

The Green Housing Forum at Homes 2016

16th and 17th November

Olympia, London



Speakers from:

Department for Business
Energy and Industrial Strategy
National Energy Action
Delta EE

Sentinel Housing Association
GMCA
Wigan and Leigh Homes
ESSH Working Party
Centre for Sustainable Energy

Switcher
Smart Energy GB
Energy Saving Trust
Daikin UK

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The Green Housing Forum

The Green Housing Forum is a unique hub for social housing professionals and thought leaders to network and share ideas and best practice around sustainability and energy in the UK affordable housing sector.

The increasing and imminent pressures facing social landlords and local authorities, such as welfare reform and budget cuts, make balancing the needs of the tenant while limiting impact on the environment ever more challenging.

Launched in 2014 and sponsored by Daikin UK, the Green Housing Forum has sparked engaging discussion and debate at events across the UK, tackling social housing's most significant issues.

The challenges

- Over 4 million households living in fuel poverty in the UK
- A need to improve energy efficiency
- Securing funding for new measures and technology
- Tenant engagement
- Reducing environmental impact
- Future proofing housing stock

The Green Housing Forum at Homes 2016

The largest Green Housing Forum to date took place at the Homes event at London Olympia, on 16th and 17th November.

Homes is the UK's only large-scale housing event that brings together professionals from local authorities, housing associations, house builders and procurement teams.

Over the two days, speakers from government, local authorities, energy technology companies and housing associations led presentations on policy, innovation and the challenges ahead, also taking part in Q & A sessions with Green Housing Forum delegates.



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Session 1 – A new vision to alleviate fuel poverty



Richard Mellish

Richard Mellish

Deputy Director for fuel poverty and supplier obligations, Department for Business, Energy and Industrial Strategy

BEIS is a ministerial department that brings together responsibilities for business, industrial strategy, science, innovation, energy and climate change. Richard's responsibilities include obligations on energy suppliers, implementation of government fuel poverty strategy and energy efficiency schemes.

Fuel Poverty - Policy & progress

- Government's BEIS will be responsible for ensuring the UK has a reliable, low cost and clean energy system. Tackling carbon emissions is part of this responsibility
- The BEIS is equipped with a solid strategy, definition and targets for fuel poverty, with funding of around £640m allocated for energy efficiency programmes
- To meet fuel poverty targets, the BEIS says it needs to help build capacity of local authorities for local delivery, clarify what schemes such as the smart meter roll out will deliver and help households in fuel poverty take greater control of their energy use
- ECO (Energy Company Obligation) is a programme for the delivery of energy efficiency measures in homes across UK. The supplier obligation is set to run from 2017-2022.



Peter Smith

Peter Smith

Director of policy and research, National Energy Action

National Energy Action is a charity working to end fuel poverty in England, Wales and Northern Ireland. Peter oversees policy and research work, working with government and industry to address the causes and impacts of fuel poverty.

Practical plans for meeting fuel poverty targets

- Cold homes are one of the UK's biggest killers. NEA estimates that without ambitious and urgent government intervention, the cumulative effect will be 125,000 premature deaths and a cost of £22 billion to the NHS over the next 15 years
- NEA's Get Warm Soon report assesses how many health and wellbeing boards in England are including public health indicators on fuel poverty and excess winter deaths in their needs assessments and strategies
- Welfare reforms to tackle fuel poverty and government funding are vital
- The whole economy needs to strive for energy efficiency - not just in housing.

Session 1 – A new vision to alleviate fuel poverty



Dr Andrew Turton CEng MInstP

Dr Andrew Turton CEng MInstP

Principal analyst, Delta EE

Delta EE is a research and consulting company that provides its clients with information, analysis, insight and advice in emerging distributed energy markets. Andrew has provided advice at both strategic and policy level to government and local authorities. He specialises in low and zero carbon energy schemes.

Hybrid heat pumps – Bridging the fuel poverty and technology gap

- The way we heat homes will change significantly by 2050. There are a range of future scenarios, all of which are likely to impact on energy costs
- To reduce fuel poverty, we must reduce demand / improve efficiency at home level and minimise total system cost
- Hybrid heat pumps could be a key technology in meeting the heating requirements of homes and minimising impact on network
- Project FREEDOM (Flexible Residential Energy Demand Optimisation and Management) is a field trial of hybrid heat pumps that will aim to understand their potential and impact on customers.



Vince Wedlock-Ward MBE

Vince Wedlock-Ward MBE

Project surveyor, Sentinel Housing Association

Sentinel Housing Association is passionate about people, communities and opportunity. Its number one priority is building quality, affordable homes. Vince has a vast amount of experience in retrofitting renewable technologies. He was awarded an MBE in 2012 for his environmental work and efforts to tackle fuel poverty.

The Fuel Poverty Puzzle

- In order to beat fuel poverty, we must address tenant energy behaviours their understanding of usage.
- Tenant champions are key to successful tenant engagement as people listen to their neighbours and friends
- The next step is choosing the correct heating system - I fully recommend air source heat pumps as a renewable solution
- We also need to ensure that the home itself is suitable. This means the correct choice of insulation, whether that's cavity or inner wall
- Lastly, we need the will to make change. This has to come from inside and above in organisations.

Session 1 – A new vision to alleviate fuel poverty



Scott Wilson

Renewables solutions consultant, Daikin UK

Scott has worked within the plumbing and heating industry for almost 30 years. He uses his wealth of experience to help drive Daikin UK sales and improvement of heating in social housing alongside local authorities and housing associations.

Hybrid solutions

- Air to water heat pumps are a great option for the 4 million UK homes that are off the gas grid – they are an efficient renewable source that do not rely on finite sources
- Hybrid heat pumps are the best choice for those on the grid. Combining a refrigerant unit and a gas boiler, they are highly efficient, compact and automatically select the cheapest operating system
- Hybrid solutions make life easier for tenants with automatic climate settings – also allowing greater control
- The Daikin Altherma heat pump monitors energy prices and manipulates its hydraulics to maximise heat pump COP.

To find out more about Daikin renewable solutions visit www.daikin.co.uk

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Session 2 – Large scale renewables adoption



Cliff Arnold

**Project manager,
Smart Communities Project,
Daikin UK**

Cliff joined Daikin UK in September 2015, where he is responsible for overseeing the delivery of the world's first domestic demand response and community research and development project. He previously ran his own successful renewable energy installation business and has worked at corporate management level within renewable technologies companies.

Smart Communities Project

- The project is a unique collaboration that sees leading-edge heat technology applied to communities across Greater Manchester that will benefit most from increased efficiency and reduced energy bills
- The SCP demonstrates demand response capability – balancing electricity grid demand and supply so that homes can remain warm without overloading the network
- The key challenges of the SCP were securing District Network Operator and noise level approval, as well as tenant engagement
- The benefits – tenant's heating bills cut by up to 50%, significant impact on fuel poverty, consistent temperatures and reduction in energy consumption.

Neil Jones

**Low carbon energy innovation manager,
Greater Manchester Combined Authority**

The GMCA consists of ten Greater Manchester councils who work with other local services, businesses and communities to improve the city-region. Neil's role is to identify current and future innovations in low carbon energy technology and work to develop relationships and projects that showcase them at scale across Greater Manchester.

Smart Communities Project – A local authority perspective

- Greater Manchester currently produces around 15 million tonnes of CO₂e a year - A successful transition to a low carbon economy is fundamental to its future
- The Committee on Climate Change stated in a 2012 report that "emissions reductions without local action will be insufficient to meet national targets"
- One of the key powers local authorities have are planning and planning restrictions – enforcing energy efficiency standards and working with developers to make renewable projects acceptable to local communities is a real possibility
- It's projects like the Smart Communities that allow us to prove the benefits of renewables and secure more funding
- The GMCA headline goal is to cut carbon emissions by 48% between 1990 and 2020 – we believe Manchester can be a world class, low carbon city.

Session 2 – Large scale renewables adoption



Matt Roberts

Matt Roberts

Director of asset management and development,
Wigan and Leigh Homes

Wigan and Leigh Homes is responsible for managing and maintaining all of Wigan Council's 22,500 homes. Its vision is to 'build communities for everyone'. Matt has worked in social housing for over 25 years. He has been leading the social housing side of the Smart Communities project since 2012 on behalf of GMCA and is an advocate for low carbon technologies.

Smart Communities Project – Social housing perspective

- The initial challenges of the SCP included – perceptions and bad press, property selection, impact on the current grid and convincing tenants to take part
- We overcame the above hurdles by communicating the full process and benefits to tenants and others involved – participants also receive a free tablet and free Wi-Fi for two years
- Although not complete until March 2017, we have now engaged with over 2,000 tenants, with 550 heat pumps installed
- Investing time with tenants is extremely important – it will save time in the long run
- What's next? Evaluation of demand response, tenant surveys, evaluation of system and perhaps a wider roll-out.

To find out more about the Smart
Communities Project visit www.daikin.co.uk



Mike Trant

Mike Trant

Member of EESSH Working Party

The EESSH aims to encourage landlords to improve the energy efficiency of social housing in Scotland. Mike has more than 35 years' experience in managing, maintaining and improving social housing. A champion for affordable warmth, Mike was one of the key influencers behind Government's decision to include social landlords within the Domestic RHI.

The new energy target for Scottish social landlords and rural approach

- Fuel poverty is Scotland's 'elephant in the room' – Government knows it's a major issue, but not enough is being done to tackle it
- Scottish government has a carbon reduction target of 42% - which it achieved four years ahead of target
- It also set a target of reducing fuel poverty to 0% by the end of November 2016. It took Scottish Government until July to accept that it was not on track
- Scottish government set up EESSH to identify why this target has been so unreachable – our role includes creating improved definitions of fuel poverty
- The EESSH produced a case study with Dumfries & Galloway, one of the worst areas for fuel poverty. The local authority there first installed Daikin renewable heat pumps in 17 homes. After seeing the significant benefits, it rose to 1300 heating systems. Daikin systems proved 'far superior' to the other options Dumfries & Galloway tried.

Session 3 – Connectivity for social housing providers



Ilan Preston

Ilan Preston

Head of household energy services,
Centre for Sustainable Energy

CSE is an independent national charity with a vision of a 'world where sustainability is second nature, carbon emissions have been cut to safe levels and fuel poverty has been replaced by energy justice'. Ilan leads CSE on forward thinking energy advice and retrofit schemes and is exploring opportunities to work with energy suppliers and government for local smart meter roll-out.

Fuel poverty and low carbon heat

- 'Why treat people and send them back to the conditions that made them sick?' – Sir Michael Marmot's Mind the Health Gap. Emergency admissions have risen by a third in 10 years and many of these are elderly patients with preventable health problems
- District heat, a network of insulated pipes used to deliver heat in the form of hot water or steam, provides a large scale retrofitting opportunity. It can also provide reliable, controllable heating where there was none before. Funding is also widely available
- However, consumer dissatisfaction with DH is common (Which? report) and often down to pricing and billing clarity issues. We need better reporting and transparency on pricing - a single point of contact for advice is also important
- District heat can significantly reduce fuel bills and CO₂ emissions, which will help in the fight against fuel poverty.



Ilan Napier

Ilan Napier

Co-founder and commercial director, Switchee

Switchee is the first smart thermostat designed specifically for social housing. Through Switchee, Ilan is committed to helping the sector deploy connected technology to deliver better outcomes for residents at lower costs to landlords.

The future of the Internet of Things (IoT) in social housing

- CISCO described the IoT as the 'point in time where more things or objects were connected to the internet than people'
- For social housing, the IoT will provide information that was never there before. Data-driven insights will allow IT, asset management, and sustainability teams to improve efficiency of service delivery whilst reducing costs and improving the lives of residents
- Connected devices and sensors can monitor temperature, air quality and humidity, as well as property conditions and building KPIs
- IoT sensors allow proactive repairs by identifying and preventing mould growth, improving the health of residents. Devices may also leverage data to understand occupancy - better maintenance scheduling
- There is so much opportunity for the IoT in social housing but a lack of sector specific solutions and connectivity issues have been obstacles in the past.

Session 3 – Connectivity for social housing providers



Rebecca Yates

Rebecca Yates

Policy and public affairs manager, Smart Energy GB

Smart Energy is the national voice of the smart meter roll out. Rebecca has expertise in public affairs and parliamentary engagement, having previously worked in Westminster for Meg Hillier MP.

Smart meters – Energising Great Britain

- Smart Energy GB's task is to communicate the benefits of smart meters and engage UK consumers. We've created a national campaign that brings to life the lack of energy control and consumer frustration, using characters Gaz and Leccy
- We wouldn't accept the service we experience with energy in any other aspect of life – can you imagine getting an estimated food bill and being told you'd receive a correct one in three months?
- Change is here – smart meters are being offered to every single household and micro business between now and 2020 by the energy industry, at no additional cost
- 80% of people using a smart meter report they are using less energy. It's all about having the correct info to make better decisions
- The campaign results - 30% of people know what a smart meter does in detail, 64% of people recall the main campaign and 2 in 3 people take action on seeing it.



David Weatherall

David Weatherall

Lead policy adviser, Energy Saving Trust

Energy Saving Trust is a leading impartial organisation helping people save energy every day. Its experts deliver first class programmes for governments and speak with millions of householders every year, all underpinned by world-renowned research. David's work has been particularly influential in focusing attention on the problem of cold homes in the private rented sector.

The role and future of energy advice for householders

- Energy advice is most important for those in need – the fuel poor. The majority of these are people aged under 59 – there is a common misconception that the fuel poor are predominantly elderly
- 12,000 people call the EST each month with energy issues. Our telephone advice is designed to reduce energy consumption and support government policy
- Our most important task is to identify people in fuel poverty via communication and refer them on to energy suppliers, in order to get support
- The EST has carried out pilot studies using new thermostats and heat technology, with the objective of identifying techniques that encourage people to make best use of heating controls. 52% had heating costs reduced, with 37% saying their home was more comfortable.

Session 3 – Connectivity for social housing providers



Iain Bevan

Southern Divisional Sales Manager, Daikin UK

Passionate about sustainability, Iain works closely with housebuilders, housing associations and local authorities to support the implementation of energy efficient solutions.

Remote metering and monitoring

- By 2020 there will be around 50 billion connected things – 7.6 'things' per person
- Daikin are soon to release the Daikin Altherma comfort app which will deliver end users intuitive remote control over their heating and hot water, putting them in control of fine tuning the system to their needs
- Daikin's LAN adaptor which is also soon to be released provides the opportunity to maximise self consumption of PV generated electricity, multiplying this through the efficiency of a heat pump and storing this in the DHW for use at a later time is an absolute must.

To find out more about Daikin renewable solutions visit www.daikin.co.uk

Speaker organisations and websites

Thank you to all of our speakers and delegates for another successful and hugely insightful Green Housing Forum.

To find out more about the events and how you can be involved, please visit: www.greenhousingforum.co.uk

Speaker organisations and websites	
Centre for Sustainable Energy	www.cse.org.uk
Daikin UK	www.daikin.co.uk
Delta EE	www.delta-ee.com
Department for Business Energy and Industrial Strategy	www.gov.uk/beis
Energy Efficiency Standard for Social Housing	https://beta.gov.scot/
Energy Saving Trust	www.energysavingtrust.org.uk
GMCA	www.greatermanchester-ca.gov.uk
Sentinel Housing Association	www.sentinelha.org.uk
Smart Energy GB	www.smartenergygb.org/en
Switchee	www.switchee.co
Wigan & Leigh Homes	www.walh.co.uk



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Lead the way in Renewable heating

Revolutionise the energy efficiency of your housing stock and reduce tenants' fuel bills by partnering with Daikin UK.

The Daikin UK renewable heating team offers everything you need to upgrade tenants' heating systems, reduce running costs and carbon emissions from homes:

- > Market-leading, MCS accredited Daikin Altherma heat pump solutions
- > Full range of renewables for new build and refurbishment programmes
- > Advice on designing and selecting high efficiency, low temperature systems
- > Tenant presentations and consultations
- > Guidance on RHI funding applications and advice on RHI metering requirements
- > All-in-one heat pumps for easy installation

Find out more on www.daikin.co.uk/domestic or email heating@daikin.co.uk