ENERGY HOUSE LABS

European Union
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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
- Thermal Measurement Laboratory

/ CONTACT US

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/ Welcome

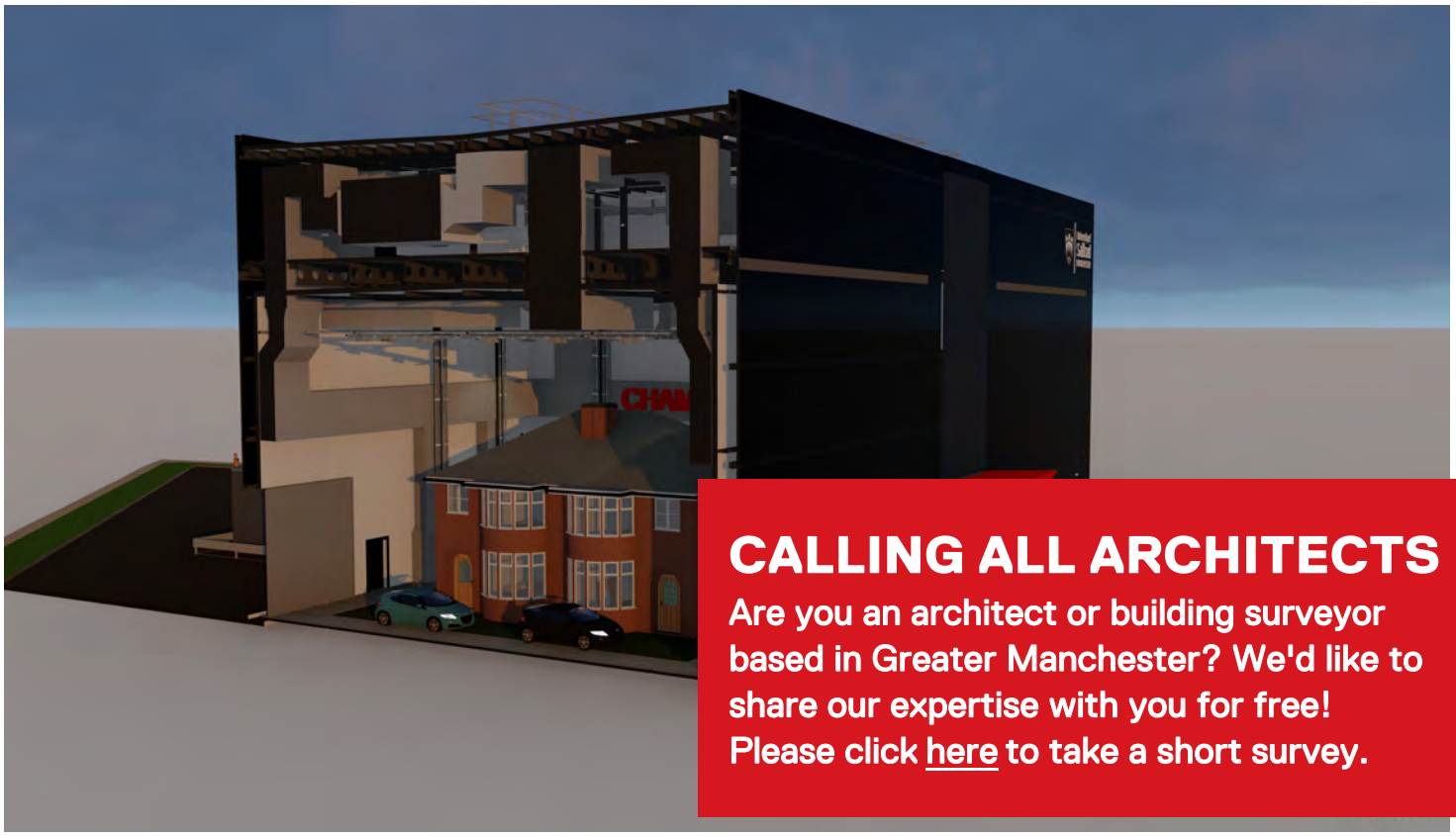
It is nearly 10 years since we launched the Salford Energy House, which proved a catalyst for the growth of the Energy and Buildings work at the University of Salford.

A decade later we have a team of 18 staff, 3 innovative labs, and we are part way through the construction of Energy House 2.0, a major international quality research facility, part-funded by ERDF and will be the centrepiece of the Energy House Labs when completed in 2022.

As we come out of the COVID crisis we are left with a number of major issues to wrangle with. The Climate Emergency has not gone away but now it is coupled with a major economic downturn. This represents a major opportunity for businesses large and small. The capacity to innovate in the Clean Growth space of energy services, smart homes and energy efficiency, will be a major focus for businesses, policy makers and citizens going forward. We are here to support that vision.

Our unique labs and our innovative outward facing approach provide a place where we can all convene to address the problem of decarbonisation and look to develop the future energy systems for our homes.

Professor Will Swan, Director Energy House Labs



CALLING ALL ARCHITECTS

Are you an architect or building surveyor based in Greater Manchester? We'd like to share our expertise with you for free! Please click here to take a short survey.

/ Energy House 2.0 Launch

In normal times we would have celebrated the start of the Energy House 2.0 construction with a traditional ground-breaking ceremony, presenting plenty of photo opportunities for VIPs wearing hard hats, high viz and wielding spades. For the obvious reasons, we had to opt for a virtual format for the launch event.

This was a new experience for many of us but thanks to the excellent support from our IT experts, things ran (almost) to plan. We attracted an audience of 349 people with Rt Hon Kwasi Kwarteng and Andy Burnham Mayor of Greater Manchester as the headline speakers. Other contributors included Greg Jackson, Chief Executive of Octopus Energy, and Oliver Novakovic, Technical and Innovation Director Barratt Developments, in addition to some of the smaller companies who have already been working with us on collaborative research projects.

The key message was how Energy House 2.0 will support research and innovation playing a vital national role as a centre of excellence in the development of low carbon buildings.

Although the feedback from the event was overwhelmingly positive, we are all looking forward to March 2022 when we can hold a more traditional live event to mark the opening of this exciting new laboratory.

The presentations from the 12th November can be found **here**.

/ Energy House 2.0 Construction

Construction started on site in August this year, with Bowmer and Kirkland as the principal contractor. The work has continued at pace, even during the COVID pandemic, which has put great pressure on the construction industry.
The following work has been completed to date; site clearance and boundary improvement to the adjacent railway track, installation of drainage tanks, creation of the large pits that will form the area for testing inside the lab, and the piles on which the building will stand.

The next stages will be completion of the concrete base for the building, which will take place during the remainder of December, following the Christmas break, the steel frame will be installed during January.

The building is due to reach practical completion by December 2021, and open March 2022.

A link to the live time-lapse camera can be found **here** alongside a construction update blog, available **here**.

/ Case Study

Karolis Petruskevicius founded Homely Energy in 2018 while studying for his PhD at the University of Manchester. With a background in economics and mathematics, Karolis and his team developed a smart thermostat designed specifically for heat pumps that enables the consumer to take full advantage of agile tariffs giving significant cost savings.

Karolis approached the Energy House 2.0 project and we explored ways to further the development of the thermostat. The Smart Meters>Smart Homes Laboratory is a living laboratory and was the ideal facility to test the smart thermostat under controlled conditions and energy cost savings of up to 20% were demonstrated. This was followed up by further testing at the Salford Energy House. As Homely Energy was a Manchester based SME we were able to carry out this work at no cost under the Energy House 2.0 ERDF project.

In 2020 Homely was acquired by the Evergreen Energy group and Karolis is now heading their Smart Home division looking at further ways of integrating the smart thermostat with other technologies such as batteries, PV, EVs and solar thermal.

The Smart Meters>Smart Homes laboratory provided the ideal test bed for the Homely system and has provided us with extremely valuable data which we used to further refine and develop our product. The support of the Salford academics, in particular Dr Ioannis Paraskevas, was also crucial to the success of this trial. Subsequently, we have been able to start conversations with a number of potential partners, such as heat pump manufacturers and installers, to launch our product with the expectation that a number of householders will benefit from lower energy costs.

SMART ENERGY TECHNOLOGIES FOR THE HOME

A free-to-attend 12-hour online workshop for start-ups, small and medium sized businesses in Greater Manchester with an interest in Smart Energy, data solutions, networks and devices for the Connected Home.

Are you interested in:

- accessing data from the domestic smart metering system (SMETS1 / SMETS2) using a Consumer Access Device (CAD)
- Smart Heating and the utilisation of the dynamic Time of Use (ToU) tariffs
- the Home Energy Management Systems (HEMS)
- the IoT for the Smart home ecosystem
- the Cybersecurity aspect of the Smart home technologies

A free-to-attend 12-hour ‘hands on’ online course organised by the Smart Meters > Smart Homes (SMSH) Laboratory at the University of Salford and delivered by industry experts. To register, click **here**