



# **PRESS RELEASE:**

## **Announcement of HEAT08 Conference Expo**

Dr Justin Hayward

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CAMBRIDGE, OCTOBER 2008:

For the built-environment, we can source renewable energy through solar electricity and heating, from super-large farms in deserts, right down to the “micro” level on the roofs of our own buildings. If one could easily and quickly produce enough energy renewably, then the supply side would solve the demand side problem. But this is not easy (with today’s technology and indeed with the finite density of solar energy etc), and we must look also at demand. We need far more stringent building design so that the heat energy needed is minimal and can easily be supplied at all levels by the sun even in northerly climes. Air source heat pumps may yet be widely used. We need greatly more efficient electronic designs, components and appliances. We also then need improved measurement and control systems (“smart meters”). One can also support this through grand-scale solar energy sourcing and smart grids where the energy can go to and fro between traditionally-labelled ‘users’ and ‘suppliers’.

These built-environment supply and demand themes are the focus of the 12-talk, one-day Solar Smart HEAT Conference on Friday, 28 November, 2008 at New Hall, Cambridge University, Cambridge CB3 0DF UK, starting at 10:00 and ending at 17:30.

The speakers range from small, exciting technology companies, such as Alertme Ltd, right up to multi-billion pound investment funds, such as Good Energies. SENTEC Ltd, the upcoming Cambridge consultancy, will talk about Smart Grids, while ARM plc, the canonical Cambridge success in electronic design, and Adiabatic Logic will show how they are leading the way in energy efficiency at design level. An interesting talk from Nordic Passive Homes Ltd will describe a design for a house that does not need any heating. An entire session of talks on solar energy, led by Solar Century plc, who will look into the economic viability and performance of solar PV systems with and without feed-in tariffs, and the solar session will end with a discussion by Graham Ford of Heliodynamics Ltd, on the grand scale concentrated solar farms. The chairpeople and audience, we hope, will make sure that any qualitative claims are always backed up by hard numbers in acceptable units: this “reality-check-culture” is one of the reasons Cambridge is leading the way in this crucial sector. There are two panel sessions during the day, one led by Mike McCreary of CIR Ltd, a former electronics manufacturing guru, and the final session is moderated by Professor Alan Barrell, University of Cambridge, a leading and well-known entrepreneur.

It promises to be an excellent day, and we hope you will be able to come and join and influence the discussions.

<http://www.cambridgeinvestmentresearch.com/events/heat/>

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## **PRESS PACK**

HEAT 08. Your home, your energy, your future.

Cleantech covers many different fields and it is often hard to see how they work together to achieve our climate change goals. HEAT 08 is a conference that provides a uniquely holistic approach to the problem, by focussing on the topic of reducing the carbon output from one sector - the built environment - looked at as a single unit - a building - and as a whole - the energy supply to it - and inviting individuals from all relevant disciplines to put forward their parts of the solution.

The conference will cover contributions from the fields of:

- o Solar energy (Heating and electricity)
- o Energy efficiency
  - + Reducing energy use in construction, adapting buildings for low consumption
  - + Controlling the energy used by appliances
  - + Designing better home controls to allow us to live well for less energy
  - + Improving energy efficiency across the electricity grid as a whole

The event will be held in New Hall College, Cambridge, on the 28th November. 13 speakers, from a variety of companies, will present their views on the opportunities for, and barriers to, a dramatic reduction of carbon output from the built environment by 2050. They will be joined by an audience of their peers in the industry and the event is structured to ensure debate, based on hard facts and personal experience.

Journalists are warmly invited to attend and join the discussion on topics such as:

- \* How well do these techniques work together?
- \* What will the impact be on consumers and businesses?
- \* What are the commercial opportunities?
- \* How can government best promote energy efficiency in the built environment?

All talks and debates will be captured and presented online after the event and face to face briefings can be arranged for journalists to follow up questions of particular interest. For a complimentary registration, please contact Justin Hayward PhD MBA ([jhayward@cambridgeinvestmentresearch.com](mailto:jhayward@cambridgeinvestmentresearch.com), tel: 01223 303500).

HEAT 08 – Summary

Friday, 28th November 2008

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## Purpose

In the diverse world of environmental technologies, the synergies between different sectors can be easily overlooked. HEAT 08 is a conference that seeks to explore these synergies by bringing together market leaders from a number of different sectors to address one common problem – that of greatly reducing the carbon footprint of any building and the energy supply to the built environment.

This year's conference focuses on reducing demand: through energy efficiency at all levels of consumption, from individual appliances right up to grid-scale, and energy supply: through solar sourcing (concentrated, thermal and PV). The built environment consumes up to a third of UK domestic energy use and major energy reductions can be achieved by reducing its energy requirements, improving feedback and control, and providing low carbon energy sources. We hope to inspire delegates to seize the opportunities available to contribute to the UK's carbon reduction goals, by exploring and debating the opportunities that these technologies can unlock when working together.

## Structure

The day will be focussed on a series of short talks and panel sessions, given by senior figures from companies active in the energy efficiency and solar sectors, including:

- \* ARM plc
- \* Adiabatic Logic
- \* Alertme
- \* Camfridge
- \* CIR
- \* Green Energy Options
- \* Good Energies Investment Fund
- \* Heliodynamics
- \* Nordic Passive Homes
- \* Polysolar
- \* Sentec
- \* Solar Century
- \* Viridian Solar

However, the event is intended to be interactive and is designed to allow an audience of peers to debate and explore the issues that the talks raise.

Discussions can continue over coffee and lunch, when delegates will have the opportunity to talk to a number of companies exhibiting solutions and services for the environmental market.

Who will you meet?

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The audience for the conference is drawn from senior management in technology companies, academics and experts in the field, with some advisors and investors.

Venue and registration

HEAT 08 will be held in New Hall's conference centre, a modern lecture and exhibition facility close to the centre of Cambridge.

Registration is available online at <http://www.hvm-uk.com>

Draft Speaking Programme

Please see table below.

HEAT 08 Briefing notes

Why focus on the built environment alone?

In the UK, use of the land accounts for a third of our energy use. More than 90% of the remaining energy use comes from transport, industry, and the built environment in three roughly equal parts.

The options available for reducing carbon emissions from the built environment are particularly complex. We can source renewable energy through a variety of generation techniques, including solar electricity and heating, from super-large farms in deserts right down to the "micro" level on the roofs of our own buildings. But this is not a quick or easy solution to our growing energy needs, we must also look also at demand.

We need more stringent building design so that the heat energy needed is minimal and can easily be supplied at all levels by the sun even in northerly climes. Air source heat pumps may become more common. We need greatly more efficient electronic designs, components and appliances. We also then need improved measurement and control systems ("smart meters"). One can also support this through grand-scale solar energy sourcing and smart grids where the energy can go to and fro between traditionally-labelled 'users' and 'suppliers'.

Understanding of the interactions between the various solutions is limited and HEAT 08 seeks to deepen this understanding.

What is the commercial potential of the sector?

Very large. Global investment in the sector has grown by an average of 64% each year since 2004, to reach \$148.4 billion in 2007. This reflects some startling estimates of the market potential, with some commentators predicting the market for Cleantech products

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will exceed \$80 billion in 2010. The Solar PV sector is set to grow for at least ten years at an annual rate of 50% according to Good Energies.

What is the aim of the event?

HEAT is aiming to offer both practical and less tangible benefits:

- \* an opportunity for senior industry figures to meet and explore ways of doing business together
- \* a chance to identify areas where by speaking with one voice the industry can send a clear message to policy makers
- \* a one stop shop to answer the media's questions around the complex area of reducing the carbon footprint of the built environment
- \* inspiration for delegates to stimulate new ideas and action to overcome the barriers to carbon reduction

Why hold the event in Cambridge?

Cambridge is a well known technology cluster and as such has many of the right skills and infrastructure to support new companies in the Cleantech sector. Many Cambridge companies are already involved in the area, others have much to offer, not least the application of the strong 'reality check' culture which is part of the experience of doing business here. How big will the audience be?

The audience is limited to no more than 140 delegates to improve the degree of interaction with speakers and other delegates.

Who are CIR?

CIR Ltd is a small independent strategy consultancy based in Cambridge, England since 2001. It offers strategic solutions, such as for market entry, financial (e.g. M&A) consulting, market research, technology and engineering help in the related sectors of electronics, manufacturing, energy and environment.

**END OF PRESS PACK NOTES**

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## Event Summary

Solar Smart HEAT 08 - 28 November, New Hall, Cambridge  
<http://www.cambridgeinvestmentresearch.com/events/register.htm>

Draft Programme		
Speaker	Company	Title
Dr Justin Hayward	CIR	HEAT: source, measure, control, adapt
Jim Wallace	ARM plc	Performance with Zero Power
Geoff Harvey	Adiabatic Logic Ltd	Slicing Power Use
Neil Wilson	Camfridge Ltd	Clean Cooling
Pilgrim Beart	AlertMe	Home Energy Management: Fast, affordable, essential
Simon Anderson	Green Energy Options	Making Energy Visible
Hermione Crease	SENTEC Ltd	Tying it all together: Smart Grids
Alan South	Solar Century plc	Solar PV & Our Generation
Michael Priestnall	Polysolar Ltd	Transparent Solar Power
Graham Ford	Heliodynamics	Concentrated Solar Energy
Stuart Elmes	Viridian Solar	Solar Heating
Dr Mitra Hedman	Nordic Passive Homes	Passive House: no heating!
Andrew Lee	Good Energies Investment Fund	Clean Technology: Fad or for Good – Keynote Talk

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Following last year's HEAT07 success...  
...this year's core themes are:

**Low Power Electronics;**  
**Smart Metering;**  
**Solar Power Generation;**

**integrated into buildings.**

"This year's themes are right on the money; it promises to be a groundbreaking day of presentations!" *2008 confirmed speaker*

We're delighted to welcome Andrew Lee, Managing Director at Good Energies Fund based in Zug, Switzerland and with centres in London, New York and the West Coast. Andrew is a Cambridge graduate, who trained in engineering.

## **Why attend?**

This is a unique conference-expo with a holistic approach to sorting out the built-environment emissions problem, a large fraction of a country's CO2 emissions: we hope to inspire you. Such an important topic is one which decision-makers would want to discuss first-hand with others. The briefing aspect of the talks shall be concise, complete and provided with opportunities for questions, debate and general inputs. Enjoy the day: all talks and discussions shall be captured and presented online after the event. Delegates can influence a discussion which shall be reported upon and referred to in the future.

## **Who will attend?**

The largest groups are large and small technology company directors, academics and expert consultants, with smaller groupings of public sector advisors, patent attorneys and investors.

## **Venue**

The lovely surrounds of the Conference Centre at New Hall, Cambridge University, its modern theatre for the plenary sessions and the Hall for networking Expo. By the centre of historic Cambridge.

### **Registration and Booking**

Please register online at <http://www.hvm-uk.com> and to find more information. Directions to venue are at:

<http://www.newhall.cam.ac.uk/directions/> Please call 01223 303500 for sponsorship, speaking and other delegate booking information.

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## Notes for editors

### About Solar Smart HEAT08

This conference is part of the HVM Series, first held in 2002, is aimed at encouraging energy enterprise, high-value manufacturing, investment and market understanding.

The ten conferences so far have been attended by over 1,100 delegates, and have featured as speakers more than 100 respected entrepreneurs, investors and professional experts. This is the second in the HEAT Series.

Keynote speakers have included Lord Sainsbury of Turville, former Undersecretary of State for Innovation; Digby, Lord Jones of Birmingham, former CBI head; Michael Marshall CBE, Chairman of Marshall Group; Dr Hermann Hauser, serial entrepreneur; and Professor Mike Gregory, Head IfM.

### Talks at HEAT08

The conference first session is led by semiconductor design global leaders and Cambridge-based ARM plc.

The presentation by director Jim Wallace is entitled: "ARM - Cool running performance"

Jim believes that ARM can provide: "Performance without power;" this concept ties in well with a later presentation on next generation buildings given by Nordic Passive Homes, and the objective of heating and powering buildings cleanly and renewably where necessary elaborated in several of the day's talks.

Jim Wallace joined ARM in 2006 and currently leads the Home & Emerging activity within ARM. Emerging focuses on Medical and Green Technologies while home focuses on DTV, STB, Blu Ray, Gaming and DSC/DVC. He has over 23 years of global semiconductor experience, managing Marketing and Business Development, Engineering and BUs across a number of hi-tech semiconductor companies: Zarlink, Mitel, GEC Plessey Semiconductors and Philips. He started his career as an analog design engineer with Philips in Eindhoven and earned his BENG from the University of Limerick.

The start-up Alertme will take part, led by founder and CEO Pilgrim Beart. Pilgrim Beart is co-founder of AlertMe, an online home platform services company based in Cambridge, UK. He has spent 20 years in high-tech startups in the UK and Silicon Valley, and AlertMe is his third startup. The company is launching a Home Energy Saving application onto its existing platform around the time of the HEAT 08 conference.

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Pilgrim claims that:

“It’s easier and faster to save energy than it is to generate clean energy.

“Today, 90% of UK households are concerned about their energy bills. By 2010, 10% of the UK population are predicted to be in fuel poverty.

“The Energy Gap is a challenge to civilization on the scale of the Second World War”

Pilgrim’s talk, entitled “Home Energy Management: Fast, affordable ... and essential”, will outline how energy consumption in the home contributes to the energy gap, and break-down the energy-use of the typical home. He will then discuss opportunities to address this by improving both energy-management and consumer understanding, and consider how to drive rapid market adoption. The talk will focus primarily on the UK, but with references to Europe and the US too.

The 21st Century will be a century of transition from cheap fuel to cheaper solar energy, but we are still learning how to harness solar energy effectively.

According to Graham Ford at Heliodynamics, “Compared to wind power, solar is vastly cheaper way of saving natural gas, the fossil fuel of choice for most industrial processes.

“A nuclear power station takes ten years to make , 50 years to use, and a million years to decommission. It is made of uranium and goes on to make plutonium and technetium, the two most toxic elements in the Universe.

Solar energy takes 10 months to make, 50 years to use, and can recycled as often as we like. It is made of silicon, oxygen, aluminium and iron - the most common elements on Earth.

Which will our children wish we'd chosen?”

Graham will give a talk entitled: “Concentrated solar energy on a grand scale”. He notes that no other source can match the extent of solar for energy in terms of quantity. The implications for how industry is best organised are profound. Much will depend on the technologies that can successfully and cost effectively harness the power of the sun.

Graham Ford, Managing Director of Heliodynamics Ltd, a UK company based near Cambridge which was founded in 2000.

He is the principal inventor of Heliodynamics’ concentrated solar energy technology, and has led the technical team developing Heliodynamics products.

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Graham is an experienced product and process development engineer, having previously served as a technology and management consultant for over 20 years, working in a wide range of industrial sectors.

Graham is married, with three grown up children, all of whom are also dedicated to solving the climate change crisis.

Alessandro Pastore, Business Development Director at Camfridge Ltd, gives a talk on cooling and air conditioning. Alessandro brings more than 12 years of marketing and business development experience. Since his PhD & MBA he has also mentored and grown emerging companies and liasoned with VCs. He brings a deep understanding of large company sales cycles and has extensive overseas market engagement experience.

Hermione Crease, Marketing Manager at Sentec Ltd, a technology company developing solutions for the metering and utility industries, including smart metering solutions for use all over the world, has taken a personal interest in the Cleantech sector for many years, particularly in energy efficiency, home control and architecture.

Smart grids can change the relationship between consumers and utilities from one-way supply to two-way discussion. Electricity grids at the moment are largely 'blind' below the substation level so faults can accumulate quickly and undetected until they reach a critical level. Smart Grids give utilities eyes to fix these problems.

Alongside the massive efforts directed to the development of low carbon generation techniques, is an area which has received less publicity, but is arguably as important – the development of modern electricity grids. These smart grids will facilitate the integration of distributed energy sources and just as importantly, they can dramatically improve energy efficiency, sometimes known as 'the fifth fuel', through greater efficiency and improving co-operation with consumers.

Many technologies have an important part to play in the building of the smart grid, including smart meters, smart grid connectors, energy storage and communications networking. Hermione's talk will have a look at some of the implications of smart grid developments for consumers, utilities and the distributed generation industry.

Leading the session on Solar sourcing is Alan South, CIO of Solar Century plc, who will describe the expectations for solar photovoltaics in the coming years in terms of growth, regulation, and technology. The objective is to share an understanding of the role PV will play within the broader family of renewables and the supporting technologies that will be required. This will be a practical view, based on experience gained as a commercial organisation in the PV sector. Alan South said, "Despite years of compound growth approaching 50%, the solar photovoltaic industry is still in its infancy. However, as the huge

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levels of investment begin to bear fruit in reducing costs, and grid electricity becomes relentlessly more expensive, we should expect to see a whole new industry take shape.”

Alan South joined Solarcentury from IDEO, an international consultancy regularly ranked by business leaders in the world’s top ten most innovative companies. A respected thinker and spokesperson, Alan has delivered executive learning programmes with Harvard Business School, and has presented strategies for innovation at governmental level.

Stuart Elmes, of Viridian Solar, a solar heating manufacturer for use in mainstream construction, will talk about the energy studies his company have undertaken to prove out the benefits to householders of installing solar water heating systems, and the opportunities for widescale use of solar heating technologies in the UK.

The sharp pang of guilt Stuart got from accepting a graduate job drilling holes in the ground for an oil company was quickly assuaged by a small annual donation to Greenpeace. However, he never took the position with the oil major because a holiday job with a start-up company in Cambridge turned into a ten-year odyssey.

BioRobotics designed and manufactured automated equipment to help unravel the genome. Brazenly rejecting the world of venture capital, BioRobotics doubled in size every year funded only by re-invested profits, until at 100 people and a turnover of £10m, it was sold to an American corporation. Stuart and the other owners of BioRobotics have subsequently been recycling their windfall into a new venture, Viridian Solar. Viridian’s goal is to create products that contribute to a sustainable civilization that’s not based on teepee-dwelling and muesli. Its first project, a cost-optimised solar heating product for the building industry is now shipping from a factory just outside Cambridge

Joost Becker, Investment Director, London, of the 6 billion Euro private investment fund Good Energies, will give the Keynote Talk in the final session. Prior to joining Good Energies, Joost was a Vice-President of Bregal Private Capital – a UK based investment firm focused on private equity fund investments, direct co-investments and secondary transactions. Previously, he executed M&A and capital markets transactions in Benelux-linked deals as an Associate Director at Fortis Bank Investment Banking. Joost studied at the Free University in Amsterdam where he gained his Masters degree in Financial Economics.

Good Energies is a leading global investor in the renewable energy and energy efficiency industry, focusing on investments in the areas of solar, wind, project finance and development as well as energy efficiency and green building. The company also makes investments in developing countries and in other promising game changing energy technologies. Good Energies is guided by the 3-P principle People-Planet-Profit and is looking for meaningful long-term investments with outstanding growth potential.

The final session will be Chaired by Professor Alan Barrell, the well-known Cambridge entrepreneur, formerly CEO of the £200+ million digital printing equipment company Domino and an Entrepreneur in Residence at Cambridge University's Centre for Entrepreneurial Learning.

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