

**Press Release September 2016  
For Immediate Release**

***First home in Scotland with groundbreaking Viessmann technology  
"Heating with Ice"***

***Sustainable building by Stommel Haus with sustainable heating***

**Aberdeenshire, Scotland – Stommel Haus**, premium manufacturer of offsite manufactured eco homes in Germany, equips a private dwelling in Aberdeenshire with groundbreaking "Heating with Ice" technology by **Viessmann**.

The innovative ice store system is installed in a very energy efficient eco timber house from Stommel Haus **becoming the first of its kind in Scotland**. This groundbreaking technology recovers energy from only renewable sources, such as the sun, the ambient heat and the soil, to heat and cool a building and provides hot water for the house,

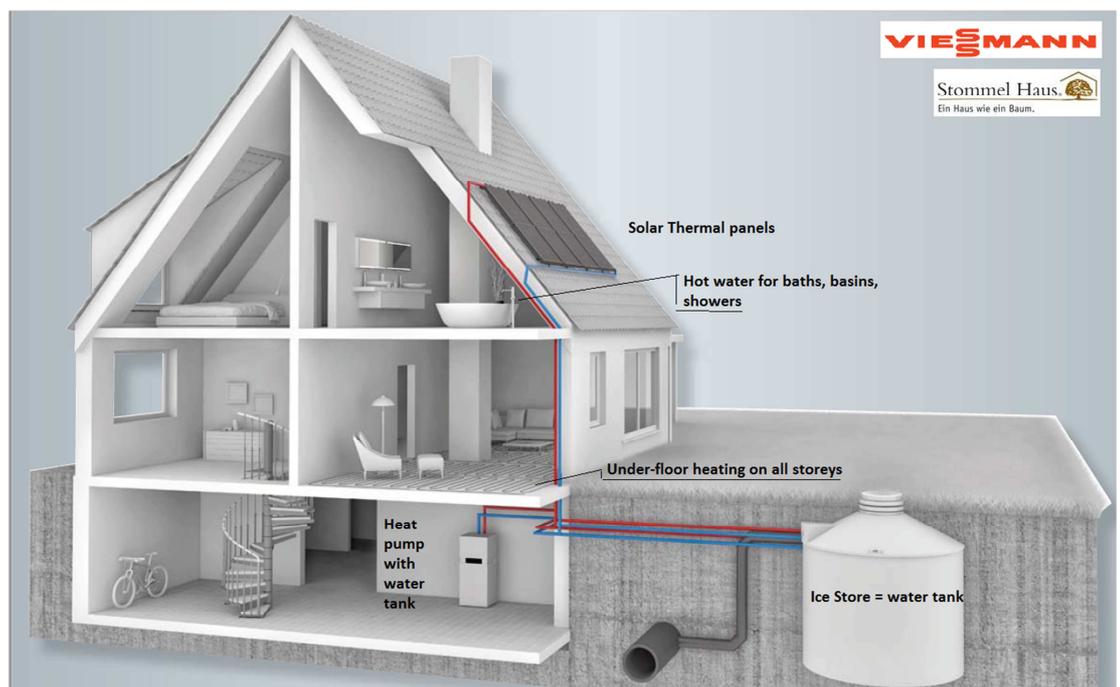
Drawing energy from ice to heat or cool a house **sounds a little bit like science fiction**, but over the past 4 years Stommel Haus already installed many such systems in their eco houses in Germany. The ice storage system which consists of an underground water tank, solar thermal panels and a state of the art heat pump supplies energy to the heat pump which generates the hot water for taps and baths and heat for the under-floor heating on all storeys of the house. It also cools the house in summer.

The heat pump extracts energy from the water stored in the ice storage tank which is installed under ground. The energy used to provide the heat slowly turns the water in the underground tank to ice. Additional energy is obtained from the freezing process of the water - therefore the term "ice store".

Freezing is an exothermic process, i.e. as liquid water changes to solid ice, crystallisation energy (latent heat) is released. This latent heat is retained in the ice store system.

A heat source management system integrated in the heat pump draws energy

from either the ice store or solar thermal panels on the roof. The ice store also draws energy from the surrounding ground to regenerate heat.



In summer the ice store can be used to provide natural cooling: At the end of the heating season, the water in the store is turned to ice. The ambient summer heat around the store, the solar thermal energy and heat which is drawn from the system via an extraction heat exchanger melt the ice in the ice store and cools the heating circuit of the house.

Barbara Fischer-Clark, UK agent for Stommel Haus says: "We are proud to have built the very first Stommel Haus home in Scotland and fitted it with the latest in heat pump technology called "Heating with Ice" from Viessmann. Stommel Haus is one of the leading suppliers of energy efficient eco homes and embrace new technology to support sustainable and energy efficient building. Our Scottish clients will enjoy a warm house regardless of the weather and a comfortable ambient temperature in their 216 m<sup>2</sup> house with minimal running cost. In addition to the "Solar Ice" heating which uses the heat of the sun and soil as well as the latent energy of ice, photovoltaic panels on the south facing roof will generate more electricity than required by the house."

Jörg Schmidt from Viessmann says: "With an ice storage measuring ten cubic metres – the standard size for a detached house – this corresponds to the energy content of approx. 120 litres of fuel oil. The key difference being that the fuel oil is entirely consumed to generate heat, while the water content of the ice store represents an almost limitless heat source that is continuously regenerated with energy from the sun and air."



### **Benefits of the Solar Ice technology**

- Combined utilisation of ambient air, the sun and ground as heat source
- No drilling – no environmental risk, no permits required
- Low operating costs thanks to the high COP (Coefficient Of Performance) of the heat pumps, up to 5.0 (B0/W35) to EN 14511

- Particularly high efficiency thanks to intelligent heat source management and heat pump with RCD (Refrigerant Cycle Diagnostic) system with electronic expansion valve (EEV)
- Easy-to-use control unit integrated in the heat pump

### **About Stommel Haus**

Stommel Haus GmbH is a German Premium manufacturer of bespoke, energy efficient, houses. With more than 45 years of experience, the family business proves every day that using high precision manufacturing methods together with experienced craftsmanship, the use of high quality and sustainable materials as well as the attention to detail lead to providing a modern, ecological and high quality product which is tailor-made for each and every client.



Nestled in the small town of Neunkirchen-Seelscheid near Cologne, Stommel Haus develops and produces their certified and precision built eco houses off-site in the sheltered environment of the factory. The houses are transported on site where they are erected by qualified teams and made wind and water tight typically within 5 to 7 days. Under-floor heating, state-of-the-art heat pump technology and the high quality interiors are then fitted by German craftsmen with only top class products.

### **About Viessmann**

The Viessmann Group is one of the leading international manufacturers of heating, industrial and refrigeration systems. Founded in 1917, the family business maintains a staff of approximately 11,600 employees and generates 2.2 billion euros in annual group turnover.



With 22 production divisions in 11 countries, sales subsidiaries and representative offices in 74 countries, and 120 sales offices around the world, Viessmann is an internationally orientated company. 56 percent of sales are generated abroad.

#### **Sustainability in practice**

As a family business, Viessmann sets great store by responsible conduct with a long-term vision. Sustainability is already firmly embedded into the company's guiding principles. For Viessmann, the practice of sustainability means reconciling cost efficiency, ecology, and social responsibility throughout the entire company to enable us to meet our current needs without compromising the ability of future generations to meet theirs.

As an environmental pioneer and technology leader in the heating industry, Viessmann has for decades been supplying minimal emission, energy-efficient heating systems for oil and gas as well as solar thermal systems, wood combustion systems, and heat pumps. Many Viessmann developments are regarded as milestones in heating technology.

## **CONTACT**

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