> <p>£/MW revenue from a double ROC** qualified plant</p>
<p><b>Natural and Bio-gas</b></p> <p>Natural gas and bio-gas are predominantly methane which is hydrogen-rich. Hydrogen is released using a standard industrial process known as reforming (SMR). Developments in this field are leading to improving economics for the reforming process at smaller-scale steam methane.</p>	<p><b>70%</b></p> <p>efficiency of SMR process for H2 production</p>	<p><b>48%</b></p> <p>of H2 today produced by SMR globally</p>	<p><b>104</b></p> <p>number of bio-gas plants in the UK</p>
<p><b>Coal Gasification</b></p> <p>Coal can be gasified either underground or at the surface to produce hydrogen and carbon dioxide (which is captured, ready for storage if available). AFC Energy's alkaline fuel cell systems enable the cleaner, more efficient use of coal for electricity generation as well as providing water required for the gasification process.</p>	<p><b>85%</b></p> <p>of energy content of coal recovered</p>	<p><b>1.5</b></p> <p>trillion tonnes estimated coal reserves if accessed with UCG</p>	<p><b>50%</b></p> <p>expected power efficiency with fuel cells</p>
<p><b>Others</b></p> <p>There are many other sources of hydrogen:</p> <ul style="list-style-type: none"> <li>• Ammonia</li> <li>• Electrolysers</li> <li>• Chemical processes</li> <li>• Algae/bacteria</li> <li>• Blast furnace gas</li> </ul>	<p><b>1</b></p> <p>atomic number of hydrogen</p>	<p><b>90%</b></p> <p>of the atoms in the universe are H2</p>	<p><b>-253</b></p> <p>°C boiling point of H2 (degrees centigrade)</p>

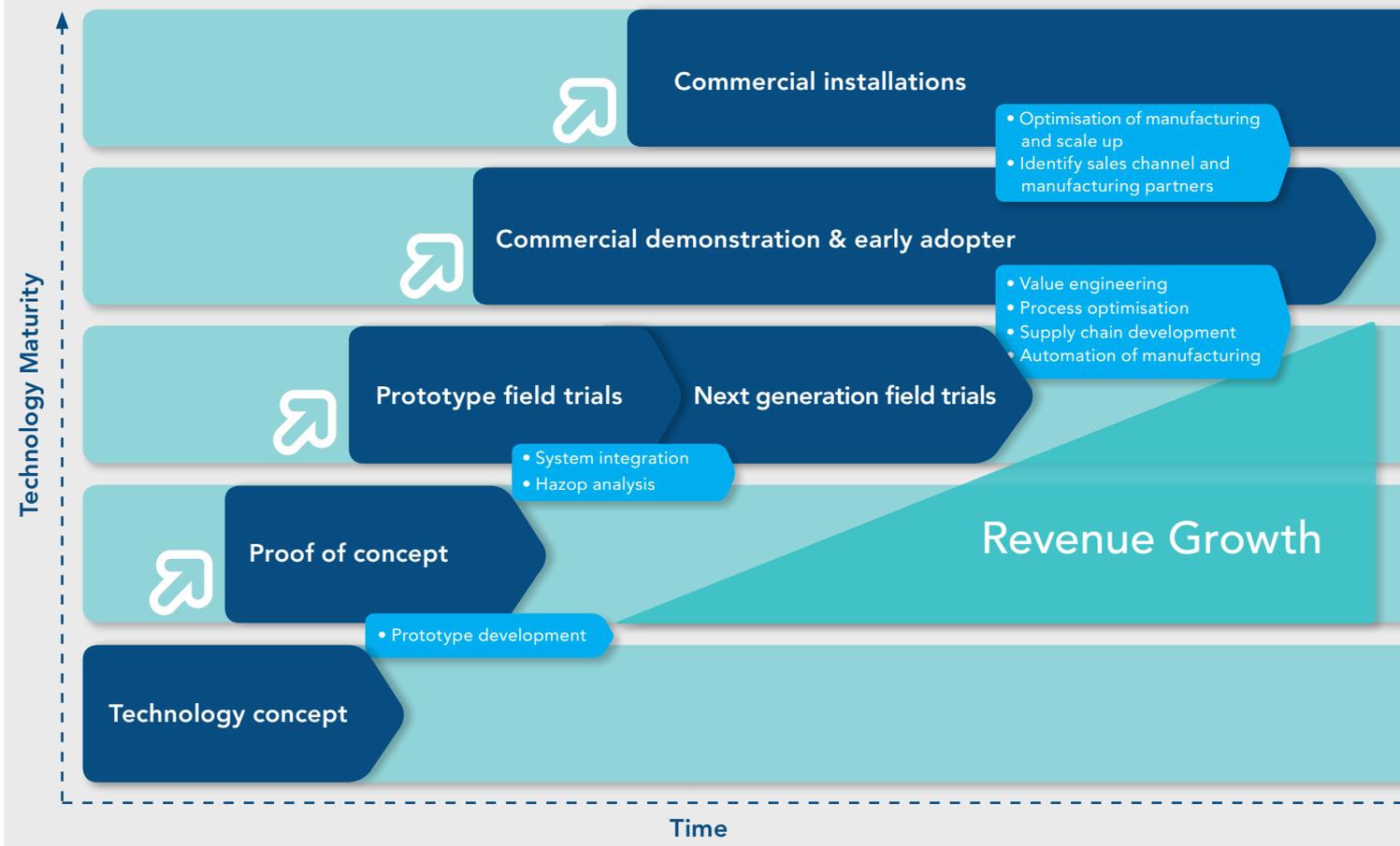
...and regions that offer attractive subsidies for electricity that is generated from fuel cells.

<p><b>South Korea</b></p> <p>Financial incentives paid for electricity generated from fuel cells makes South Korea a particularly attractive target market for AFC Energy fuel cell systems.</p>	<p><b>250</b></p> <p>\$/MW market value of power from a fuel cell</p>	<p><b>11.2</b></p> <p>MW installation of the worlds largest fuel cell power plant</p>	<p><b>10%</b></p> <p>portion of renewable energy to be supplied by 2022</p>
<p><b>Germany</b></p> <p>In the EU, Germany continues to champion the introduction of fuel cells. Long term support for combined heat and power solutions is available which doubles the value of the power supplied.</p>	<p><b>5,905</b></p> <p>number of bio-gas plants in Germany (2010)</p>	<p><b>51</b></p> <p>€/MW CHP bonus for fuel cells</p>	<p><b>1.4</b></p> <p>billion € support for H2 and fuel cells up to end 2016</p>

\* MSW - Municipal Solid Waste  
 \*\* ROC - Renewable Obligation Certificate

# Our Business continued

## Our journey to commercialisation



## Our business model

### • Funded projects

- **Development revenue**  
External agency funding makes our shareholder capital work harder. AFC Energy look to fit our development needs within defined funding rules. This allows projects to be delivered earlier and with less call on internal financial resources for capital items.
- **Overhead coverage**  
Many agencies fund direct time spent on key technical research, development and demonstration. A portion of overhead recovery is also permitted. This dramatically improves our monthly cash burn rates.

### • Market positioning partners

- **Licence revenue**  
Our initial licence revenues were obtained this year. Our work with partners in this area is designed to seed opportunities for our fuel cells in markets which have a longer sales/delivery process such as Waste-to-Energy. Working in this way minimises our sales costs and helps deliver market recognition earlier.

## Our progress on the journey



Opening of South Korea office through appointment of Intralink.  
Identify and engage European commercial partners

**2013/14**

Commercial Partners



Industrial Chemicals project earmarked EU funding for largest alkaline fuel cell installation in the world.  
Semi/full automation of production process

**2013**

ICL



Upgrading of our technology and cartridge configuration led to our first commercial system becoming part of the AkzoNobel trial.  
First licence revenue flows from the W2T UK agreement, first industrial power generated

**2012**

AkzoNobel



The larger Beta system was developed using results from these trials. The system was tested in-house and then deployed to AkzoNobel, Germany.

**2011**

Beta System



Our 3.5kW Alpha system was field tested and proven at both AkzoNobel, Germany and Linc Energy, Australia.

**2009**

Alpha System

### • Manufacturing partners

- Licence revenue**  
 Our work with manufacturing partners is just beginning. AFC Energy is currently developing both its supply chain and its equipment for manufacturing automation. Our philosophy remains that the redeployment of process equipment from other industries will offer the highest integrity product for the lowest investment. Once our production line has been fully mapped out and proven we will engage with preferred production companies for licensed manufacture.

### • Customer sales

- Capital sales revenues**  
 Although, in the longer term, we wish to retain ownership of our fuel cell systems it may be prudent to engage with some of our partners to sell our systems as we continue our development. This additional revenue will help support the company during this initial phase.
- Electricity, heat & water revenues via an ESCo model**  
 An Energy Services Company ("ESCo") is AFC Energy's supply method of choice. We believe this will reduce decision time, especially in mature industries, and allow the Company to take advantage of the expected longer term growth in global energy prices.
- Hybrid**  
 Our Hybrid offering will merge the concepts outlined above. We will obtain an initial advance payment for the system and also engage with our partner on a long term basis via an ESCo arrangement.



# Opportunity



# Operational Review



It is clear that AFC Energy is built on unique technology with a considerable global opportunity.

Ian Williamson  
Chief Executive Officer

## 6 months

Electrode longevity in laboratory

## 60%

Increase in electrode power output in the field

## 20,000

Electrode production capacity delivered

**Our electrode power output and longevity performance is in line with our technology development plan.**

2012 has been a year of great progress for AFC Energy. Since joining as CEO at the end of 2011, my belief in the potential of the Company has only been strengthened. It is clear that AFC Energy is built on unique technology with a considerable global opportunity.

We have embarked on an ambitious strategy to become a leading hydrogen fuel cell energy supply company for industrial and utility-scale applications. We believe our technology will continue to develop into one of the lowest cost, most efficient fuel conversion devices available.

2012 saw the Company take great strides towards that goal both in development and commercial terms. We have seen markedly increased activity from many interested future customers that understand the potential of AFC Energy's technology and are seeking to apply it to their own needs.

There are three key areas where it is clear AFC Energy is in a far stronger position than it was 12 months ago. We:

- have seen rapid technical progress;
- have moved closer to realising our commercialisation ambitions; and
- are on a significantly stronger financial footing, enabling us to execute our growth and investment strategies.

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Review

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# Technology



# Operational Review

## 1 Technical Progress

Once again, the Company has made significant progress in the technical development of an efficient and robust fuel cell system.

Once again, the Company has made significant progress in the technical development of an efficient and robust fuel cell system.

We have made several technical advances in electrode life and power performance, as a result of extensive lab and in-field testing at AkzoNobel's Bitterfeld plant, as well as making strategic progress in other areas.

### Since the year-end:

We have extended the electrode life in the laboratory to over six months and we are focused on further developing electrode life towards 12 months and beyond where we believe we will have a product that is economic globally in all target markets.

Power output from our electrodes has now escalated by over 60% when compared to that being achieved at the start the previous fiscal year. This is in-line with the technical plan created for the Company.

We have announced a technical partnership with Lancaster University to add high quality resource and capacity in the required areas.

We have shipped our initial test Beta+ system to Industrial Chemicals Ltd for feedstock assessment whilst we await the finalising of the EU funding and begin the build programme for the large scale system.

### Partnerships

This has been a milestone year for AFC Energy. In early 2012 we produced our first industrial energy at AkzoNobel from a Beta+. Whilst the actual performance of the system remains commercially confidential, AkzoNobel continued to offer us every support and encouragement. We have run a number of different tests on the systems in Germany. Longevity and power output are important but factors such as cycling and maintenance techniques are also being assessed. We also look beyond the fuel cell itself at possible factors to consider at performance so assessing environmental conditions has proven invaluable in development terms.

### Strengthened Development Team

We strengthened our development team at Dunsfold with the addition of renowned fuel cell scientist Naveed Akhtar early on in the year and have further strengthened the team with the addition of three highly qualified scientists. We continue to resource globally for these posts, attracting the highest possible calibre of candidates which has allowed us to create a wonderfully multinational and talented team.

### Expanded Production

As our development team continued to deliver our technical milestones, our plans for expanded production



## AkzoNobel and AFC Energy Driving fuel cells to commercial reality

AFC Energy has two Beta+ test systems installed at AkzoNobel, Bitterfeld. Primarily for electrode and cartridge development, the systems have been in continuous use this year. Factors such as power output, longevity, system cycling and maintenance techniques have all been tested. The programme is on track to deliver its goals.

# 70,000

m<sup>3</sup>/day H<sub>2</sub> produced at Bitterfeld

# 100MW

if all used for power via a fuel cell  
Equates to c. 20% reduction in  
plant power consumption

# Operational Review continued

## 1 Technical Progress continued

### The pace of development within AFC Energy appears to be accelerating.

Dr Jon Helliwell, CPI

took shape. An initial production facility was funded and commissioned within the fiscal year and within the budget allocated for it, which allows the Company to produce up to 20,000 fuel cell electrodes per year using hand crafted processing. A production team of skilled fuel cell professionals was employed under the leadership of Nick Yeomans, our new production manager. This has allowed the development team to refocus on the next steps for the technology and we have already seen the benefits of this.

#### Funded Projects – Underway

We also began our initial EU funded project – Project LASER-CELL. AFC Energy is leading a group of companies who are all interested in developing innovative high-volume production technologies which can be used to manufacture alkaline fuel cell components. The project is due to run for three years and will run in parallel with the Company's current development programme. The Company's work in this area is supported by a €1.4m grant.

#### Funded Projects – Earmarked

Our funding success at the EU level has continued and we have two new projects earmarked for funding – Power Up and Alkammonia.

- Power Up will provide significant funding for our scaled up, commercial demonstration project with ICL. This project builds on our successful AkzoNobel development work. In this project we will be delivering our first full scale commercial system capable of supplying enough power for up to 500 homes. The system will be delivered in stages over the period of the project.
- Alkammonia allows us to continue to develop our knowledge of different hydrogen supply feedstocks for integration with our fuel cell system. Initial laboratory tests have indicated that our technology will integrate well with ammonia fed systems. This project will expand our knowledge in the area and lead to an initial integrated system design.

The addition of Diverse Energy's IP and technical know-how will further aid our speed of development in this area.

#### Programme Assessment

Our programme has once again been assessed externally. The Company has continued to commission independent reviews of its progress from Dr Jon Helliwell, Project Manager, Fuel Cell Applications at the CPI, which independently benchmark the progress of our technology. The CPI carried out reviews in January and August 2012 and the following are the key highlights from the latter review:

The Company:

- Completed its Beta cartridge test programmes at Dunsfold and Bitterfeld;
- Completed development of the Beta+ cartridge technology;
- Established three operational demonstration systems based on the Beta+ technology;
- Created a dedicated production facility and a team that has already produced cartridges that are currently under long-term test;
- Developed these systems to the point at which they can be interrogated and operated (started/ stopped) with ease, even from a remote location;
- Supported successful operation of three Beta+ systems simultaneously;
- Ran the Beta+ demonstration systems for a combined total of several thousand hours; and
- Continued to build a very strong relationship with its first key customer, AkzoNobel.

The following is an extract from the summary of this review:





## CPI Progress Report

*The pace of development within AFC Energy appears to be accelerating and the Company has clearly moved a long way from a proof of concept phase into demonstration and production. The Company is delivering on both its technology road map and its commercial business plan.*

*The Company still faces challenges moving forward. In exactly the same way as it is amassing data to demonstrate the robustness of its technology, it needs to build up further financial data that demonstrates the low cost of its technology and the low total cost of ownership. It has made a good start in this area by establishing a robust cost system.*

*The establishment of a dedicated production capability, with all the disciplines entailed, will greatly facilitate this task. The author strongly believes that the Company is applying exactly the same discipline and rigour to the financial and economic aspects of its technology as to its technical*

*aspects, so he fully expects to see this data develop as the Company progresses along its road map.*

*In conclusion, the author still strongly believes that the Company will achieve its technical and commercial objectives and this belief has been strengthened by the very positive developments made since his last review.*

**Dr Jon Helliwell**  
Project Manager,  
Fuel Cell Applications,  
CPI Innovation

August 2012

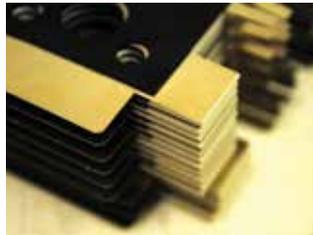
**Our funding success at the EU level has continued and we have two new projects earmarked for funding. Diverse Energy's IP and technical know-how will further aid our speed of development in this area.**

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# Economy



# Operational Review continued

## 2 Financial Overview

**In 2012, AFC Energy delivered its highest annual revenue.**

In 2012, AFC Energy delivered its highest annual revenue through a combination of licence income, sales to commercial customers and grant income, the first of these representing £0.26m of the overall total of £0.36m. All but £0.03m of this was in the UK.

The loss fell by £0.2m to £3.79m as a consequence of increased revenue, lower depreciation and lower share-based payments charges offsetting a modest rise in own and EU funded R&D expenditure, mainly resulting from increased technical and production staffing and system and cartridge builds.

The Company has continued to keep administrative costs under tight control and to look creatively at how to maximise the impact of its assets, including cash resources. Examples of this in the year include:

- Outsourcing of basic accounting and payroll functions, saving an annualised £50k p.a.
- Carefully selected strategic investment in capital assets, notably investment of £180k in a pilot scale production facility at Dunsfold. The facility enables the increased production of fuel cells with full cartridge assembly to meet AFC Energy's growing commercial activities and in-house expansion programme. It provides a prudent

low cost interim step between small-scale and fully automated high volume in-line production, and will also act as a demonstration facility for discussions with manufacturing partners.

- The development of re-cycling programmes for fuel cell components to reduce purchase costs and environmental impact.
- The loan of certain fully depreciated capital assets to the Lancaster University to support the programme of technical collaboration announced on 30 January 2013.

The Board has maintained its policy of continually reviewing cash balances and forward requirements and seeking to ensure that an adequate funding horizon is maintained. During the year, the cash outflow from operating and investing activities was £3.32m, against £3.31m in the previous year. This included the repayment in full with interest of the £150k loan granted to W2T in 2009. The projected cash balance as 31 October 2012 gave the Company a funding horizon to mid-2013. The Board was therefore very pleased to accept an investment of £8.7m on 10 October 2012 from Ervington Investments Ltd (whose ultimate beneficial owner is Roman Abramovich) at 26.6 pence per share for a 15% share in the Company.

**The Company has adequate financial resources to continue its operations for the foreseeable future. Outsourcing of basic accounting and payroll functions, saving an annualised £50k p.a.**



# Operational Review continued

## 2 Financial Overview continued

The Company is applying exactly the same discipline and rigour to the financial and economic aspects of its technology.

Jon Helliwell, CPI

The resultant cash balance of £10.94m at 31 October ensures that the Company has adequate financial resources to continue its operations for the foreseeable future.

It was pleasing to note that a comprehensive review of the Company's patent portfolio at the year-end confirmed the existing assessment of its value. The current patent portfolio will underpin the commercial fuel cell systems and will be important in ensuring that the Company maximises the tax advantages of the forthcoming Patent Box regime.

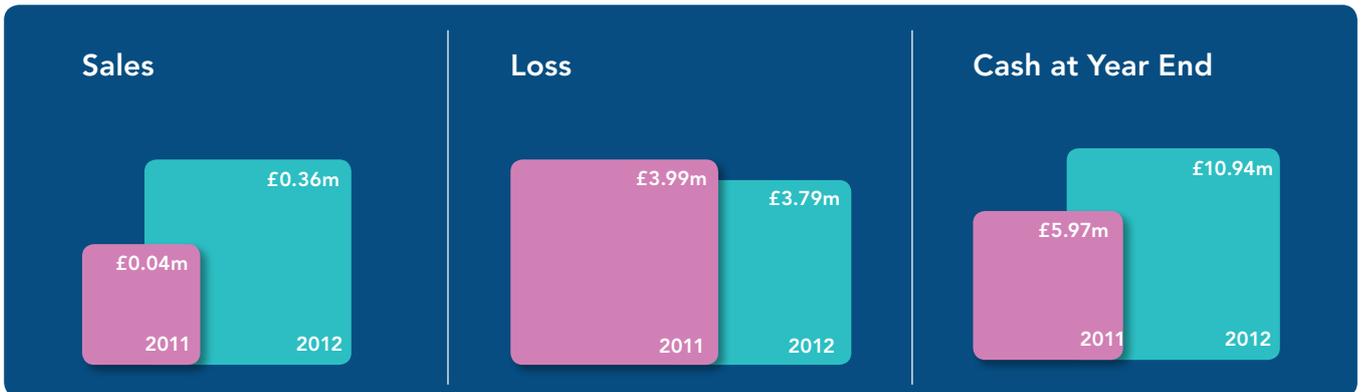
Looking ahead, AFC Energy expects a modest further increase in its staffing to support development and deployment of its commercial system. Even after entering into the collaboration with Lancaster University, it also expects to invest in further cell testing capacity, to meet the increasing demand for test stands, driven by the rapidly lengthening time each cell is on test. Finally, it envisages investing in the first in-line production facility.

### Intellectual Property

AFC Energy continues to generate intellectual property as a result of its research and development activities. The Company regularly reviews this intellectual property to determine its value and the best way to protect it. The Company reported last year that it had strengthened its technical team with the appointment of further world-class fuel cell expertise. This move has borne fruit, and in January 2013, AFC Energy was delighted to report that it had made significant advances in the field of low cost alkaline fuel cells. The Company is currently pursuing 23 families of patents, including one acquired from Diverse Energy, with 11 filed since the last annual report and others in preparation. AFC Energy endeavours to anticipate future technical developments in the field of alkaline fuel cells and to apply for patent protection for inventions which are likely to be incorporated in future generations of its products.

**AFC Energy expects to see modest staffing increases, further investment in cell testing and in-line production.**

**The Company is currently pursuing 23 families of patents.**



**£10.94m**

Cash  
(at 31st October 2012)

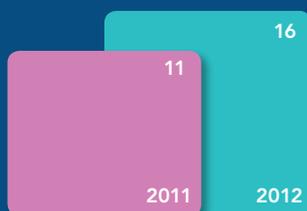
**£8.7m**

investment from  
Ervington Investments

**€8m**

Earmarked EU funding

Number of patents filed



Highest annual revenue through a combination of licence income, sales to commercial customers and grant income.

Loss down by £0.2m to £3.79m.





# Strategy



# Operational Review continued

## 3 Strategic Overview

Last year, we set out five clear targets to help us develop one of the lowest cost, most efficient fuel conversion mechanisms available.

At the beginning of 2012, we set out five clear targets aligned with the commercial and technical aims of the Company to help us achieve our goal of developing our technology into one of the lowest cost, most efficient fuel conversion mechanisms available.

These five goals were:

### 1. Existing Partners

Deliver on our set of defined goals for the fuel cell system trials with AkzoNobel;

### 2. Pilot production plant

Transfer electrode production from technical staff to manufacturing staff;

### 3. New Partners

Expand, in a controlled way, the number of 'partner' customers. Where we have existing relationships we either progress them or move on;

### 4. Multiple feedstocks

Gain experience of more hydrogen production methods and integration requirements; and

### 5. International Markets

Position the Company to access other international markets.

It is pleasing to report that all of the above targets were achieved with excellent progress across all aspects of the business.

The Company remains on track to commercialise its low cost alkaline fuel cell systems and since the last annual report has continued to make, what in fuel cell terms is, rapid development. We have now demonstrated in our own facilities that our electrodes can last beyond six months.

These results are of significance since the first industrial applications that we have identified require a minimum of three months' electrode life to be economic. At six months' longevity, these applications have the potential to generate significant revenues in places such as South Korea where support is available for electricity generation and here AFC Energy is pursuing a strategy to advance potentially lucrative opportunities with industrial partners.

At six months' longevity, new commercial opportunities are also opened up in additional territories such as Germany, where the Company is already carrying out long term longevity trials with AkzoNobel, one of the world's largest chemicals groups.

### Ervington Investments – enabling delivery of our strategy

We were delighted to welcome the investment from Roman Abramovich's Ervington Investments, further strengthening AFC Energy's balance sheet, providing the Company with additional cash resources to execute

We have now demonstrated in our own facilities that our electrodes can last beyond six months. At six months' longevity, new commercial opportunities are also opened up.



# Operational Review continued

## 3 Strategic Overview continued

**AFC Energy has made huge progress in the system and electrode development ...there is a higher than 50% chance of multiple roll-out units across Akzo plants within 5 years. Ton Manders, AkzoNobel**

its long term growth strategy and invest in its low cost fuel cell technology over the coming years. It is a ringing endorsement of AFC Energy's innovative technology and its strategy to become a leading hydrogen fuel cell energy supply company for industrial and utility-scale applications.

Ervington is excited by the potential of our low cost hydrogen fuel cells which are cleaner and more efficient than technologies that use combustion to generate energy like gas-fired power stations. Ervington's support not only enables us to take full advantage of our commercialisation plans expeditiously but will also provide us with high level access to energy users and potential partners globally.

### Investor focus

We value all investors. In order to improve our communication channels we have refocused our public relations activities through Luther Pendragon, improved and re-launched our website and are working with Proactive Investors to enhance news flow beyond the words contained in announcements we make.

We continued to hold open days for investors to visit AFC Energy's premises as we understand the desire for information concerning the Company's plans and it will be our intention to continue to hold similar events in the future. We look forward to continuing to delivering further real progress on AFC Energy's drive to commercialisation.

### 1. Existing Partners AkzoNobel

In January 2012, the Company announced that it had commenced a comprehensive programme of trials with AkzoNobel, using two commercial-scale fuel-cell systems. These systems have been generating electricity using industrially produced hydrogen. Although, for commercial reasons, we have not been publicising many of the details relating to these trials, we are very pleased with the overall progress that has been made. We are building up data to give us a comprehensive understanding of the practicalities of industrial operation as well as using them to confirm laboratory results and to inform our future development.

Longevity and power output remain just two of a number of factors being investigated. The cycling of fuel cells in an industrial environment (i.e. the switching on and off of the systems given the hydrogen flow and the chemical plant's operating conditions) offers us insights as to the robustness of our system. We have also undertaken replacement cartridge trials both in terms of local repair of individual components and time taken to effect a complete cartridge change. Other operational considerations such as environmental conditions and maximising hydrogen usage have also seen a number of tests.

**The majority of the components can be reused or recycled. The Company has refocused its public relations activities, improved and re-launched its website and is working to enhance news flow.**

[www.afcenergy.com](http://www.afcenergy.com)





AkzoNobel remains fully supportive of the programme and acknowledge the progress being made. As Ton Manders, head of Process Optimisation and Engineering, commented to a group of investment analysts last year, "AFC Energy has made huge progress in the system and electrode development in the last year... electricity generation is the most efficient use of hydrogen we produce... there is a higher than 50% chance of multiple unit roll-out across all Akzo plants within 5 years."

## 2. Pilot production plant

Another important aspect of commercialisation is the ability to manufacture electrodes as economically as possible.

Last year we reorganised the way our fuel cells were to be manufactured, to meet the growing demand as we move towards full commercialisation. A year ago electrodes were manufactured by our research and development staff in small numbers. In March 2012, the Company announced that it was investing in a fuel cell pilot production plant at Dunsfold Park and this opened on 14 September 2012.

The new facility not only enables the increased production of fuel cells with full cartridge assembly to meet AFC Energy's increasing commercial activities and in-house expansion programme, but also allows the research

and development staff to maximise their focus on the continued development of what is fundamental to our business – the technology. At full production, the plant, in its current configuration, has the capability of producing up to 20,000 fuel cell electrodes a year.

The plant, which has been delivered within a budget of £180,000, provides an interim step between small-scale and fully automated high volume in-line production. Licensed manufacture at larger scales remains AFC Energy's intended manufacturing route for full-scale commercial deployment. The pilot line is operating well and we are manufacturing electrodes of uniform consistency. We have also been assessing the suitability of off-the-shelf automated manufacturing equipment.

We have recruited a dedicated production manager and a team of experienced fuel cell production technicians to staff the unit. In the longer-term, the Company expects there to be many more jobs in fuel cell production as the fuel cell industry grows and AFC Energy begins exporting its products around the world.

## Reusable parts lower the cost of production

When our cartridges reach the end of their life in the field they are returned to AFC Energy. Owing to the materials

**The pilot production plant is operating well and we are manufacturing electrodes of uniform consistency. As electrode life and power output increases over time, operating costs will diminish giving the opportunity for margins to increase.**



# Operational Review continued

## 3 Strategic Overview continued

AFC Energy will coordinate the Power Up project and expects its direct share of the project funding to be up to €3m.

selected by AFC Energy in the design of the cartridge, the majority of the components can be reused or recycled. The new production plant includes the facility to dismantle used cartridges and to reuse components back into the production process. Components that are not reused are returned to our suppliers or other recycling partners for reclaiming and reuse. The ease of reuse and recycling of cartridge components significantly reduces the ongoing cost and material demand for producing new cartridges over the lifetime of a fuel cell system and AFC Energy also believes it will be well placed to meet potential new legislation regarding reuse and recycling of materials.

### 3. New Partners

#### ICL

I mentioned last year that we planned to increase the number of customers in a controlled way. We have been very selective about which projects to pursue. In addition to these trials with AkzoNobel, the Company is now working with ICL in the UK. ICL have built Europe's newest chlor-alkali plant and it has been designed to operate in conjunction with AFC Energy's fuel cell system.

The project is part of ICL's integrated energy generation plan and is the largest fuel cell system announced for installation in the UK to date and is believed to be the

largest alkaline fuel cell system announced anywhere in the world.

AFC Energy's low cost alkaline fuel cell system will be installed in stages at the ICL-owned and operated chemical facility and is eventually expected to generate approximately 1MWe (one megawatt of power, enough energy to power 500 homes). The chlor-alkali plant will manufacture chlorine and caustic soda that have a range of uses including in household cleaning products, detergents and water treatment.

Hydrogen produced as a waste by-product in ICL's chlor-alkali process will be used to generate power using AFC Energy's fuel cell system. Without this fuel cell system, waste hydrogen would typically be discharged into the atmosphere. Instead, ICL will be able to reduce dependence on the national grid for its energy needs by creating economic value from its hydrogen.

AFC Energy was delighted to announce in November 2012 that with the support of ICL and others it had been awarded, subject to contract, €6.1m by way of an EU grant funding to support the demonstration of this fuel cell system and the development and installation of an associated automated electrode production line. We expect the project to commence formally during Spring 2013. If concluded satisfactorily, AFC Energy will coordinate the project and expects



### ICL and AFC Energy Installing large scale commercial fuel cells

With the help of an EU grant, AFC Energy will collaborate with ICL to deliver the largest Alkaline fuel cell system in the world. ICL recently commissioned the first new chlorine plant in Europe for many years. It has been specifically designed to incorporate AFC Energy's fuel cells. The project's primary purpose is to scale up the balance of plant to a commercial offering, introduce automate manufacture and demonstrate the ESCo contractual arrangements.

# 4

phase planned installation

# 1MW

power generated

# 500

homes can be powered by the facility



its direct share of the project funding to be up to €3m with the balance to be received by the other project partners. The project is expected to create a significant number of UK jobs in the long term and the stationary fuel cell industry is forecast to create 500,000 jobs globally over the next decade according to Fuel Cell Today.

Installations such as the 1MW facility planned for ICL are also aimed at showcasing AFC Energy's alkaline fuel cell system and will act as reference sites which prospective customers can visit to see working fuel cell systems, at scale, in an industrial environment. At the end of the grant funded demonstration period it is intended that AFC Energy will continue to provide electrical power to ICL under an ESCo model whereby ICL will provide its hydrogen and purchase power under long-term contracts. AFC Energy will own, operate and maintain the fuel cell systems. This is the first example we have of the ESCo model in operation.

The ESCo model is our preferred future route to market. Instead of selling the fuel cell system we, or a facilities management company on our behalf, owns and operates the system in return for a "toll fee" for the electricity produced. It is our belief that this model, which is widely used elsewhere in industry, will yield the greatest return to the Company and therefore generate the greatest shareholder value. It means

that as electrode life and power output increases over time, operating costs will diminish giving the opportunity for margins to increase. The models show that a quick return on investment can be expected from sales of electricity generated and in some applications, the water and heat produced by the fuel cell system may also have a considerable value, opening up an additional source of revenue. We believe this model is attractive to chlorine manufacturers from the feedback we have received and will facilitate a more rapid market penetration.

#### 4. Multiple feedstocks

A key factor in the wide deployment of AFC Energy's systems will be their ability to be used with many different energy feedstocks.

Ammonia is one of those important hydrogen sources. It has a high energy density and can be very easily converted to hydrogen by heating it in the presence of a catalyst – a process known as "cracking". AFC Energy's alkaline fuel cell system enables the efficient use of the hydrogen liberated by cracking, giving it the potential to be more economic than other fuel cell types.

AFC Energy's alkaline fuel cells also have the advantage of being able to tolerate ammonia traces in the fuel stream – recently confirmed by AFC Energy's own initial laboratory-based

trials using hydrogen with higher residual ammonia concentrations. These tests show that power systems derived from the integration of ammonia with alkaline fuel cells do not require an expensive clean-up process. Ammonia-fed alkaline fuel cell systems are also far more efficient than known current diesel alternatives and the only emissions from this process are water and nitrogen. Ammonia-fuelled systems are suited for both industrial and small scale back-up and off-grid power solutions.

In December 2012, the Company announced that it had been awarded, subject to contract, a EU grant of up to €1.96m for the launch of its Alkammonia project to develop ammonia fed alkaline fuel cell systems. The project is coordinated by AFC Energy and its direct share of the project funding is expected to be up to €0.64m.

In addition to the EU grant, and also in December, AFC Energy acquired specific assets, including equipment and intellectual property, of Diverse Energy. Diverse Energy gained a track record in being able to deliver small scale ammonia-fed fuel cell systems into the mobile phone mast power market, specifically within Africa. AFC Energy expects to use the equipment, knowledge and systems understanding developed by Diverse Energy to accelerate its speed to market for ammonia-fed systems.

## 3 Strategic Overview continued

**AFC Energy is pleased to announce that it has opened a South Korean sales office staffed by a team from Intralink, our sales channel partners.**

### 5. International Markets

We have made good progress in a number of international markets. We have specifically focused on Europe and the Far East. AFC Energy is pleased to announce that it has opened a South Korean sales office. The office will be staffed by a team from Intralink, a specialist sales company who have a track record in delivering initial markets and partners to western companies in Asia. The partnership will help AFC Energy establish a firm presence in the region, maximise its reach and seize on the potentially substantial market opportunity there.

We have continued to gain credibility within a European context and the earmarking of two EU grants is an acknowledgement of the progress that has been made and interest there is in the further development of our fuel cell systems.

In addition, AFC Energy continues to work with other partners to open other channels to market. The Company took a 25% stake in W2T in June 2009. W2T assisted Air Products plc in pulling together various elements its 350,000t/year waste-to-energy plant in Teesside, which received funding during the year. The plant remains a potential demonstration opportunity for AFC Energy's alkaline fuel cell technology alongside conventional generating technologies. In March 2012, AFC Energy

received full repayment of £152,500 loan and associated interest made to W2T in 2009 and, in April 2012, W2T exercised its option to purchase an exclusive UK licence for the Company's fuel cell technology for use in the conversion of waste into electricity. AFC Energy will receive a non-refundable appointment fee of £1m payable in stages over 4 years, the first £150,000 instalment of which has been received. W2T also has a conditional right of first refusal regarding the supply of AFC Energy's fuel cells to further territories in Europe, North America and Thailand for use in projects where hydrogen is derived from the gasification of municipal solid waste. AFC Energy and W2T will continue to work together to target and develop waste-to-energy opportunities as they arise.

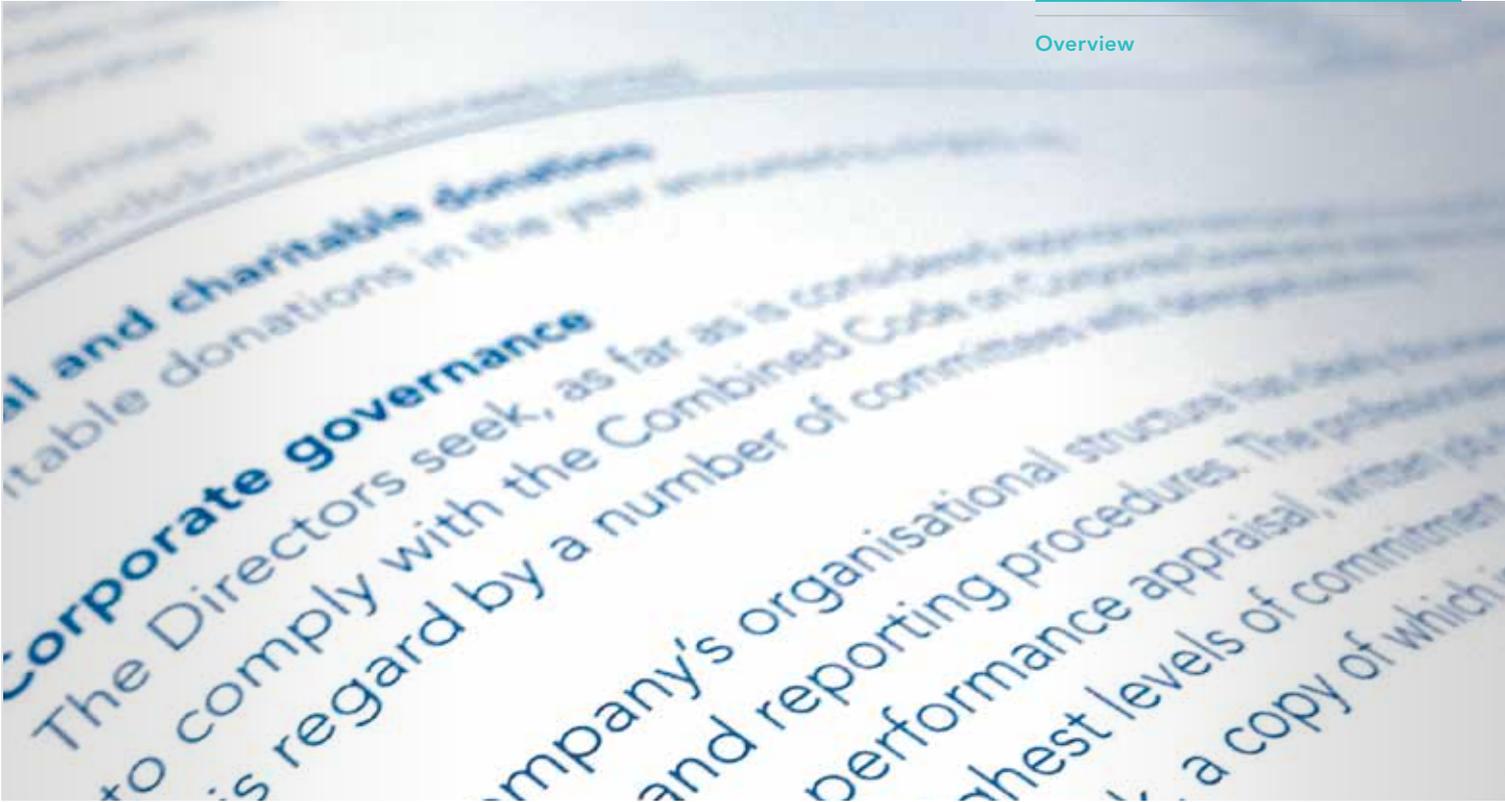
We continue to work with Linc Energy (ASX:LNC), a 10% shareholder in AFC Energy and our partner for clean power generation, in the underground coal gasification market. Whilst opportunities to facilitate further demonstrations for this market segment have been limited during the year, we are currently working together on the next steps in our plans.



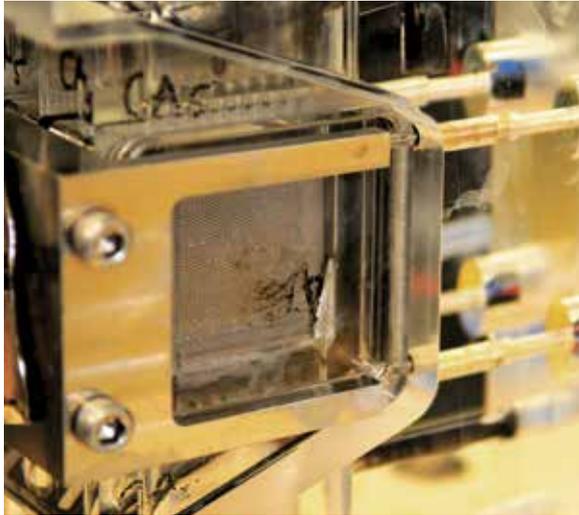
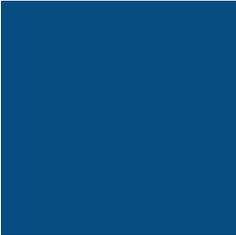
**Ian Williamson**  
Chief Executive Officer  
1 March 2013

**AFC Energy's system enables the efficient use of hydrogen liberated by cracking ammonia, making it more economic than other fuel cells.**

**W2T exercised its option to purchase an exclusive UK licence for use in the conversion of waste to electricity.**



# Responsibility



# Board of Directors



**Tim Yeo**  
**Non-Executive Chairman**

Tim Yeo has been MP for South Suffolk since 1983. He held various Ministerial posts under Margaret Thatcher and John Major, including Minister of State at the Department of the Environment. Between 1998 and 2005 he was a member of the Shadow Cabinet, shadowing a record seven different departments. Between 2005 and 2010 he was Chair of the Environmental Audit Committee and, since 2010, he has been the chairman of the ECC Select Committee. Tim holds a number of non-executive directorships in the energy and transport sectors, including Groupe Eurotunnel SA and TMO Renewables Limited. He was appointed chairman of AFC Energy in 2007.



**Ian Williamson**  
**Chief Executive Officer**

Ian has significant experience within the industrial gas sector with Air Products particularly centred on the manufacture, provision, distribution and commercial sale of hydrogen. He is very well known in the industry and his external positions include being the President of the European Hydrogen Association and a Director of the UK Hydrogen and Fuel Cell Association. He has also been a Vice President of PATH (the Partnership for the Transition to Hydrogen) and a Director of CENEX (the UK's Centre of Excellence for Low Carbon and Fuel Cell Technologies). Ian also led Air Products' new venture into the renewable energy market and was instrumental in obtaining planning permission for the proposed 49.9MW advanced gasification power plant being built on Teesside.



**Ian Balchin**  
**Deputy Chairman & Chief Strategy Officer**

Ian has 27 years experience of commercialising early stage technologies. Ian was CEO of Stanelco plc for five years during which time the company acquired Biotec Holdings in Germany, which Ian chaired and led to profitability. Prior to this Ian held senior management positions at AEA Technology, including Director of New Ventures. Ian is also a director of Waste2Tricity, a leading exponent of energy from waste, and has interests in a range of businesses focused on materials and material processing.



**David Marson**  
**Finance Director & Company Secretary**

David has been working with the Company since November 2008 as financial management consultant helping to improve its financial systems and business processes. He has an extensive track record in the financial and operational management of small and medium sized technology-based businesses, having worked at AEA Technology plc where he held various senior roles as a divisional General Manager and as divisional Finance Director. In this period he was instrumental in the spin-out of a number of successful ventures, including Forensic Alliance Ltd, now a part of LGC Forensics, and Synexus Ltd, the clinical trials patient recruitment organisation. He also held a number of non-executive directorships, including Benitec Ltd, a bio-technology start-up company now listed on ASX.



**Gene Lewis**  
**Technical Director**

Dr Gene Lewis joined the Company in November 2008 as Chief Technical Officer, having previously worked at Ceres Power where he was instrumental in the development of their solid oxide fuel cell technology. Gene's leadership skills and his background in fuel cell material science and engineering have significantly strengthened the technical team. Gene has overseen AFC Energy's technical programme since February 2009.



**Adam Bond**  
Non-Executive Director

Adam is currently President Clean Energy at Linc Energy, where he is responsible for the execution and deployment of the company's clean energy, Underground Coal Gasification (UCG) to Gas to Liquids (GTL) projects around the globe. Prior to joining Linc Energy, Adam held positions with the British Government as Project Director, Lead Negotiator and Commercial Lead for the United Kingdom's first carbon capture and storage programme. He was also instrumental in the design of the commercial framework for delivery of the United Kingdom's offshore electricity transmission network.



**Mitchell Field**  
Non-Executive Director

Mitchell, who lives in Wales, owns Richards and Appleby Ltd, which is engaged in the manufacture, sales and distribution of branded toiletries and cosmetics. Among these are Leighton Denny, and several well-known heritage brands, including 'Cyclax' which formerly held the Royal Warrant from Her Majesty the Queen. His principal role is sales and marketing, dealing with blue-chip companies in the UK and exporting to over 60 companies internationally. Mitchell has other investments and manages interests in fashion, property, import/export and general trading.



**Sir John Sunderland**  
Non-Executive Director

Sir John has a distinguished career spanning more than 40 years in leadership roles, including as the former chief executive and later as chairman of Cadbury Schweppes plc, where he steered the confectionery and beverage company through a period of major change and growth. He retired as chairman of Cadbury in 2008 after 40 years with the company. He is currently a non-executive director of Barclays Bank plc, an adviser to CVC Capital Partners and chairman of the management board of Merlin Entertainment Group. From 2004 to 2006, he served as President of the Confederation of British Industry. He is a Fellow of the Royal Society of Arts and was knighted in the Queen's Birthday Honours 2006, for services to business. He is the Chancellor of Aston University.



**Eugene Shvidler**  
Non-Executive Director

Eugene worked at Russian oil major OAO Sibneft from 1996 through 2005, initially as senior vice president and, from 1998, as president of the company. Eugene is a graduate of the I. M. Gubkin Moscow Institute of Oil and Gas with a Masters in applied mathematics and he received an MBA and Masters in International Taxation from Fordham University in New York. He is currently non-executive Chairman of Highland Gold Mining Ltd, an AIM-quoted company, and is a member of the Board of Evraz plc, a FTSE 100-listed company.



**Eugene Tenenbaum**  
Non-Executive Director

Eugene served as head of corporate finance for OAO Sibneft in Moscow from 1998 through 2001. In 1994, he joined Salomon Brothers where he worked until 1998. Prior to that, he spent five years in corporate finance with KPMG in Toronto, Moscow and London. He was an auditor at PriceWaterhouse in Toronto from 1987 until 1989. Eugene is a chartered accountant and holds a bachelors degree in commerce and finance from the University of Toronto. He has numerous other directorships; notably, he is a member of the boards of Chelsea FC plc, Evraz plc (a FTSE 100-listed company) and Highland Gold Mining Ltd (an AIM-quoted company).

# Directors' Report

The Directors present their report together with the audited financial statements for the year ended 31 October 2012. The comparative period was from 1 November 2010 to 31 October 2011.

## Principal activity and review of business developments

The principal activity of AFC Energy plc (or 'the Company') is the development of fuel cells.

Reviews of operations, business developments and current projects are included in the Chairman's Statement and the Operating and Financial Review.

## Results and dividend

The results for the year are set out in the Statement of Comprehensive Income on page 35.

No dividends were paid in the year. The Directors do not intend to declare a dividend in respect of the year.

## Principal risks and uncertainties

The major risk faced by the business relates to the technical progress in development of the commercial fuel cell system. Financial risks include the risk of additional development expenditure being required to produce a commercial product. The Company's approach to the management of these risks is described in the Operating and Financial Review.

## Key performance indicators

Given the nature of the business and that the Company is in the development phase of its products, the Directors are of the opinion that analysis using financial KPIs is not appropriate for an understanding of the development, performance or position of the business at this time. However, the Directors constantly review overall expenditure compared to budget and the Company's cash position. At 31 October 2012, the Company's cash balance was in line with the target set.

	2012 £	2011 £
Cash and cash equivalents at the year end	10,935,449	5,968,429

## Directors and their interests

The Directors who served during the year were:

Tim Yeo	Non-Executive Chairman
Ian Balchin	Deputy Chairman and Chief Strategy Officer
Ian Williamson	Chief Executive Officer
Dr Gene Lewis	Technical Director
David Marson	Finance Director
Adam Bond	Non-Executive (appointed 1 June 2012)
Mitchell Field	Non-Executive
Simon Hunt	Non-Executive (resigned 11 April 2012)
David Smith	Non-Executive (resigned 31 May 2012)
Sir John Sunderland	Non-Executive (appointed 8 March 2012)

A Director appointed during or after the year must stand for re-appointment at the first Annual General Meeting after such appointment. Accordingly Adam Bond, and both Eugene Shvidler and Eugene Tenenbaum who were appointed after the year end, offer themselves for re-election. In addition, Ian Balchin, Gene Lewis and David Marson are required to retire by rotation in accordance with the Company's Articles of Association and, being eligible, offer themselves for re-election.

On 31 October 2012 the beneficial interests of Directors and their families in the equity share capital of the Company were:

	Number of Ordinary shares of 0.1p 2012	Number of Ordinary shares of 0.1p 2011
Tim Yeo	777,272	377,272
Ian Balchin	50,000	50,000
David Marson	50,000	50,000
Dr Gene Lewis	10,000	10,000
Mitchell Field	2,144,810	2,210,027
Sir John Sunderland	370,270	–
Adam Bond	–	–
Ian Williamson	–	–

On 31 October 2012 the Directors' interests over share capital of the Company were:

	1 November 2011	Options/Warrants granted in year	Options/Warrants exercised in year	31 October 2012	Exercise price	Date from which exercisable <sup>1</sup>	Expiry date	Type
Tim Yeo	1,500,000	–	400,000	1,100,000	£0.031	18/04/2012	17/04/2019	Warrant
	1,000,000	–	–	1,000,000	£0.240	14/04/2013	13/04/2020	Warrant
Ian Balchin	1,500,000	–	–	1,500,000	£0.031	18/04/2012	17/04/2019	Warrant
	2,306,000	–	–	2,306,000	£0.240	14/04/2013	13/04/2020	Warrant
David Marson	500,000	–	–	500,000	£0.031	18/04/2012	17/04/2019	Warrant
	586,000	–	–	586,000	£0.240	14/04/2013	13/04/2020	Warrant
Dr Gene Lewis	1,000,000	–	–	1,000,000	£0.031	18/04/2012	17/04/2019	EMI option
	1,954,000	–	–	1,954,000	£0.240	14/04/2013	13/04/2020	Warrant
Mitchell Field	350,000	–	–	350,000	£0.031	18/04/2012	17/04/2019	Warrant
	750,000	–	–	750,000	£0.240	14/04/2013	13/04/2020	Warrant
Ian Williamson	–	500,000	–	500,000	£0.320	08/11/2013	07/11/2021	EMI option
	–	500,000	–	500,000	£0.320	08/11/2014	07/11/2021	EMI option

Note:

<sup>1</sup> Warrants/Options exercisable from/after 14 April 2013 are subject to achievement of performance conditions.

Adam Bond and Sir John Sunderland had no interest over share capital during the reporting period.

# Directors' Report continued

## Directors' remuneration

Name	Salary £	Bonus £	Share-based payment expense £	Other compensation <sup>1</sup> £	Total 2012 £	Total 2011 £
Tim Yeo	26,500	–	37,361	33,500	97,361	104,290
Ian Williamson	246,154	–	80,487	16,077	342,718	–
Ian Balchin	125,000	–	86,154	2,389	213,543	309,110
David Marson (see note 25)	–	–	21,894	63,397	85,291	105,062
Dr Gene Lewis	121,328	–	73,003	3,777	198,108	232,575
Adam Bond (see note 25)	–	–	–	8,333	8,333	–
Mitchell Field (see note 25)	–	–	28,020	75,000	103,020	59,050
Sir John Sunderland (see note 25)	–	–	–	13,808	13,808	–

Note:

<sup>1</sup> Other compensation includes private medical insurance, company car, benefits and consultancy fees.

## Directors' service contracts

Tim Yeo's services as a Chairman and Non-Executive Director are provided under a service agreement with the Company dated 1 January 2012 for an indefinite term, subject to a minimum of six months' notice. Additional consultancy services are provided under an agreement between the Company and Locana Corporation (London) Ltd dated 1 January 2012.

Ian Williamson's services are provided under a service agreement with the Company dated 7 November 2011 for an indefinite term, subject to six months' notice by either party.

Ian Balchin's services are provided under a service agreement with the Company dated 17 February 2011 for an indefinite term, subject to twelve months' notice by the Company and six months' notice by the Executive.

David Marson's services are provided under an agreement between the Company and Hudson Raine Ltd dated 8 June 2011, subject to three months' notice by either party (see also note 25).

Dr Gene Lewis's services are provided under a service agreement with the Company dated 3 June 2011 for an indefinite term, subject to twelve months' notice by either party.

Adam Bond's services as a Non-Executive Director are provided under an agreement between the Company and Linc Energy Ltd dated 23 May 2012, subject to a minimum of six months' notice (see also note 25).

Mitchell Field's services as a Non-Executive Director are provided under the terms of a Non-Executive letter dated 10 April 2008 for an indefinite term, subject to a minimum of six months' notice (see also note 25).

Sir John Sunderland's services as a Non-Executive Director are provided under an agreement between the Company and John Sunderland Associates Ltd dated 8 March 2012, subject to a minimum of six months' notice (see also note 25).

Eugene Shvidler's services as a Non-Executive Director are provided under the terms of a letter of appointment, dated 10 January 2013, for an indefinite term, subject to a minimum of six months' notice.

Eugene Tenenbaum's services as a Non-Executive Director are provided under the terms of a letter of appointment, dated 10 January 2013, for an indefinite term, subject to a minimum of six months' notice.

## Board changes

Details of changes to the membership of the Board are disclosed within the 'Directors and their interests' section on page 28.

## Capital structure

Details of the Company's share capital are disclosed in notes 17 and 18 the financial statements.

Shareholder funds have been used for the development and testing of industrial scale fuel cell systems than can compete with conventional electricity generation technologies.

On 1 March 2013, the Company was aware of the following holdings of 3% or more in the Company's issued share capital:

	Number of shares	Approximate percentage of the Company's issued share capital
Ervington Investments Limited	32,594,782	(14.893%)
Age of Reason Foundation	22,602,420	(10.35%)
Linc Energy	22,000,705	(10.08%)
TD Direct Investing Nominees (Europe) Limited	13,158,093	(6.03%)
Barclayshare Nominees Limited	11,079,729	(5.07%)
Eturab Trade Corporation	8,500,000	(3.89%)
Hargreaves Lansdown (Nominees) Limited	7,429,201	(3.40%)
Harry Epstein	7,000,000	(3.21%)
LR Nominees Limited	6,771,818	(3.10%)

## Political and charitable donations

Charitable donations in the year amounted to nil (2011: nil).

## Corporate governance

The Directors seek, as far as is considered appropriate having regard to the size and nature of activities of the Company, to comply with the Combined Code on Corporate Governance applicable to listed companies. The Board is assisted in this regard by a number of committees with delegated authority.

The Company's organisational structure has clearly documented and communicated levels of responsibility, delegated authority and reporting procedures. The professionalism and competence of employees is maintained through recruitment, performance appraisal, written job descriptions and personal training and development plans. The Board supports the highest levels of commitment and integrity from employees. Expected standards of behaviour are set out in the Staff Handbook, a copy of which is given to all employees.

## Audit Committee

The Company's Audit Committee members during the financial year were Mitchell Field (chairman), Tim Yeo, Simon Hunt (to 11 April 2012) and Sir John Sunderland (from 12 April 2012). The Committee meets at least twice a year, on dates linked to the Company's financial calendar, and at any other time when it is appropriate to discuss audit, accounting or control issues.

The Committee's principal responsibilities are:

- to monitor the integrity of the financial statements of the Company, reviewing the annual and interim financial statements to ensure that they present a balanced assessment of the Company's position;
- to review accounting policies;
- to review with management and the Company's external Auditor the effectiveness of internal controls;
- to oversee the publication of reserve and resource statements to ensure compliance with best practice under AIM rules;
- to review with the Company's external Auditor the scope and results of their audit; and
- to oversee the relationship with the Auditor.

The Auditor attends meetings of the Committee except when their appointment or performance is being reviewed. Executive Directors attend as and when appropriate.

# Directors' Report continued

## Remuneration Committee

The Remuneration Committee's members during the financial year were Simon Hunt (chairman – to 11 April 2012), Sir John Sunderland (Chairman – from 12 April 2012), Tim Yeo, and Mitchell Field. The Committee reviews the performance of the Executive Directors and sets the scale and structure of their remuneration and the basis of their service agreements. In determining remuneration, the Committee seeks to enable the Company to attract and retain Executives of the highest calibre. In doing so, the Committee takes advice as appropriate from external advisers on executive remuneration. The Committee also makes recommendations to the Board concerning allocation of share options to employees. No Directors participate in discussions or decisions concerning their own remuneration. This Committee is also responsible for nominating candidates, for the approval of the Board, to fill either Executive or Non-Executive vacancies or additional appointments to the Board. The Committee retained independent search consultants in respect of the appointment of the Chief Executive Officer with effect from November 2011.

Details of the Directors' remuneration, service agreements and their interests in the share capital of the Company are disclosed in the Directors' Report.

## AIM Rules Compliance Committee

The AIM Rules Compliance Committee comprises Tim Yeo, Mitchell Field and Sir John Sunderland and meets as appropriate. The Committee monitors internal procedures, resources and controls to enable the Company to comply with AIM rules.

## Payments to creditors

The Company's policy is to settle the terms of payment with its suppliers when agreeing the terms of each transaction, either by accepting the suppliers' terms or by making the suppliers aware of alternative terms, and to abide by the agreed terms. Trade creditors of the Company at 31 October 2012 represented 36 days (2011: 44 days) of annual purchases.

## Liability insurance for Company officers

The Company maintains Directors' and officers' liability insurance cover for its Directors and officers to the extent permitted under the Companies Act 2006.

## Financial risk management objectives

These are detailed in note 21 to the financial statements.

## Research and development

The Company invests substantially in research and development and makes claims under the Government's R&D tax credit scheme. In the year to 31 October 2012, relevant expenditure totalled £1,452,382 (2011: £1,429,164).

## Going concern

The Company raised £8,288,777 after expenses in October 2012. The Directors are satisfied that the Company has sufficient resources to continue its operations and to meet its commitments for the foreseeable future.

## Post-balance sheet events

Details of post-balance sheet events are provided in note 23 to the financial statements.

## Relations with Shareholders

The Board attaches great importance to maintaining good relationships with Shareholders. The Board regards the Annual General Meeting as an opportunity to communicate directly with investors, who are encouraged to attend and participate.

## Auditor

A resolution to reappoint the Auditor of the Company, Jeffreys Henry LLP, will be proposed at the forthcoming Annual General Meeting. Jeffreys Henry LLP have expressed their willingness to continue as Auditor of the Company.

This report was approved by the Board of Directors on 1 March 2013.



**David Marson**

Company Secretary

# Statement of Directors' Responsibilities

The Directors are responsible for preparing the Annual Report and financial statements in accordance with applicable law and International Financial Reporting Standards.

Company law requires the Directors to prepare financial statements for each financial period. Under that law the Directors have elected to prepare the financial statements in accordance with International Financial Reporting Standards as adopted for use in the European Union. The financial statements are required by law to give a true and fair view of the state of affairs of the Company and of the profit or loss of the Company for that period. In preparing those financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The Directors confirm that they have complied with the above requirement in preparing the financial statements.

The Directors are responsible for keeping adequate accounting records which disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the Company's website ([www.afcenergy.com](http://www.afcenergy.com)) and legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

## Statement of disclosure to Auditor

So far as the Directors are aware, there is no relevant audit information (as defined by section 418 of the Companies Act 2006) of which the Company's Auditor is unaware, and each Director has taken all the steps that he ought to have taken as Director in order to make himself aware of any relevant audit information and to establish that the Company's Auditor is aware of that information. This confirmation is given and should be interpreted in accordance with section 418 of the Companies Act 2006.

# Independent Auditor's Report to the Shareholders of AFC Energy plc

We have audited the financial statements of AFC Energy plc for the year ended 31 October 2012 which comprise the Statement of Comprehensive Income, the Statement of Financial Position, the Cash Flow Statement, the Statement of Changes in Equity and the related notes. The financial reporting framework that has been applied in their preparation is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union.

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

## Respective responsibilities of Directors and Auditors

As explained more fully in the Statement of Directors' Responsibilities set out on page 33, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's (APB's) Ethical Standards for Auditors.

## Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Directors; and the overall presentation of the financial statements.

In addition, we read all financial and non-financial information in the Chairman's Statement, the Operating and Financial Review and the Directors' Report to identify material inconsistencies with the audited financial statements. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

## Opinion on financial statements

In our opinion the financial statements:

- give a true and fair view of the state of the Company's affairs as at 31 October 2012 and of its loss for the year then ended;
- have been properly prepared in accordance with IFRSs as adopted by the European Union; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

## Opinion on other matters prescribed by the Companies Act 2006

In our opinion:

- the information given in the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

## Matters on which we are required to report by exception

We have nothing to report in respect of the following:

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- adequate accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.



**Jonathan Isaacs**  
(Senior statutory Auditor)

1 March 2013  
for and on behalf of

Jeffreys Henry LLP  
Statutory Auditor  
Chartered Accountants & Registered Auditors  
Finsgate  
5-7 Cranwood Street  
London  
EC1V 9EE

# Statement of Comprehensive Income

## for the year ended 31 October 2012

	Note	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Revenue		357,367	35,468
Cost of sales		27,498	27,498
<b>Gross profit</b>		<b>329,869</b>	<b>7,970</b>
Other income		4,071	3,996
Administrative expenses		(4,569,182)	(4,402,158)
Analysed as:			
Administrative expenses		(3,980,578)	(3,711,686)
Equity-settled share-based payments	18c	(588,604)	(690,472)
<b>Operating loss</b>	5	<b>(4,235,242)</b>	<b>(4,390,192)</b>
Financial income	8	79,887	44,930
Loss before tax		(4,155,355)	(4,345,262)
Taxation	9	361,030	354,822
<b>Loss for the financial year and total comprehensive loss attributable to owners of the Company</b>		<b>(3,794,325)</b>	<b>(3,990,440)</b>
Basic loss per share	10	(2.05)p	(2.26)p
Diluted loss per share	10	(2.05)p	(2.26)p

All amounts relate to continuing operations.

The notes on pages 39 to 51 form part of these financial statements.

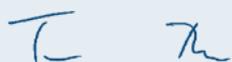
# Statement of Financial Position

## as at 31 October 2012

	Note	31 October 2012 £	31 October 2011 £
<b>Assets</b>			
<b>Non-current assets</b>			
Intangible assets	11	207,512	149,498
Property and equipment	12	820,345	824,264
Investment in associate	13a	2,500	2,500
		<b>1,030,357</b>	<b>976,262</b>
<b>Current assets</b>			
Inventory and work in progress	14	127,019	138,952
Trade and other receivables	15	677,448	691,974
Cash and cash equivalents	16	10,935,449	5,968,429
		<b>11,739,916</b>	<b>6,799,355</b>
<b>Total assets</b>		<b>12,770,273</b>	<b>7,775,617</b>
<b>Capital and reserves attributable to owners of the Company</b>			
Share capital	17	217,299	183,339
Share premium	17	27,221,606	18,966,789
Other reserve		2,409,089	1,820,485
Retained deficit		(17,515,430)	(13,721,105)
<b>Total equity attributable to Shareholders</b>		<b>12,332,564</b>	<b>7,249,508</b>
<b>Current liabilities</b>			
Trade and other payables	19	437,709	526,109
		<b>437,709</b>	<b>526,109</b>
<b>Total equity and liabilities</b>		<b>12,770,273</b>	<b>7,775,617</b>

The notes on pages 39 to 51 form part of these financial statements.

These financial statements were approved and authorised for issue by the Board on 1 March 2013.



**Tim Yeo**

Chairman



**David Marson**

Finance Director

AFC Energy plc  
Registered number: 05668788

# Statement of Changes in Equity

## for the year ended 31 October 2012

	Share Capital £	Share Premium £	Other Reserve £	Retained Loss £	Total Equity £
Balance at 1 November 2010	173,339	15,044,217	1,130,013	(9,730,665)	6,616,904
Loss after tax for the year	–	–	–	(3,990,440)	(3,990,440)
Total recognised in income and expense for the year	–	–	–	(3,990,440)	(3,990,440)
Issue of equity shares	10,000	3,989,822	–	–	3,999,822
Share issue expenses	–	(67,250)	–	–	(67,250)
Equity-settled share-based payments	–	–	690,472	–	690,472
Balance at 31 October 2011	183,339	18,966,789	1,820,485	(13,721,105)	7,249,508
Loss after tax for the year	–	–	–	(3,794,325)	(3,794,325)
Total recognised in income and expense for the year	–	–	–	(3,794,325)	(3,794,325)
Issue of equity shares	33,960	8,678,977	–	–	8,712,937
Share issue expenses	–	(424,160)	–	–	(424,160)
Equity-settled share-based payments	–	–	588,604	–	588,604
<b>Balance at 31 October 2012</b>	<b>217,299</b>	<b>27,221,606</b>	<b>2,409,089</b>	<b>(17,515,430)</b>	<b>12,332,564</b>

Share capital is the amount subscribed for shares at nominal value.

Share premium represents the excess of the amount subscribed for share capital over the nominal value of these shares net of share issue expenses.

Other reserve represents the credit to equity in respect of equity-settled share-based payments.

Retained earnings represent the cumulative loss of the Company attributable to equity Shareholders.

# Cash Flow Statement

## for the year ended 31 October 2012

	Note	31 October 2012 £	31 October 2011 £
<b>Cash flows from operating activities</b>			
Loss before tax for the year		(4,155,355)	(4,345,262)
Adjustments for:			
Depreciation and amortisation		456,832	377,258
Impairment of plant and equipment		–	30,000
Impairment of intangible assets		1,611	191,379
Equity-settled share-based payment expenses	18c	588,604	690,472
Finance income		(79,887)	(44,930)
<b>Cash flows from operating activities before changes in working capital and provisions</b>		<b>(3,188,193)</b>	<b>(3,101,083)</b>
Corporation tax received		354,822	258,076
Decrease/(increase) in trade and other receivables		32,667	(40,516)
(Decrease)/increase in trade and other payables		(88,400)	149,625
<b>Cash absorbed by operating activities</b>		<b>(2,889,104)</b>	<b>(2,733,898)</b>
<b>Cash flows from investing activities</b>			
Purchase of plant and equipment	12	(438,583)	(577,796)
Acquisitions of patents	11	(73,956)	(43,094)
Interest received	8	79,887	44,930
<b>Net cash absorbed by investing activities</b>		<b>(432,652)</b>	<b>(575,960)</b>
<b>Cash flows from financing activities</b>			
Proceeds from the issue of share capital		8,712,937	3,999,822
Costs of issue of share capital		(424,160)	(67,250)
<b>Net cash from financing activities</b>		<b>8,288,777</b>	<b>3,932,572</b>
Net increase in cash and cash equivalents		4,967,020	622,713
Cash and cash equivalents at start of year		5,968,429	5,345,716
<b>Cash and cash equivalents at 31 October</b>	16	<b>10,935,449</b>	<b>5,968,429</b>

# Notes forming part of the Financial Statements

## 1. Corporate information

AFC Energy plc ('the Company') is a public limited company incorporated in England & Wales and quoted on the Alternative Investment Market of the London Stock Exchange.

The address of its registered office is Finsgate, 5–7 Cranwood Street, London, EC1V 9EE.

## 2. Basis of preparation and accounting policies

These consolidated financial statements of AFC Energy plc have been prepared in accordance with International Financial Reporting Standards (IFRSs), International Accounting Standards (IASs) and International Financial Reporting Interpretations Committee (IFRIC) interpretations (collectively 'IFRSs') as adopted for use in the European Union and as issued by the International Accounting Standards Board and with those parts of the Companies Act 2006 applicable to companies reporting under IFRS.

The accounting policies set out below have, unless otherwise stated, been applied consistently in these financial statements.

Judgements made by the Directors in the application of these accounting policies that have significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year are discussed in note 3.

### a. New and amended standards adopted by the Company

- Improvements to IFRS (issued in May 2010).
- Revised IAS 24 'Related Party Disclosures' (effective for accounting periods beginning on or after 1 January 2011). This revision has not yet been endorsed for use in the EU.
- IFRS 1 First-time Adoption of International Financial Reporting Standards (amendment) – Severe Hyperinflation and removal of Fixed Dates for First-time adopters has an effective date for annual periods beginning on or after 1 July 2011. This provides further guidance on how an entity should resume presenting IFRS financial statements when its functional currency ceases to be subject to severe hyperinflation. Early adoption of these standards is permitted. The adoption of this will have no effect on the financial statements of the company.
- IFRS 7 'Financial instruments: disclosures (amendment)' is effective for annual periods beginning on or after 1 July 2011. The amendments requires additional quantitative and qualitative disclosures relating to transfers of financial assets, where financial assets are derecognised in their entirety, but where the entity has a continuing involvement in them and where financial assets are not derecognised in their entirety. The adoption of this will have no effect on the financial statements of the Company.
- Amendment to IFRIC 14 'Prepayments of a Minimum Funding Requirement' (effective for accounting periods beginning on or after 1 January 2011). This amendment has not yet been endorsed for use in the EU.

- The IASB issued improvement to IFRSs (2011), an omnibus of amendments to its IFRS standards. The amendments have been adopted as they become effective for annual periods on or after 1 January 2011. They include:

IFRS 1 First time adoption of International Financial Reporting Standards  
 IFRS 3 Business combinations  
 IFRS 7 Financial instruments: disclosures  
 IAS 1 Presentation of financial statements  
 IAS 27 Consolidated and separate financial statements  
 IFRIC 13 Customer loyalty programmes  
 IAS 34 Interim Financial Reporting

There is no impact from the adoption of the above amendments on the Company's financial position or performance.

### b. Standards, amendments and interpretations to published standards not yet effective

At the date of authorisation of these consolidated financial statements, the IASB and IFRIC have issued the following standards and interpretations which are effective for annual accounting periods beginning on or after the stated effective date. These standards and interpretations are not effective for and have not been applied in the preparation of these consolidated financial statements:

- IFRS 1 'First-time Adoption of International Financial Reporting Standards (amendment) – government loans' has an effective date for annual periods beginning on or after 1 January 2013. This requires an entity to measure government loans with a below-market rate of interest at fair value prospectively to loans entered into on or after the date of transition to IFRSs. Early adoption of these standards is permitted. The adoption of this will have no effect on the financial statements of the company.
- IFRS 9 'Financial Instruments' (effective for accounting periods beginning on or after 1 January 2013). This standard has not yet been endorsed for use in the EU.
- IFRS 10 Consolidated Financial Statements, IFRS 11 Joint Arrangements, IFRS 12 Disclosures of Interests with Other Entities (none of which have yet been endorsed for use in EU), along with related amendments to IAS 27 Separate Financial Statements and IAS 28 Investments in Associates and Joint Ventures will have an effective date of 1 January 2013. Early adoption of these standards is permitted, but only if all five are early adopted together. The Company does not expect the adoption of this to have a significant impact on its financial position and performance.
- IFRS 11 Joint Arrangements is effective from 1 January 2013. The core principle of the standard is that a party to a joint arrangement determines type of joint arrangements in which it is involved by assessing the rights and obligations and accounts for those rights and obligations in accordance with the type of joint arrangement. Joint ventures now must be accounted for using the equity method. Joint operator which is a newly defined term recognises its assets, liabilities, revenues and expenses and relative shares thereof. The adoption of this will have no effect on the financial statements of the company.

# Notes forming part of the Financial Statements

## continued

### 2. Basis of preparation and accounting policies

#### continued

- IFRS 12 Disclosures of Interests with Other Entities is effective from 1 January 2013. It requires increased disclosure about the nature, risks and financial effects of an entity's relationship with other entities along with its involvement with other entities. The adoption of this will have no effect on the financial statements of the company.
- IFRS 13 Fair Value Measurement is effective from 1 January 2013. It defines fair value, sets out in a single IFRS a framework for measuring fair value and requires disclosures about fair value measurements. It includes a three-level fair value hierarchy which priorities the inputs in a fair value measurement.
- IAS 12 'Income taxes (amendment) – Deferred taxes: recovery of underlying assets', is effective for annual periods beginning on or after 1 January 2012. It introduces a rebuttable presumption that deferred tax on investment properties measured at fair value will be derecognised on a sale basis, unless an entity has a business model that would indicate the investment property will be consumed in the business. If consumed a use basis would need to be adopted. The amendments also introduce the requirement that deferred tax on non-depreciable assets measured using the revaluation model in IAS 16 should always be measured on a sale basis. The adoption of this interpretation will have no effect on the financial statements of the Company.
- IAS 19 'Employee benefits' is effective for annual periods beginning on or after 1 January 2013. It changes a number of disclosure requirement for post-employment arrangements and restricts the options available on how to account for defined benefit pension plans. The amendment will have no effect on the Company.

The Company expects no impact from the adoption of the above amendments on its financial position or performance.

#### c. Capital policy

The Company manages its equity as capital. Equity comprises the items detailed within the principal accounting policy for equity and financial details can be found in the Statement of Financial Position. The Company adheres to the capital maintenance requirements as set out in the Companies Act.

#### d. Revenue

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Company and the revenue can be reliably measured. Revenue is measured at the fair value of the consideration received, excluding discounts, rebates, and other sales taxes or duty. Revenue arising from the provision of services is recognised when and to the extent that the Company obtains the right to consideration in exchange for the performance of its contractual obligations. Licence income is recognised in accordance with the substance of the agreement. When a licensee has the right to use certain technology for a specified period of time, this is usually on a straight-line basis over the life of the agreement in accordance with IAS 18. Revenue based grants are recognised

in the profit and loss account in the same period as the expenditure to which the grant relates.

#### e. Development costs

Development expenditure does not meet the strict criteria for capitalisation under IAS 38 and has been recognised as an expense.

#### f. Foreign currency

The financial statements of the Company are presented in the currency of the primary economic environment in which it operates (the functional currency) which is pounds sterling. In accordance with IAS 21, transactions entered into by the Company in a currency other than the functional currency are recorded at the rates ruling when the transactions occur. At each balance sheet date, monetary items denominated in foreign currencies are retranslated at the rates prevailing at the balance sheet date.

#### g. Inventory and work in progress

Inventory is recorded at the lower of cost and net realisable value. A prior year reclassification has been made to reclass inventory previously shown within other receivables. Work in progress is valued at cost, less the cost of work invoiced on incomplete contracts and less foreseeable losses. Cost comprises purchase cost plus production overheads.

#### h. Trade and other receivables

Trade and other receivables arise principally through the provision by the Company of goods and services to customers (trade debtors). They also include other types of contractual monetary assets. These assets are initially recognised at fair value and are subsequently measured at amortised cost less any provision for impairment.

#### i. Loans and other receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, loans and receivables are carried at amortised cost using the effective interest method less any allowance for impairment. Gains and losses are recognised in profit or loss when the loans and receivables are derecognised or impaired, as well as through the amortisation process.

The Company's loans and receivables include cash and cash equivalents. These include cash in hand, and deposits held at call with banks.

#### j. Property and equipment

Property and equipment are stated at cost less any subsequent accumulated depreciation and impairment losses.

Where parts of an item of property and equipment have different useful lives, they are accounted for as separate items of property and equipment.

Leases in which the Company assumes substantially all the risks and rewards of ownership of the leased asset are classified as finance leases. Leased assets acquired by way of finance lease are

stated at an amount equal to the lower of their fair value and the present value of the minimum lease payments at inception of the lease, less accumulated depreciation and impairment losses.

Depreciation is charged to the income statement within cost of sales and administrative expenses on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. The estimated useful lives are as follows:

– Leasehold improvements	1 to 3 years
– Fixtures, fittings and equipment	1 to 3 years
– Vehicles	3 to 4 years

Expenses incurred in respect of the maintenance and repair of property and equipment are charged against income when incurred. Refurbishment and improvement expenditure, where the benefit is expected to be long lasting, is capitalised as part of the appropriate asset.

The useful economic lives of property, plant and equipment and the carrying value of tangible fixed assets are assessed annually and any impairment is charged to the income statement.

#### k. Intangible assets

Expenditure on research activities is recognised in the income statement as an expense as incurred.

Other intangible assets that are acquired by the Company are stated at cost less accumulated amortisation and impairment losses.

Amortisation of intangible assets is charged using the straight-line method to administrative expenses over the following period:

– Patents	20 years
-----------	----------

Useful lives are based on the management's estimates of the period that the assets will generate revenue, which are periodically reviewed for continued appropriateness and any impairment is charged to the income statement.

#### l. Cash and cash equivalents

Cash and cash equivalents comprise cash balances and call deposits with major banking institutions realisable within 12 months.

#### m. Other financial liabilities

The Company classifies its financial liabilities as:

##### Trade and other payables

These are initially recognised at invoiced value. These arise principally from the receipt of goods and services. There is no material difference between the invoiced value and the value calculated on an amortised cost basis or fair value.

##### Deferred income

This is the carrying value of income received from a customer in respect of the order for five systems which has not been fully recognised in the Income Statement pending delivery to the customer. The carrying value is fair value.

#### n. Leases

##### Finance leases

Finance leases, which transfer to the Company substantially all the risks and benefits incidental to ownership of the leased item, are capitalised at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between the finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are reflected in profit or loss. Capitalised leased assets are depreciated over the shorter of the estimated useful life of the asset and the lease term, if there is no reasonable certainty that the Company will obtain ownership by the end of the lease term.

##### Operating leases

Operating lease rentals are charged to the Income Statement on a straight-line basis over the lease term.

#### o. Financial assets

All of the Company's financial assets are loans and receivables. Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets at fair value and comprise trade and other receivables and cash and cash equivalents.

#### p. Share-based payment transactions

The Company awards share options and warrants to certain Directors and employees to acquire shares of the Company. The fair value of options and warrants granted is recognised as an employee expense with a corresponding increase in equity. The fair value is measured at grant date and spread over the period during which the Directors and employees become unconditionally entitled to the options or warrants. The fair value of the options and warrants granted is measured using a binomial option valuation model, taking into account the terms and conditions upon which the options and warrants were granted. The amount recognised as an expense is adjusted to reflect the actual number of share options and warrants that vest only where vesting is dependent upon the satisfaction of service and non-market vesting conditions or where the vesting periods themselves are amended by the introduction of new schemes and the absorption of earlier schemes by agreement between the Company and the relevant Directors and employees. Where options or warrants granted are cancelled, all future charges arising in respect of the grant are charged to the income statement on the date of cancellation.

#### q. Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event and it is probable that the Group will be required to settle the obligation. Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the balance sheet date and are discounted to present value where the effect is material.

# Notes forming part of the Financial Statements

## continued

### 2. Basis of preparation and accounting policies

#### continued

#### r. Taxation

Tax on the profit or loss for the year comprises current and deferred tax. Tax is recognised in the income statement except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity.

Current tax is the expected tax payable or recoverable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date together with any adjustment to tax payable in respect of previous years.

Deferred tax assets are not recognised due to the uncertainty of their recovery.

### 3. Significant accounting estimates and judgements

#### Carrying values of property and equipment

The Company monitors internal and external indicators of impairment relating to its property and equipment. Management has considered whether any indicators of impairment have arisen over certain assets relating to these assets. After assessing these, management has concluded that no impairment has arisen during the year and subsequent to 31 October 2012 (2011: £30,000).

#### Useful lives and impairment of intangible assets, and property and equipment

Intangible assets, and property and equipment are amortised or depreciated over their useful lives. Useful lives are based on the management's estimates of the period that the assets will generate revenue, which are periodically reviewed for continued appropriateness. After undertaking a comprehensive review of intangible assets with its patent attorneys, management has concluded that partial impairment has arisen with respect to intangible assets with a gross book value of £6,761 during the year and subsequent to 31 October 2012. This has resulted in an impairment charge of £1,611 to the Statement of Comprehensive Income in the year to 31 October 2012 (2011: £191,379).

#### Income taxes and withholding taxes

The Company believes that its receivables for tax recoverable are adequate for all open audit years based on its assessment of many factors including past experience and interpretations of tax law. This assessment relies on estimates and assumptions and may involve a series of complex judgements about future events. To the extent that the final tax outcome of these matters is different from the amounts recorded, such differences will impact income tax expense in the period in which such determination is made.

#### Capitalisation of development expenditure

The Company uses the criteria of IAS 38 to determine whether development expenditure should be capitalised. After assessing these, management has concluded it would not be appropriate to capitalise development expenditure incurred during the year ended 31 October 2012.

#### Share-based payments

Certain employees (including Directors and senior Executives) of the Company receive remuneration in the form of share-based payment transactions, whereby employees render services as consideration for equity instruments ('equity-settled transactions').

The fair value is determined using an appropriate pricing model.

The cost of equity-settled transactions is recognised, together with a corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled, ending on the date on which the relevant employees become fully entitled to the award ('the vesting date'). The cumulative expense recognised for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Company's best estimate of the number of equity instruments that will ultimately vest. The profit or loss charge or credit for a period represents the movement in cumulative expense recognised as at the beginning and end of that period.

No expense is recognised for awards that do not ultimately vest, except for awards where vesting is conditional upon a market condition, which are treated as vesting irrespective of whether or not the market condition is satisfied, provided that all other performance and/or service conditions are satisfied. Where the terms of an equity-settled award are modified, the minimum expense recognised is the expense as if the terms had not been modified. An additional expense is recognised for any modification which increases the total fair value of the share-based payment arrangement, or is otherwise beneficial to the employee as measured at the date of modification. Where an equity-settled award is cancelled, it is treated as if it had vested on the date of cancellation, and any expense not yet recognised for the award is recognised immediately. However, if a new award is substituted for the cancelled award, and designated as a replacement award on the date that it is granted, the cancelled and new awards are treated as if they were a modification of the original award, as described in the previous paragraph.

### 4. Segmental analysis

A segment is a distinguishable component of the Company that is engaged in providing products or services in a particular business sector (business segment) or in providing products or services in a particular economic environment (geographic segment), which is subject to risks and rewards that are different in those other segments. The Company operated in the year in one business segment, the development of fuel cells, and in two principal geographic segments, the United Kingdom and Germany. German revenue was derived from one customer (£27,498). All of the gross profit was derived in the UK. All assets and liabilities were in the UK at the year end.

## 5. Operating loss

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
<b>This has been stated after charging:</b>		
Depreciation/Impairment of property and equipment	442,503	386,189
Research and Development expenditure	1,452,382	1,429,164
Amortisation/Impairment of intangible assets	15,942	212,448
Equity-settled share-based payment expense	588,604	690,472
Foreign exchange differences	5,195	509
Auditor's remuneration – audit	15,000	16,000
Auditor's remuneration – tax	2,500	1,000
Auditor's remuneration – other services	2,000	3,050

## 6. Staff numbers and costs, including Directors

The average numbers of employees in the year were:

	Year ended 31 October 2012 Number	Year ended 31 October 2011 Number
Support, operations and technical	24	21
Administration	5	5
	<b>29</b>	<b>26</b>
The aggregate payroll costs for these persons were:	£	£
Wages and salaries (including Directors' emoluments)	1,768,889	1,121,323
Social security	183,738	129,553
Equity-settled share-based payment expense	588,604	536,854
	<b>2,541,231</b>	<b>1,787,730</b>

## 7. Directors' remuneration

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Wages and salaries	518,982	323,333
Social security	65,907	35,745
Equity-settled share-based payment expense	345,599	425,818
Other compensation (see note 25)	251,373	152,685
	<b>1,181,861</b>	<b>937,581</b>
The emoluments of the Chairman	<b>97,361</b>	104,290
The emoluments of the highest-paid Director	<b>342,718</b>	309,110

The remuneration, details of share options and interests in the Company's shares of each Director are shown in the Directors' Report on pages 28 to 32.

# Notes forming part of the Financial Statements

## continued

### 8. Financial income

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Bank interest receivable	79,380	43,425
Loan interest receivable	507	1,505
Total interest receivable	79,887	44,930

### 9. Taxation

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Recognised in the income statement		
Research and development tax credit – current year	361,030	354,822
<b>Total tax credit</b>	<b>361,030</b>	<b>354,822</b>
<i>Reconciliation of effective tax rates</i>		
Loss before tax	(4,155,355)	(4,345,262)
Tax using the domestic rate of corporation tax of 24.8% (2011: 26.7%)	1,030,527	1,160,185
Effect of:		
Expenses not deductible for tax purposes	147,504	186,110
Research and development allowance	(411,404)	(348,630)
Research and development tax credit	361,030	354,822
Depreciation in excess of capital allowances	39,228	72,090
Losses surrendered for research and development	771,597	730,217
Unutilised losses carried forward	483,604	520,398
Total tax credit for the year	361,030	354,822

### 10. Loss per share

The calculation of the basic loss per share is based upon the net loss after tax attributable to ordinary Shareholders of £3,794,325 (2011: loss of £3,990,440) and a weighted average number of shares in issue for the year.

	Year ended 31 October 2012	Year ended 31 October 2011
Basic loss per share (pence)	(2.05)p	(2.26)p
Diluted loss per share (pence)	(2.05)p	(2.26)p
Loss attributable to equity Shareholders	(3,794,325)	(3,990,440)
	<b>Number</b>	<b>Number</b>
Weighted average number of shares in issue	185,298,945	176,599,336

### Diluted earnings per share

The diluted loss per share is the same as the basic loss per share, as the loss for the year has an anti-dilutive effect.

## 11. Intangible assets

	2012 Patents £	2011 Patents £
<b>Cost</b>		
Balance at 1 November	440,806	397,712
Additions	73,956	43,094
Balance at 31 October	514,762	440,806
<b>Amortisation</b>		
Balance at 1 November	291,308	78,860
Charge for the year	14,331	21,069
Impairment	1,611	191,379
Balance at 31 October	307,250	291,308
Net book value	207,512	149,498

For details of impairment charge, see note 3.

## 12. Property and equipment

	Leasehold improvements £	Fixtures, fittings and equipment £	Total £
<b>Cost</b>			
At 31 October 2010	184,009	1,254,278	1,438,286
Additions	32,188	545,608	577,796
At 31 October 2011	216,197	1,799,886	2,016,083
Additions	–	438,583	438,583
At 31 October 2012	216,197	2,238,469	2,454,666
<b>Depreciation</b>			
At 31 October 2010	157,070	648,560	805,630
Charge for the year	21,268	334,921	356,189
Impairment	–	30,000	30,000
At 31 October 2011	178,337	1,013,481	1,191,819
Charge for the year	18,241	424,262	442,503
At 31 October 2012	196,578	1,437,743	1,634,321
<b>Net Book Value</b>			
At 31 October 2012	19,619	800,726	820,345
At 31 October 2011	37,860	786,404	824,264

For details of impairment charge, see note 3. There are no assets held under finance leases.

## 13a. Investment in Associate

The Company acquired 25% of the share capital of Waste2Tricity Ltd (W2T) (a company registered in England & Wales) on 17 June 2009 for £2,500 by converting £2,500 of the £150,000 loan provided to W2T under an agreement of February 2009. The loan plus accrued interest was repaid in full on 2 March 2012.

The Company's share of the results of its associate was as follows:

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Revenue	237,500	12,500
Profit/(loss)	108,962	(5,951)
Assets	34,047	3,932
Liabilities	2,334	76,113

# Notes forming part of the Financial Statements

## continued

### 13b. Loan to Associate

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Loan to W2T at 1 November, including accrued interest	151,980	150,475
Loan interest receivable	507	1,505
Loan repayment	152,487	–
Loan at 31 October	–	151,980

### 14. Inventory and work in progress

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Inventory	58,275	42,710
Work in progress	68,744	96,242
	127,019	138,952

### 15. Trade and other receivables

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Corporation Tax receivable	361,030	354,822
Other receivables	316,418	337,974
	677,448	691,974

There were no trade and other receivables that were past due or considered to be impaired. The trade and other receivables balances are categorised as loans and other receivables. There is no significant difference between the fair value of the trade and other receivables and the values stated above.

### 16. Cash and cash equivalents

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Cash at bank	10,185,449	738,821
Bank deposits	750,000	5,229,608
	10,935,449	5,968,429

Cash at bank and bank deposits consist of cash. There is no material foreign exchange movement in respect of cash and cash equivalents.

## 17. Issued share capital

	Number	Ordinary shares £	Share premium £	Total £
At 31 October 2010	173,339,207	173,339	15,044,217	15,217,556
Issue of shares on 4 July 2011 <sup>1</sup>	9,999,555	10,000	3,922,572	3,932,572
At 31 October 2011	183,338,762	183,339	18,966,789	19,150,128
Issue of shares on 1 May 2012 <sup>2</sup>	1,115,000	1,115	33,785	34,900
Issue of shares on 2 August 2012 <sup>3</sup>	250,000	250	7,575	7,825
Issue of shares on 16 October 2012 <sup>4</sup>	32,594,782	32,595	8,213,457	8,246,052
At 31 October 2012	217,298,544	217,299	27,221,606	27,438,905

1 9,999,555 ordinary shares with a par value of 0.1p per share were issued at 40.00p per ordinary share by way of a placing to Linc Energy and to a group of investors.

2 1,115,000 options and warrants were exercised on 1 May 2012 at an exercise price of 3.13p per ordinary share.

3 250,000 options were exercised on 2 August 2012 at an exercise price of 3.13p per ordinary share.

4 32,594,782 ordinary shares with a par value of 0.1p per share were issued at 26.60p per ordinary share on 16 October 2012 by way of a placing to Ervington Investments.

All issued shares are fully paid.

The Company considers its capital and reserves attributable to equity Shareholders to be the Company's capital. In managing its capital, the Company's primary long-term objective is to provide a return for its equity Shareholders through capital growth. Going forward the Company will seek to maintain a gearing ratio that balances risks and returns at an acceptable level and also to maintain a sufficient funding base to enable the Company to meet its working capital needs. The Company's commercial activities are at an early stage and management considers that no useful target debt to equity gearing ratio can be identified at this time.

Details of the Company's capital are disclosed in the Company statement of changes in equity.

There have been no other significant changes to the Company's management objectives, policies and processes in the year nor has there been any change in what the Company considers to be capital.

## 18a. Share options

	Number of options	Exercise price	Weighted average remaining contractual life
At 31 October 2010	11,400,000	3.13–24p	6.62 yrs
Options lapsed in the year	(370,000)	17.5–24p	
At 31 October 2011	11,030,000	3.13–24p	5.69 yrs
Options granted in the year	1,375,000	32p	
Options exercised in the year	(965,000)	3.13p	
Options lapsed in the year	(1,200,000)	3.13–24p	
At 31 October 2012	10,240,000	3.13–32p	6.58 yrs

## 18b. Warrants

	Number of warrants	Exercise price	Weighted average remaining contractual life
At 31 October 2010	11,956,000	3.13–30p	8.87 yrs
At 31 October 2011	11,956,000	3.13–30p	7.87 yrs
Warrants exercised in the year	(400,000)	3.13p	
Warrants lapsed in the year	(10,000)	24p	
At 31 October 2012	11,546,000	3.13–30p	6.75 yrs

# Notes forming part of the Financial Statements

## continued

### 18c. Equity-settled share-based payments charge

#### Share options

Option price (p)	Average grant date share price (p)	Average expected volatility (p.a.)	Average risk-free interest rate (p.a.)	Average dividend yield (p.a.)	Average implied option life (years)	Average fair value per option (p)	Amount expended in the 2012 accounts £
10	9	46%	4.4%	0%	3.5	2.5	–
22	20	46%	4.4%	0%	3.5	6	–
23	21	46%	4.4%	0%	3.5	6	–
23	14	46%	4.4%	0%	3.5	2	–
3.13	3.13	113.8%	4.4%	0%	3.0	2	(13,869)
17.5	18.75	188%	4.4%	0%	3.5	14.07	(61,662)
24	23.75	188%	4.4%	0%	3.5	17.80	(27,630)
20.80	20	214.8%	4.4%	0%	3.0	15	(166,440)
32	31.75	243%	4.4%	0%	3.5	24	(110,746)
Adjustments – prior year							(3,058)
Adjustments for expected leavers on current options – 10%							63,988
Total charge for the year (2011: £254,041)							319,417

#### Warrants

Warrant price (p)	Average grant date share price (p)	Average expected volatility (p.a.)	Average risk-free interest rate (p.a.)	Average dividend yield (p.a.)	Average implied option life (years)	Average fair value per option (p)	Amount expended in the 2012 accounts £
10	20	46%	4.4%	0%	3.5	10	–
22	20	46%	4.4%	0%	3.5	6	–
3.13	3.13	113.8%	4.4%	0%	3.0	2	–
24	23.75	188%	4.4%	0%	3.5	17.8	(422,469)
30	23.75	188%	4.4%	0%	3.5	17.64	(5,890)
Adjustment for performance conditions (non-market)							–
Adjustments – prior year							159,172
Adjustments for expected leavers on current warrants – 0%							–
Total charge for the year (2011: £436,430)							269,187
Total equity-settled share-based payment charge (2011: £690,472)							588,604

Expected volatility has been based on the historical volatility of share price returns over one year to the date of grant of the options and warrants. Vesting requirements are three years for the exercise of warrants and options, except for 500,000 options granted to Ian Williamson which vest in two years. Certain options and warrants granted to directors are also subject to performance conditions.

The fair value of services received in return for share options and other share-based incentives granted is measured by reference to the fair value of share options and incentives granted. This estimate is based on a Black-Scholes model, adjusted for non-vesting market-related conditions, which is considered most appropriate considering the effects of the vesting conditions, expected exercise period and the dividend policy of the Company.

## 19. Trade and other payables

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Trade payables	185,365	322,241
Deferred income	68,744	96,242
Other payables	75,223	36,075
Accruals	108,377	71,550
	<b>437,709</b>	<b>526,109</b>

## 20. Operating lease commitments

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Non-cancellable operating leases are as follows:		
Within one year	56,129	89,081
Between one and five years	37,768	90,672
Greater than five years	–	–
	<b>93,897</b>	<b>179,753</b>

The lease commitments relate to accommodation and three vehicles.

## 21. Financial instruments

In common with other businesses, the Company is exposed to risks that arise from its use of financial instruments. This note describes the Company's objectives, policies and processes for managing those risks and the methods used to measure them. Further quantitative information in respect of these risks is presented throughout these financial statements. The significant accounting policies regarding financial instruments are disclosed in note 2 and the significant accounting estimates and judgements are set out in note 3.

### Principal financial instruments

The principal financial instruments used by the Company, from which financial instrument risk arises, are as follows:

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Trade and other receivables	677,448	734,684
Cash and cash equivalents	10,935,449	5,968,429
Trade and other payables	437,709	526,109

### General objectives, policies and processes

The Board has overall responsibility for the determination of the Company's risk management objectives and policies and, while retaining ultimate responsibility for them, it has delegated part of the authority for designing and operating processes that ensure the effective implementation of the objectives and policies to the Company's finance team. The Board receives reports from financial team through which it reviews the effectiveness of the processes put in place and the appropriateness of the objectives and policies it sets.

The overall objective of the Board is to set policies that seek to reduce ongoing risk as far as possible without unduly affecting the Company's competitiveness and flexibility. Further details regarding these policies are set out overleaf.

# Notes forming part of the Financial Statements

## continued

### 21. Financial instruments continued

#### Credit risk

Credit risk arises principally from the Company's trade and other receivables and cash and cash equivalents. It is the risk that the counterparty fails to discharge its obligation in respect of the instrument. The maximum exposure to credit risk equals the carrying value of these items in the financial statements as shown below:

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Trade and other receivables	677,448	734,684
Cash and cash equivalents	10,935,449	5,968,429

The Company's principal trade and other receivables arose from: a) annual payments for various services held as pre-payments b) a VAT debtor and c) an R&D tax credit. Credit risk with cash and cash equivalents is reduced by placing funds with a range of banks with acceptable credit ratings and government support where applicable and on term deposits with a range of maturity dates. At the year end, most cash was temporarily held on short term deposit, following maturity of term deposits.

#### Liquidity risk

Liquidity risk arises from the Company's management of working capital and the amount of funding required for the development programme. It is the risk that the Company will encounter difficulty in meeting its financial obligations as they fall due. The Company's policy is to ensure that it will always have sufficient cash to allow it to meet its liabilities when they become due. The Company raised £8.2m net of costs in October 2012 to provide additional financial resources.

The principal liabilities of the Company are trade and other payables in respect of the ongoing product development programme. Trade and other payables are all payable within two months with the exception of the payment in advance noted above. The Board receives cash flow projections on a regular basis as well as information on cash balances.

#### Interest rate risk

The Company is exposed to interest rate risk in respect of surplus funds held on deposit and uses fixed interest term deposits to mitigate this risk.

#### Fair value of financial liabilities

	Year ended 31 October 2012 £	Year ended 31 October 2011 £
Trade and other payables	437,709	526,109

There is no difference between the fair value and book value of trade and other payables.

#### Currency risk

The Company does not enter into forward exchange contracts or otherwise hedge its potential foreign exchange exposure. The Board considers that this exposure is not currently material. The Board monitors and reviews its policies in respect of currency risk on a regular basis. At 31 October 2012 the Company held no monetary assets or liabilities in currencies other than the functional currency of the operating units involved (2011: nil).

### 22. Capital commitments

The Company had capital commitments of £2,219 for water purification equipment outstanding at 31 October 2012 (2011: £30,014).

### 23. Board changes and post-balance sheet events

Board changes during the year are reported under 'Directors and their interests'. Eugene Shvidler and Eugene Tenenbaum were appointed as Non-Executive Directors of the Company on 10 January 2013.

### 24. Ultimate controlling party

There is no ultimate controlling party.

## 25. Related party transactions

During the year ended 31 October 2012:

£63,397 (plus VAT) was invoiced by Hudson Raine Ltd (a company registered in England & Wales) for the services of David Marson, including as a Director and Company Secretary of AFC Energy plc (2011: £69,618). Mr Marson is also a Director and Shareholder of Hudson Raine Ltd. At 31 October 2012, the sum owing to Hudson Raine Ltd was £23,664 (2011: nil).

£23,425 (plus VAT) was invoiced by Cornerstone Capital Ltd (a company registered in England & Wales) for the services of Simon Hunt as a Director of AFC Energy plc (2011: £31,417). Mr Hunt is also a Director and Shareholder of Cornerstone Capital Ltd. At 31 October 2012, the sum owing to Cornerstone Capital Ltd was nil (2011: nil).

£146,000 (plus VAT) was invoiced by Cranwood Management Ltd (a company registered in England & Wales) for consultancy services. The company is owned by Adam White (2011: £139,000). Members of Mr White's family are nominated beneficiaries of the Age of Reason Foundation, which is a major Shareholder in the Company. At 31 October 2012, the sum owing to Cranwood Ltd was nil (2011: nil).

£75,000 (plus VAT) was invoiced by Richards and Appleby Ltd (a company registered in England & Wales) for the services of Mitchell Field as a Director of AFC Energy plc (2011: £15,319). Mr Field is also a Director and Shareholder of Richards and Appleby Ltd. At 31 October 2012, the sum owing to Richards and Appleby Ltd was £52,083 (2011: nil).

£20,000 was invoiced by Linc Energy Ltd (a company registered in Australia) for the services of David Smith and Adam Bond as a Directors of AFC Energy plc (2011: £1,667). Linc Energy Ltd is a major shareholder in the Company. At 31 October 2012 the amount owing to Linc Energy Ltd was nil (2011: £1,667).

£33,500 (plus VAT) was invoiced by Locana Corporation (London) Ltd (a company registered in England & Wales) for consultancy services. (2011: nil). Mr Yeo is also a Director and Shareholder of Locana Corporation (London) Ltd. At 31 October 2012, the sum owing to Locana was nil (2011: nil).

£13,808 (plus VAT) was invoiced by John Sunderland Associates Ltd (a company registered in England & Wales) for the services of Sir John Sunderland as a Director of AFC Energy plc (2011: nil). Sir John Sunderland is also a Director and Shareholder of John Sunderland Associates Ltd. At 31 October 2012, the sum owing to John Sunderland Associates Ltd was nil (2011: nil).

£2,200 (plus VAT) was invoiced by Kirkpatrick & Hopes Ltd (a company registered in England & Wales) for consultancy services (2011: nil). Mrs P Williamson was a Director and Shareholder of Kirkpatrick & Hopes Ltd. At 31 October 2012, the sum owing to Kirkpatrick & Hopes Ltd was nil (2011: nil).

£152,500 was received from W2T (a company registered in England & Wales) in full repayment, with associated interest, of a loan made to W2T in 2009. A further £150,000 was received as the first instalment of a non-refundable appointment fee of £1m payable under the terms of a Commercialisation Agreement with W2T announced on 11 April 2012. The total sum received from W2T in the year ended 31 October 2012 was £302,000 (2011: nil). The sum owing to W2T at 31 October 2012 was nil (2011: nil). The Shareholders in W2T include Age of Reason Foundation, Adam White, Eturab Corporation, Ervington Investments and Ian Balchin. Members of the White family are nominated beneficiaries of the Age of Reason Foundation. The Age of Reason Foundation, Eturab Corporation and Ervington Investments are substantial Shareholders in AFC Energy. Ian Balchin's shareholding in W2T was granted in lieu of payment for work done for W2T before he was employed by AFC Energy.

# Company Information

## Directors

Tim Yeo  
Ian Williamson  
Ian Balchin  
Adam Bond  
Mitchell Field  
Dr Gene Lewis  
David Marson (Company Secretary)  
Eugene Shvidler  
Sir John Sunderland  
Eugene Tenenbaum

## Registered office

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EC1V 9EE  
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## Broker

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## NOMAD

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## Bankers

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## Auditor

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5-7 Cranwood Street  
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## Solicitors

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## Registrars

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