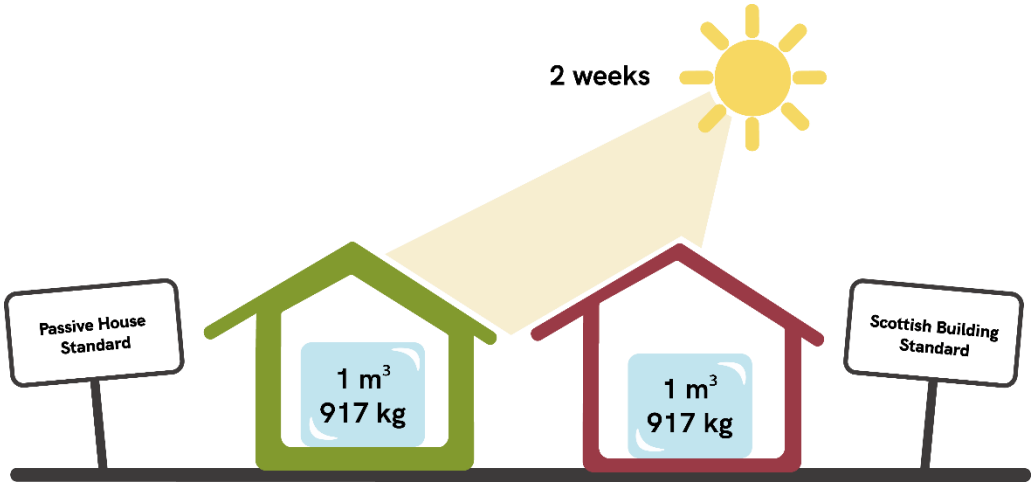
Press Release **23rd of July, 2021**

The Ice Box Challenge opening ceremony will take place today, July 23, 2021 in St Enoch Square, Glasgow from 12:30 to 2pm © Passive House Institute

Ice Box Challenge Glasgow: Official launch at St Enoch Square

***Glasgow*/Scotland. Today, two ice boxes land at St Enoch Square, Glasgow, to demonstrate the significance of an efficiency first approach to building in the run up to the UN Climate Change Conference, COP26, this November.**

The Ice Box Challenge Glasgow is a public installation and contest taking place from July 23 until August 6. One ice box has been constructed to the Scottish Building Standard, while the other meets the Passive House Standard, a highly energy efficient building performance standard, which the Glasgow City Council and local housing associations have increasingly implemented in new build and retrofit projects. As the name suggests, Passive House buildings make efficient use of passive heating and cooling sources. To demonstrate this during the Ice Box Challenge, each box is filled with an equal amount of ice at the beginning of the experiment. After a fortnight, at the closing ceremony on August 6, the amount of ice left in each box will be measured. The level of ice remaining will demonstrate how well each ice box passively kept out the heat.



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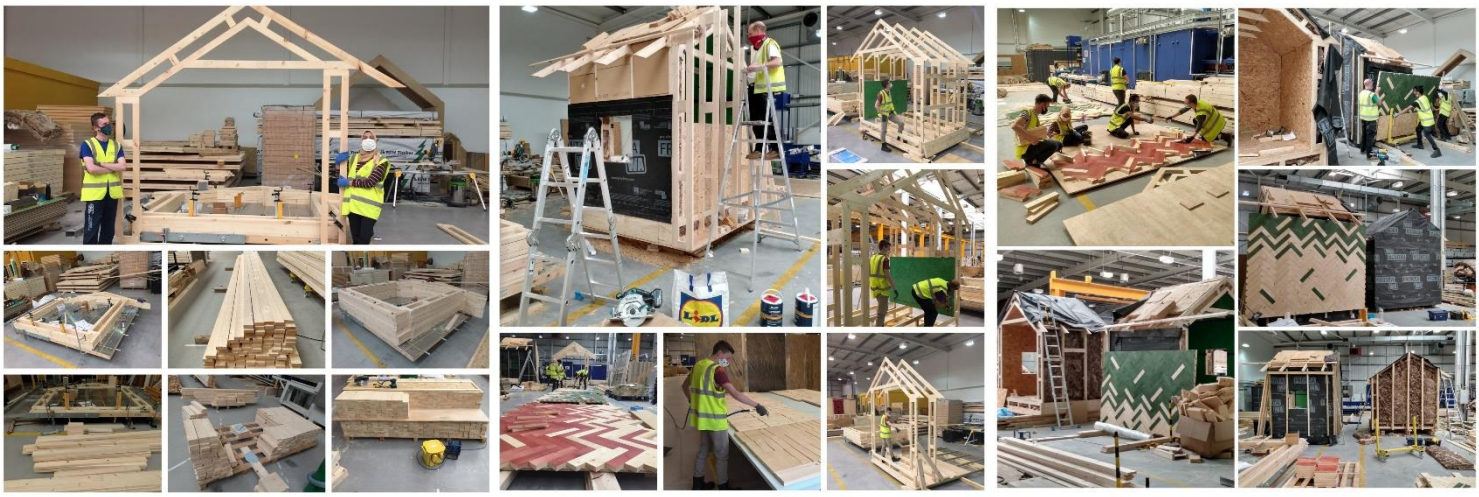
The Organisers

The project is a joint effort from the International Passive House Association, Glasgow City Council, Passive House Institute, Edinburgh Napier University, Passivhaus Trust and Construction Scotland Innovation Centre and enjoys the patronage of the UNECE and Global Alliance for Buildings and Construction. The project began with a student design competition, which received entries from all over Scotland and was ultimately won by a team from Robert Gordon University. Their design was inspired by the Scottish Highlands and incorporated design features and materials that would minimise the structures' embodied carbon as well. The team has worked with Construction Scotland Innovation Centre to fabricate the boxes for display.



The winning student team from Robert Gordon University have worked with Construction Scotland Innovation Centre to fabricate their ice box design. © Kyle Henderson

Opening Ceremony

The Ice Box Challenge opening ceremony will take place today, July 23, 2021 in St Enoch Square, Glasgow from 12:30 to 2pm. Speakers include Councillor Ruairi Kelly, Convener of the Neighbourhoods, Housing and Public Realm Committee at Glasgow City Council; Ann-Marie Fallon from Architype and Barbara Lantschner of John Gilbert Architects, two of the UK's leading Passive House architectural firms and Dr Julio Bros-Williamson and the winning student team to talk about taking their design from concept to reality. The ceremony will provide an opportunity to learn more about the Ice Box Challenge, tackling the UK Climate Emergency through Passive House implementation and also mark the opening of the 'Guess the remaining ice level' contest; where entrants can win a weekend getaway for two at Malvern Passive House B&B in the Malvern Hills Area of Outstanding Beauty.

Efficiency: The First Renewable Energy #EfficiencyFirst Campaign

The Ice Box Challenge is a part of the International Passive House Association's 2021 awareness raising campaign "Efficiency: The First Renewable Energy #EfficiencyFirst". The United Nation's IPCC highlights the substantial action needed to limit global warming. Currently, 35% of global energy consumption comes from the building sector alone. The operational stage is the largest contributor to carbon emissions, with most of this stemming from heating and cooling demand. Thus, the campaign asks people to think #EfficiencyFirst when tackling a new build or retrofitting project. It highlights existing solutions and provides local information on how to implement them.

Sponsors

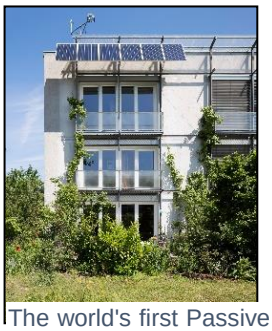
The Ice Box Challenge was made possible thanks to the generous donations from sponsors including: Construction Scotland Innovation Centre; John Gilbert Architects; Ecological Building Systems, OPEN Technologies, Glasgow Institute of Architects, Shettleston Housing Association, West of Scotland Housing Association, Southside Housing Association, Sanctuary Housing, Stewart & Shields Ltd, CCG (Scotland) Ltd, A.C. Whyte & Co. Ltd, Scotia Windows And Doors, Eskimo Ice Limited, Galt Transport, John White and Son and Green Building Store.

For more information, visit **www.IceBoxChallenge.org**

General Information

Passive House buildings

With the Passive House concept the heat loss that typically takes place in buildings through the walls, roof and windows is drastically reduced. With the five basic principles – high-quality thermal insulation, windows with triple glazing, avoidance of thermal bridges, an airtight building envelope, and a ventilation system with heat recovery – a Passive House building needs very little energy. Passive House buildings can therefore dispense with *classic* building heating systems. Such buildings are called "passive houses" because a major part of their heating demand is met through "passive" sources such as solar radiation or the heat emitted by occupants and technical appliances.



The world's first Passive House building in Darmstadt. © Peter Cook

In a Passive House building, the heat is retained for a long time because it escapes very slowly. For this reason, active heating is needed only during extremely cold days and only a small amount of energy is required for this. A Passive House building also offers an advantage in the summer: the excellent level of insulation ensures that the heat stays outside, therefore active cooling usually isn't necessary in residential buildings. A Passive House building consumes about 90 percent less heating energy than an existing building and 75 percent less energy than an average new construction.

Passive House & NZEB

The Passive House standard meets the EU requirements for Nearly Zero Energy Buildings. According to the European Buildings Directive *EPBD*, all member states must specify requirements for so-called NZEBs in their national building regulations. These came into effect in January 2019 for public buildings and apply for all other buildings since this year 2021.

Pioneer project

The first Passive House in the world was built in Darmstadt-Kranichstein (Germany) 30 years ago by four private homeowners. Prof Wolfgang Feist was one of them. Ever since the homeowners moved in with their families in 1991, these terraced houses have been regarded as a pioneer project for the Passive House standard.

Prof Wolfgang Feist. © Peter Cook

Passive House and renewable energy

The Passive House standard can be combined well with on-site renewable energy generation. Since April 2015, the new building classes "Passive House Plus" and "Passive House Premium" have been available for this supply concept.

Passive House Institute

The Passive House Institute with its headquarters in Darmstadt (Germany) is an independent research institute for highly efficient use of energy in buildings. The Institute founded by Prof Wolfgang Feist holds a leading position internationally with regard to research and development in the field of energy efficient construction. Among other things, Prof Wolfgang Feist was awarded the DBU Environmental Prize in 2001 for developing the Passive House concept.

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