CDB Consulting Engineers Ltd



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Five things to know about the Green Homes Grant

When the government unveiled the details of its Green Homes Grant scheme earlier this month, it was hailed as a programme that would generate green jobs and help households become more energy efficient. But will it also be a boost for the plumbing and heating industry? PHAM News highlights the key points and reports on some of the reaction from industry bodies and manufacturers.

1: What is it exactly?

The Green Homes Grant is a government scheme that will fund up to two-thirds of the cost of energy efficiency home improvements, which could benefit hundreds of thousands of householders and landlords in England. Money from the £2billion pot will be disbursed in the form of vouchers, which are worth up to £5000. Those on low income (owner-occupiers in receipt of income-based or disability benefits) will get 100% subsidy up to a maximum government contribution of £10,000. According to the Department of Business, Energy and Industrial Strategy, people can verify their eligibility for the vouchers on the government-endorsed <u>Simple Energy Advice</u> (SEA) website later this month. They will also be given details of accredited local suppliers. Once one of these suppliers has provided a quote and the work is approved, the voucher will be issued from the end of September.

2: Time period

The scheme is set to go live in September with funding available until March 2021.

3: Available measures

There are a limited number of measures available on the scheme, and these are divided into 'primary' and 'secondary' measures.

The primary category includes insulation (solid wall, underfloor, cavity wall or roof Insulation) and I ow carbon heating (air or ground source heat pumps, solar thermal).

Secondary measures can be accessed only if primary measures are installed too. ."

4: Installer requirements

To take part and offer their services through the scheme, all installers must register with TrustMark. Where tradespeople are installing energy efficiency measures, they must also be certified to installation standards.

5: RHI Combination

The Government have confirmed t hat those benefitting from the grant could also collect tariffs under the DRHI.

See Report in Pham News August 2020



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INSULATION HELPS GET THE BEST OUT OF HEAT PUMPS

Air source heat pumps work at low temperatures so, so if a home it is not sufficiently insulated, this will need to be improved before a heat pump is installed. The heat loss through the walls, roof and floors all must be minimised to enable efficient operation. Kevin Ellis, Grant UK's renewables sales manager, explains how home insulation is key to getting the best out of a heat pump.

The measures we are discussing here are relevant to any of your customers, whether or not they are considering a heat pump. Improving the energy efficiencies of existing housing stock is a collective responsibility so hopefully this blog will be of interest to installers of all heating technologies.



Loft insulation is an easy measure for most households to get started with. Ideally, to get the required u-value of 0.16W/m2k, 270mm of wool insulation needs to be laid within the loft. This is something homeowners can do themselves over a weekend at a cost of about £6 per m2 or, alternatively, an outside company can complete the work at a cost of around £11 to £15 per m2.

Properties built after 1935 will more than likely have cavity walls and these are relatively simple to insulate. Cavity wall insulation involves the walls being drilled into and the insulation is injected within. This job, which does need to be carried out by a professional, should cost approximately £10 per m2 of wall. Meanwhile, for properties with solid walls, insulating these can be more of an issue but there are options available. These homes can either be clad with insulation on the outside or have insulation attached inside. Solid wall insulation procedures are more costly and can cost upwards of £15,000.

Most new homes built since the late 1990s will already have more than adequate insulation. Therefore, installing a heat pump becomes an easy decision since these homes will retain more heat and are already much better suited to low temperature heating systems. Current building regulations mean that homes built today are incredibly well insulated, allowing a heat pump to be the ideal heat source for such properties and helping the running costs to be significantly cheaper.

Installing double glazed windows is another measure which can help a home become ideally suited for a heat pump. Windows are an outlet for heat to escape a home so improving their insulation can greatly reduce a property's heat loss. According to the Energy Saving Trust, by installing double glazing, a single-glazed detached home could save over £100 on their energy bills every year. In addition to the potential financial payback, installing double glazing can deliver several other benefits to your customers which are well worth highlighting.

In Summary

The topic of net zero and the various legislative changes coming into effect in the coming years will mean that heat pumps play a more prominent role in the future of domestic heating. They will become common place on new build sites and demand from homeowners in existing housing stock is going to increase too. Encouraging your customers to improve the energy efficiency of their homes and helping them to understand how they can lower their carbon footprints will probably become a regular conversation that takes place between installers and householders over the coming months and years.

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Scaling up hydrogen technologies 'could unlock £18bn for the UK by 2035'



A new report suggests Britain could see the creation of 75,000 new jobs by 2035 if the government placed hydrogen in the heart of its green recovery strategy.

Scaling up hydrogen technologies could unlock £18 billion for the UK by 2035.

That's according to a new Economic Impact Assessment by the Hydrogen Taskforce, which estimates Britain could see the creation of 75,000 new jobs by 2035 if the government placed hydrogen in the heart of its green recovery strategy.

The alliance, which includes companies such as <u>BP</u>, Shell, BNP Paribas, Northern Gas Networks and <u>Cadent</u> has published a report, which forecasts around 11.3TWh of <u>hydrogen</u> would be required every year to support sectors such as heat, transport, power and industry by 2035.

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Check if you should go back into work—https://www.gov.uk/coronavirus-employee-risk-assessment

Use this service to find out if you should go back to work during this phase of coronavirus lockdown, and what you can do if you should not be going into work.

If you're currently on furlough you can stay on furlough. However, if you are asked to come off furlough by your employer, you can use this service to find out if you should be going back into work, and how to return to work safely.

You will be asked about your:

- type of work
- health
- Household

If you or anyone in your household currently have symptoms of coronavirus then you must not go to work.

This guidance is only for England.

Guidance from the Scottish Government, Welsh Government and Northern Ireland Assembly is also available.

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Call to prioritise building retrofitting over demolition

Building designers and specifiers should consider retrofitting

solutions to improve overall sustainability, according to Rehau.

The Royal Institute of Chartered Surveyors (RICS) estimates that a sizeable proportion of a building's lifecycle carbon is emitted during construction – 35% and 51% for office and residential properties respectively. These findings have prompted campaigns for developers to prioritise the restoration of older properties over demolishing and replacing them at high carbon costs.

Rehau believes retrofit piping solutions will be vital to ensuring the viability of this upgrade-centric approach and aiding the construction sector's fight against climate change.

"The Government committing the country to net zero emissions by 2050 has made improving sustainability a key concern across all sectors, including construction," says Steve Richmond, head of marketing and technical at Rehau Building Solutions. "With

that in mind, these RICS figures show just how damaging it can be to opt for new-builds over renovating older properties, especially at a time when we should be reducing emissions.

Report by Heating & Ventilation Review



Mitigating COVID-19 and Climate Change With Innovative Alternative Cooling Strategies



The "Cold Tube," is an an outdoor pavilion made of radiant cooling panels, which provide cooling to passers by without cooling the air. Credit: Photos courtesy of the researchers

New radiant cooling technology keeps people cool outside. When most people think of cooling, they automatically imagine air conditioning (AC), or cooling the air in a room. But, there is a much more efficient way to cool people, using your body's radiation.

To demonstrate the effect of radiant cooling, Forrest Meggers, assistant professor of architecture and the Andlinger Center for Energy and the Environment, and a team of researchers built a "Cold Tube," in Singapore last year. It was an outdoor pavilion lined with novel insulated radiant panels that held cold water pipes inside. Because your body is constantly exchanging radiation with objects around you, and radiation flows from hot to cool surfaces, the participants who walked through the exhibit shed their radiation toward the panels, similar to what would happen

if you stood near a freezer. The participants reported feeling cool, despite the air itself having temperature and humidity levels that would ordinarily feel sweltering. The new research showed that people could feel comfortable in hot and humid outdoor environments using only radiant cooling, which could use far less energy than cooling large volumes of air.

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CDB Consulting Engineers celebrate being in business now for over 9 years moving from strength to strength, with a team of engineers, the main parties who have been working within the building services industry each for over 30 years.

We all have a wide ranging experience across all types of building design which includes offices, retail, residential, schools, hospitals and all types of industrial buildings

We are working hard towards being in close partnership with our clients, design and contract team, offering advice from conceptual consultation through to full system design to ensure high-performance.

Having a wide experience, our personal and professional approach we offer to assist Architects, Developers, Main-Contractors, Local Council's and Health Authorities etc.

CDB Consulting will deliver a complete range of mechanical electrical & public health services from industrial engineering to HVAC, hot and cold water services, Steam and High temperature engineering, network distribution, power and lighting control.

Other services include fire protection, security systems, voice and data communications technologies, as well as consultations and services that focuses on energy efficiency.

CDB Consultants aim to provide optimal solutions that meet the requirements of the building and the client, recognizing the importance of energy efficiency and cost management

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