

ENERGY HOUSE LABS



University of
Salford
MANCHESTER

ENERGY HOUSE LABS NEWSLETTER

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/ WHO WE ARE

The University of Salford's Energy House Laboratories helps businesses understand how effective their products and services are in lowering consumers' carbon footprint and reducing energy bills. Our research facilities include:

- Salford Energy House
- Energy House 2.0
- Smart Meters>Smart Homes Laboratory
- Thermal Measurement Laboratory

/ CONTACT US

If you have any questions email us at energyhouse2@salford.ac.uk or call 0161 295 0073

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The Energy House 2.0 project is part-funded by the European Regional Development Fund



/ VIP Tour of Energy House Labs

On Thursday 10 March, the University was delighted to welcome Ed Miliband MP, Shadow Secretary of State for Climate Change and Net Zero, Rebecca Long-Bailey, MP for Salford and Eccles, Andy Burnham, Mayor of Greater Manchester, and Paul Dennett, City Mayor of Salford, for a tour of Energy House Labs (EHL).

Discussions focused on how to tackle climate change, including offsetting rising fuel prices through retrofitting programmes. Ed Miliband MP, said:

"I was delighted to visit the University of Salford's Energy House today. This cutting edge research is essential to delivering a national home insulation scheme, which is the best way to cut household energy bills, cut our gas imports, and tackle the climate emergency."

The visit coincided with Ed Miliband MP's unveiling of Labour's Five-Point Energy Security Plan:

- Energy efficiency revolution to insulate 19m homes in a decade, cut gas imports by 15%, and cut bills by up to £400
- Double onshore wind capacity by 2030
- Increase offshore wind capacity by 2035
- Triple solar power by 2030, back tidal power, and invest in hydrogen
- End the delay on nuclear power



/ Climate Change Committee visits Energy House Labs

On Tuesday 01 March we welcomed Lord Deben, the Climate Change Committee (CCC), and Greater Manchester Combined Authority's (GMCA) environment team to the Energy House Labs.

Hosted by Professor Joe Sweeney (Dean of Science, Engineering and Environment), Professor Will Swan (Director of Energy House Labs), and Dr Richard Fitton (Research Lead, Energy House 2.0), delegates were shown around IGNITION, a Living Lab, the Salford Energy House, and Barratt Z House, before visiting our newest facility, Energy House 2.0. During the tour, Lord Deben and colleagues learnt about the research conducted within our Labs and the opportunities they can provide to help tackle climate change.

The Climate Change Committee is an independent, statutory body established under the Climate Change Act 2008 and is responsible for providing guidance in the UK on emissions targets and reducing greenhouse gas emissions, helping us to prepare for and adapting to the impacts of climate change.

/ Tours of Energy House Labs

Throughout the week of 14-18 February 2022, the doors of Energy House 2.0 were flung open to over 225 visitors. The tours provided an opportunity to view Europe's largest environmental test facility before we commence the next phase: building four different types of houses, which will act as test beds for low and zero carbon technologies.

The tours commenced with a visit to the Salford Energy House, which opened ten years ago, followed by the Barratt Z House, a zero carbon concept home, and culminated at Energy House 2.0.

Attracting visitors from across the UK and a wide-range of sectors, including national and local government departments, building contractors, architects, researchers, and university staff and students, attendees experienced a range of climates within the chambers, including -18°C and snow.



FOURTH BUILDER ANNOUNCED

We are delighted to announce that the fourth builder to commit to building a test house in the Energy House 2.0 chambers is **Project Better Energy**. Project Better Energy are leaders in green technology and heating solutions with a focus on whole-house approach to energy efficiency.



/ Futurebuild 2022

Between 01-03 March 2022, the University of Salford returned to Futurebuild at ExCel, London. Delegates were able to learn more about our Energy House Labs, including the Thermal Measurements Laboratory and Energy House 2.0, as well as Archaeology and Salford Acoustics.

Professor Will Swan reflected on 10 years of the Salford Energy House and Dr Richard Fitton gave a talk on the new retrofit assessor standard. This was followed by a reception where delegates were introduced to the four research partners who will be building the first houses in Energy House 2.0: Saint-Gobain, in partnership with Barratt Developments; Bellway; Muse Developments, in partnership with English Cities Fund; and, Project Better Energy.





/ Thermal Measurement Laboratory

A research project undertaken by the Thermal Measurement Laboratory, describing the hygrothermal performance of a replacement reed thatch roof with an insulation upgrade on a timber frame thatched cottage during the UK winter months, has recently been published in the [Journal of Energy & Buildings](#).

In-situ measurements indicated the great importance of moisture in a reed thatched roof and its dependency on rainfall and sunshine levels. The movement of moisture in and out of the outer layers of reed thatch under "real" weather conditions demonstrated its excellent qualities as a "breathing" material.

The thermal conductivity of a specimen of reed thatch from the roof, as a function of moisture content, has also been measured in the laboratory. Based on these steady state measurements for the existing reed thatch, the thermal performance during the heating season under complex environmental conditions the mean moisture content and its subsequent effect on the thermal conductivity of reed thatch has been determined and a suggested average seasonal moisture content of 10% by wt derived from in-situ observations. Under these conditions, the U value of the 300mm thick thatch roof, including insulation upgrade, was found to meet modern insulation standards in the UK.





Are You Living Comfortably? ©McCoy Wynne

Commissioned for Energy House by Open Eye Gallery and University of Salford Art Collection

ARE YOU LIVING COMFORTABLY?

An exhibition of new work by **McCoy Wynne**, Photographers in Residence at Energy House, was recently displayed at **Open Eye Gallery** in Liverpool.

Over 1200 visitors attended across 10 days. The exhibition featured new artwork, including a new poem by Jackie Kay, former Makar (National Poet for Scotland), alongside documentation and artefacts from Energy House, and an online discussion between the artists, Dr Richard Fitton (Energy House), Steve Rotherham (Metro Mayor of Liverpool City Region), and Jon Hutchinson (Groundworks) was held.

Visitors were asked to consider what would inspire them to make their homes more energy efficient with the most popular responses being: financial support/cheaper sustainable options; more information about the steps that can be taken and benefits; and energy companies and large corporations leading the push for change.

When asked if the exhibition had changed their answer to the above, responses included: *“Made me rethink how I could actually make it easier with the resources I already have at home”*; *“Makes you question your daily actions and inspires you to improve”*; and *“I always thought it may not matter this much but it definitely does”*.

The exhibition was part of a wider partnership between University of Salford Art Collection, Energy House Labs and Open Eye Gallery. The work will be presented on campus this autumn as part of the LOOK Festival Salford hub.





LAUNCH OF FRIENDS OF ENERGY HOUSE 2.0



The Friends of Energy House 2.0 programme, backed by the Mayor of Greater Manchester, Andy Burnham, has now officially launched.

Friends of Energy House 2.0 is a community of like-minded industry partners committed to working together collaboratively to fight the climate emergency. This brand-new initiative and Impact Fund will harness the activity and expertise of the Energy House 2.0 facility located at the heart of the University of Salford's campus and extend it directly into the community.

The Impact Fund will support projects to diversify the energy efficiency workforce through Women in STEM Scholarships/Studentships, power outreach work within local Schools around the topic of climate change and support community initiatives on our doorsteps helping in the drive to net zero.

Professor Will Swan, Director of Energy House Laboratories, said:

"We are delighted to be launching this impact-driven community alongside the opening of our new Energy House 2.0 facility. If we are to achieve net-zero by 2050, then we need to work together - not just to tackle the challenges we face today, but to ensure we plan for tomorrow. We thank those organisations who have already committed to support the Friends Community and we look forward to welcoming others in the coming months."

Industry partners that have already signed up include Bowmer + Kirkland, Schneider Electric, Persimmon Homes, Bellway, Dyer Environmental Controls, Electricity North West and Trilliant.

Organisations are still invited to join; to read more visit [here](#).

Hear what Andy Burnham has to say, and follow the coverage on [LinkedIn](#).

As Andy Burnham says, *"The time is now to make a difference. We cannot wait any longer."*