



Welcome to the EnviroDaq fortnightly newsletter focusing on companies in the UK's growing environmental goods and services (EGS) sector.

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EnviroDaq

Welcome to the first Envirodaq newsletter. This will be a fortnightly newsletter featuring all the latest company, policy and legislation news from the UK's rapidly growing environmental goods and services sector.

The EnviroDaq is an index of UK listed companies which generate at least 60% of their market value from providing environmentally-focused goods and services. This includes companies in the following sectors: renewable energy and energy efficiency equipment; renewable materials; waste management; water and waste water treatment; air pollution control equipment; environmental monitoring and instrumentation and cleaner technology processes.

The Envirodaq now has 66 members all of whom are listed in the UK stock market with over 90% listed on the AIM market. The index has grown by 40% over the last 12 months against 23% growth in the FTSE 100.

EnviroDaq stats (as from today)

Envirodaq Index Current Value: 166.48

Envirodaq Index Yesterday Close: 166.13

Envirodaq Index Movement Today: +0.21%

Envirodaq Index Movement Last 7 Days: -2.56%

Today's top risers:

D1 Oils PLC	DOO	+3.98%
KP Renewables PLC	KPR	+1.61%
Augean PLC	AUG	+1.10%
Renewable Energy Generation Ltd	RWE	+0.43%
RPS Group PLC	RPS	+0.25%

Today's top fallers:

Hardide PLC	HDD	-6.12%
Minorplanet Systems PLC	MPS	-4.00%
GTL Resources PLC	GTL	-4.00%
ITM Power PLC	ITM	-3.28%
AeroBox PLC	ARX	-2.78%

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Opinion

Global slump ahead?

As D:REAM once proclaimed 'Things can only get better'. Well that is certainly the hope of stock market watchers and investors following large losses on Tokyo, CAC and FTSE and subsequent concerns over a continued downturn in the global economy.

The rising cost of crude oil has been pushing up the cost of household utilities, and the heat has gone out of the consumer spending boom. Escalating energy prices have pushed inflation over its 2.0% target for the first time in six months in the UK. With such rises in household energy bills it could moderate consumer spending and lead to volatile inflation data. This, along with the new US Federal Reserve chairman, Ben Bernanke hinting at higher interest rates in the US, paints a potentially bleak future for investors.

What does this mean for EnviroDaq companies?

Against a backdrop of rising energy prices and increasing concerns over climate change, investors are increasingly interested in opportunities in the renewable energy sector. For how long and by how much energy prices rise is the subject of constant debate. Interestingly, Lord Browne of BP recently predicted a medium term decline in oil prices. However, given that investment in energy projects tends to focus on the long term, short term fluctuations in energy prices could be less important than the changing policy and regulatory framework. The latter has the effect of providing a degree of certainty for investors and has certainly been moving in favour of renewable energy, although the nuclear option remains a potential fly in the renewable ointment.

By no means all of the companies in the index are in the energy field. For these other companies energy prices are likely to have a similar negative impact to any other business. However, just as in the energy sector, the growing trend in tightening environmental regulations in areas such as waste are encouraging investment activity in these areas.

The impact of long term policy and regulatory change and the limited exposure to consumer markets suggest that companies in the EnviroDaq may be less affected by any continued economic downturn. Certainly, just as the EnviroDaq has

outperformed the FTSE 100 during the upturn we will be following its performance during downturns and noting whether it similarly outperforms the more famous index.

by Chirag Upadhyay (Envirodaq editor)

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News in Brief

GE, the world's second largest company, who last year unveiled the ecomagination initiative to cut greenhouse gases and increase sales of energy efficient products, have seen sales in its ecomagination portfolio (ranging from washing machines to jet engines) reach \$10.1 billion last year & it aims to double that by 2010. GE also announced it would double its research spend on such products to \$1.5 billion.

American International Group Inc, the world largest insurance company, has announced it will develop projects to keep greenhouse gases out of the atmosphere after it had its fingers burnt losing \$2 billion after tax from Hurricane Katrina.

Bosch, the German engineering giant is backing 2 tidal power plants in the Orkneys by 2 small UK companies Lunar Energy & Rotech. It will help in the provision of stable turbines for the experimental power station, which will generate up to 5MW of electricity. Bosch is also about to surpass €100 million in sales this year from its Rexworth Unit that supplies drive and control technology for wind farms. Bosch is also investing €2billion a year in making cars safer and cleaner.

Bernd Bohr the Head of Automotive Component Division, the source of two thirds of Bosch sales and revenue said it was investing 6% of its sales in renewable energy as a way to save the European Car industry in the wake of its US counterparts recent fate. However, a note of caution to fuel cells enthusiasts - Bosch clearly stated that future cars would be based on a mix of clean diesels, hybrids, synthetic fuels, sun fuels biomass and ethanol, but hydrogen fuels cells will not be commercially viable for 20 more years.

Policy 1: In an open letter to the PM the Corporate Leaders Group on Climate Change (CLG) says the UK should take ambitious actions to stimulate investment in low carbon technology and use the EU ETS' next round of negotiation to do so. Its argues that by only taking an ambitious domestic policy will the UK be able to easily convince India and China that it is taking climate change seriously. They also want the government to seriously incentivise the development of early stage technologies such as carbon sequestering. Not only will this confirm the intentions of the UK, but it will allow the markets of India and China to become much more of a key investment growth area of the future, therefore enhancing British business both at home and abroad and in particular, in the manufacturing sector. This would potentially give the UK a first mover advantage in the new global markets for low carbon technology.

Policy 2: Conclusions from first high level group report recommended that a priority for energy efficiency measures be established. The High Level Group (HLG) considers that a new sense of urgency is needed to fully tap the cost-effective energy efficiency potential. There is a need to have a better assessment of the payback time of investments. Take-up of energy services should be promoted and

energy using products should be subject to dynamically improving efficiency standards. The HLG also recommends making full use of the Eco-design Directive (e.g. minimum energy efficiency requirements for all energy using products, as well as further development of combined Heat and Power, and district heating)

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EnviroDaq News

ITM Power PLC has appointed Professor Marcus Newborough as Electrolyser Business Development Officer, where he will play a major role in the strategic planning and commercialisation of ITM's electrolyser technology. Professor Newborough will be joining ITM in September 2006 after completing his notice period with his current employer, Heriot-Watt University.

CMR Fuel Cells said its research and development programme has exceeded a significant performance milestone, ahead of anticipated timescales. "CMR's engineering team has successfully developed a mixed-reactant cell which demonstrates consistent cell area power densities in excess of 25mW/cm² with a sub millimetre cell repeat distance, using a non-platinum methanol-tolerant cathode catalyst," said the group.

"This is a tangible and important step towards achieving commercial viability of the Company's patented technology, which the Board believes is a strong indication that CMR is on track to deliver the low cost, high performance fuel cell stacks currently demanded by the portable electronics industry".

Romag Holdings announced a major expansion of its photovoltaic production capacity funded in part by a £2.63 million placing. During its first 18 months, Romag's current facilities at Consett in Durham have produced c1 MW of its building-integrated photovoltaic product, Powerglaz, generating over £2.5 million in turnover. Over this period Powerglaz has been installed in several high profile projects including the Eden project and the London Science Museum. This increase in capacity, which is expected to come online in the second half of 2007, is required to meet the expected significant increase in demand in both the UK and Europe*.

Romag proposes to place 2,161,532 new ordinary shares of 25 pence each in the Company with institutional and other investors, at a price of 122 pence per share to raise approximately £2.63 million before expenses representing 4.75% of the enlarged issued share capital of the Company.

Lyn Miles Romag CEO commented, "The market for our product is growing rapidly as cities such as London* start to acknowledge the importance of building-integrated solutions to the growing need to produce local, clean power to meet the twin challenges of climate change and security of energy supply. This expansion ensures that Romag will continue to be well placed to meet this demand as it arises"

If you would like your company to have news featured here or on the website then please feel free to send to s.chiva@ukceed.org. Currently a number of companies have taken up this opportunity including ITM Power, Metal Tech and a number of PR companies who represent over 20 companies from the sector.

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For all the EnviroDaq company news visit www.EnviroDaq.com – news archive

EnviroDaq Company Case Studies

Metal Tech.

1) Introduction

If the government of the Soviet Union had been more minded to commercialise the industrial research and development it funded with its scarce roubles into in the 1980s, Metal-Tech plc might not have become the market leader it is today.

But, when immigrants began flooding into Israel from the disintegrating Soviet Union, rich with chemical engineering expertise from years of academic research – Aik Rosenberg, the chairman of Metal-Tech, recognised a commodity more precious than the high grade metal powders the company manufactured.

The arrival of the Soviet know-how (combined with Israeli expertise developed in various Dead Sea projects and western engineering, computing and management expertise) helped Mr Rosenberg, now chairman of the Aim-listed group, begin to turn around a loss-making company that he had bought in 1994.

2) About Metal-Tech

The company has become a world leader in the production of high quality speciality metal oxides, powders, and chemicals from the recycling of waste and low grade raw materials including mining tailings, metal scrap, industrial sludge, and spent catalysts.

Mr Rosenberg's most significant innovation was to change Metal-Tech from a recycler producing tungsten from high quality scrap into a producer of valuable metals and chemicals – from waste and low grade cheap raw materials – for which there is strong demand in end markets such as construction, where they are used in the manufacture of stainless steel and cutting and power tools.

Metal-Tech's global approach and its engineering ability, resulted in a successful implementation of its hydro-metallurgy and other technologies in state of the art modern manufacturing facilities converting low grade raw materials and waste on the sites where it is produced. Thus, it produces quality products in an environmentally conscious manner at optimal economic value. Three plants are currently producing quality products - Israel, Uzbekistan and Mongolia. The latter two are joint ventures with government-owned copper mining concerns, running alongside existing mines.

Another side of the company's business that is being developed by Metal-Tech R&D is the recycling of spent catalysts from the oil industry and spent Lithium batteries.

Metal-Tech is one of the very few companies that recycle Primary Lithium batteries. In the execution of this strategy, Metal-Tech dedicates considerable resources to the development of new recycling and recovery technologies for primary and secondary materials, focusing on improving cost benefits, increasing recovery rates, high energy efficiency and using green technologies to minimise environmental impact.

3) Metal-Tech's USP

Metal-Tech's key attributes are the quality of its research and development, engineering and international ability in providing a complete turn key project and its ability to offer what it describes as a "cradle to grave" service to customers by selling quality metals and chemicals while receiving the end of life cycle products.

Metal-Tech's key technology is hydro-metallurgy, and because the company understands that its ability to innovate and improve is critical, it has placed R&D at the core of everything it does, including its manufacturing processes, to ensure it is achieving the highest possible rate of recovery of elements from waste.

The company also positions itself on its ability to offer partners a complete turn-key service on international engineering projects and close collaboration with partners in the design, construction, and management of new industrial facilities.

The success Metal-Tech achieved in this regard with Uzmetal Technology, its joint venture with the Uzbek government, was instrumental in the company securing an agreement with the Mongolian government – beating off competition from major international conglomerates far larger than the company – after its representatives visited the plant to view Metal-Tech's work.

4) Competition

There is only a handful of companies that offer a "one stop shop" that can provide its customers with special metals and chemicals, technical back-up and recycle its end of life cycle materials. There are even fewer engineering companies that can provide the mining industry with a complete turn-key hydrometallurgy projects for treatment of waste and low grade materials of speciality metals including managements, and secure sales. The combination of these makes Metal-Tech unique within the metal and chemical industry.

5) Financial performance

In late April, Metal-Tech reported that it had almost trebled its full-year pre-tax profits earning \$26.9m in the 12 months to December 31 2005, compared to £9.5m in 2004. Sales more than doubled in the same period to £125.9m. Having listed on Aim in 2005, the group paid a maiden dividend of 3.9 cents per share on earnings of 45 cents per share.

In the early years of the new century Metal-Tech's annual revenues grew steadily from just under \$10m in 2000 to just under \$20m in 2003, but the impact of the group's international expansion, first into Uzbekistan, made them leap to almost \$60m in 2004.

6) Future Prospects

Metal-Tech's growth plans are founded on replicating the success it has experienced in Uzbekistan and Mongolia with other joint ventures worldwide as the implementation of its technologies in the production of other metals. There are few corners of the globe the company is not exploring opportunities in, and Metal-Tech reports a pipeline that has significantly expanded since it raised £10.5m at Aim, largely for this purpose.

Metal-Tech announced in November 2005 that it was in advanced negotiations for one such joint venture, and those discussions remain ongoing.

7) Management

Metal-Tech's management team is heavily biased in favour of engineering disciplines. Mr Rosenberg, a mechanical engineering graduate of King's College, London, is a serial entrepreneur who has previously owned businesses operating in various industries including textiles, metals, chemicals and energy and environmental sciences.

Ran Maimon, who was appointed chief executive 1995, having previously been a technical manager at Metal-Tech, is one of two senior executives who joined from Dead Sea Works Ltd, one of the world's largest suppliers of potash and other chemical products. Another graduate of that firm is Meir Klausner, chief operating officer, who served as an economist there following four years as a senior investment adviser at Bank Leumi Le Israel.

Another senior engineer is Michael Holin, the vice president of research and development since 1996, who has a strong background in chemical industries.

Metal-Tech's senior executive team is completed by Modi Ashkenazy, a former chartered accountant with PWC in Israel, who brings the corporate finance transaction experience invaluable in the group's establishment of joint ventures overseas.

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xCo2

1) Business overview

quietrevolution develops and supplies elegant innovative wind energy products. The company has been developed out of XCO2 Ltd, a leading and high-profile consultancy on low-carbon design and technology in the built environment. Quietrevolution's flagship product is a patented vertical-axis wind turbine (VAWT) which is particularly adapted to exploit urban wind resources that may change direction frequently. Quietrevolution also has a range of innovative display products based on wind turbines. These use LED technology and gives access to income streams from signage branding and marketing.

Quietrevolution has seen intense customer interest after commissioning their commercial-scale prototype in May 2006 and recent press coverage in the Observer, Guardian, and construction trade press. Quietrevolution has one completed sale with payment in advance, one contract for a display installation in Bristol and many sales in progress. With a strong sales pipeline quietrevolution is now seeking investment to scale up the business.

2) Technology

The urban environment is characterised by winds which frequently change direction and speed, and quietrevolution's products are designed to perform better than traditional wind turbines with this type of wind resource. The design also virtually eliminates noise and vibration, which are often critical for public acceptance close to buildings.

They have a patent on the quietrevolution VAWT geometry which is granted in UK and pending in all key territories worldwide, and the design is internationally registered. On the display technology, they have exclusive licence to the application in wind turbines of the patents and the know how of their LED technology supplier.

3) Market

Quietrevolution's products access the renewable power market and the display

market. There are some existing and new companies who are in this market with horizontal axis wind turbines (HAWTs – propeller type), and others are looking to enter with VAWT products. Customers see them as preferable to alternatives because:

- quietrevolution is the most elegant design;
- quietrevolution’s design as a VAWT will perform better than HAWTs in urban wind conditions;
- quietrevolution has great credibility and excellent connections in the construction industry thanks to XCO2 links; and
- quietrevolution has added-value display technology.

Power Market: Sustainable energy markets are growing very fast and there is intense interest in micro-generation and building-integrated renewable energy. The market is directly underpinned by increasing adoption of planning requirements for new buildings to provide at least 10% of their energy from renewables on site. Small wind is one of the most cost-effective ways of meeting this goal. It also enables corporates and developers to make a visual statement of intent. There is also strong potential in the consumer market, especially for large private houses.

Display Market: Outdoor signage and branding, the primary display market, is very large. The global LED sign market in 2007 is forecast to be £1bn. Outdoor media spend in total is some £12bn annually and, in advanced countries, digital takes a 10% share and is growing. In the display market, the competition is from conventional LED displays which are many times more expensive and do not have the cachet of being energy producers.

4) Management Team

The strong team has been working closely together on the project for 18 months:

Robert Webb, CEO, BSc, Dip Arch: Robert is an increasingly high profile figure in the construction industry as a designer and engineer focusing on innovation in low-carbon energy and buildings. Trained as an architect, he worked with leading architects and engineers before establishing XCO2 in 2000.

Richard Cochrane, CTO, MEng, MPhil: Richard is the technical brains behind the project. A Cambridge engineering graduate and building services engineer, with particular experience in aeronautics. Richard is a talented and respected engineer and has combined a number of aeronautic insights to create the design of quiet revolution.

Julia Groves, Acting Commercial Director, BA, MBA: Julia is an MBA with 12 years experience in a variety of businesses. She was Head of New Media at British Airways, Chief Marketing Officer at Agency.com and interim MD of the B2C portfolio at eVentures, the venture capitalist.

Andrew Cox, Manufacturing and Development Director, BSc: Andrew Cox runs the manufacturing design aspects of the project. Andrew led the design of the C21 Solar (photovoltaic) tile recently developed by XCO2 with Solar Century, and winner of the Best New Product Award at Interbuild 2004. He has been fundamental in winning R+D grants for quietrevolution.

Dr Tamas Bertenyi, Research and Development Director, MEng, PhD: A Cambridge engineering graduate, Tamas has taught in the Engineering department for the past four years while undertaking research and consultancy on sustainability and aeronautic design.

The advisory board includes: Dr Volker Buttgerit, senior wind in buildings consultant; and senior outdoor media executive Peter Smyth.

Funding requirement

£1.6 million in the form of ordinary shares or convertible loan to be agreed. The business is currently owned by its management with a small proportion owned by a seed investor. The shareholders have so far spent some £445k through XCO2. To date they have received an additional £134k in R+D grant support from DTI and EU.

Use of funds

The funds cover specific R+D, marketing and manufacturing scale-up as well as growth of the company over the next 18 months, beyond which growth is self-sustaining from income. Broadly an income of £1.5m over 18 months (weighted to the end of the period) and a spend of £3.0m (weighted to the beginning of the period) is expected.

Website

www.quietrevolution.co.uk

Contact

Robert Webb, Managing Director
quietrevolution
1-5 Offord Street
London
N1 1DH

Email: mail@xco2.com
Telephone: 020 7700 1000

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Contact EnviroDaq

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s.chiva@ukceed.org

Tel: 01733 312 280

EnviroDaq has been developed by the [UK Centre for Economic and Environmental Development \(UK CEED\)](#), a charitable foundation, and the Centre for Sustainable Engineering (CSEng), a not-for-profit company. The aim is for the index to become an authoritative benchmark for performance in the environmental industries and to attract recognition for, and investment activity in the sector. [Top](#)

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