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## **IKU Award for efficient energy system**

### **ESyCool green from Viessmann – innovation for the food retail industry**

Sustainable refrigeration on the road to success: the efficient and environmentally friendly **ESyCool green** energy solution from Viessmann KÜHLSYSTEME GmbH was awarded the German Innovation Prize for Climate and Environment, or IKU (Innovationspreis für Klima und Umwelt) for short, yesterday.

The IKU Award is presented every two years by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety as well as the Federal Association of German Industry. It awards prizes to innovations from industry and research that showcase new approaches in the field of climate and environmental protection. The **ESyCool green** solution, which was developed by Viessmann in cooperation with the ALDI Nord discount retailer, took first place in the category "Process innovations for climate protection". Joachim Janssen, Co-CEO of the Viessmann Group, received the award in Berlin from Jochen Flasbarth, Secretary of State for Environment.

**Janssen said: "This award encourages us to continue in developing sustainable energy solutions for the benefit of future generations."**

The new type of refrigeration and heat supply for supermarkets not only significantly reduces energy consumption, but also significantly reduces CO2 emissions. With **ESyCool green**, so-called zero-emission stores can be realized – one of the major sustainability goals of food retailing.

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***“We are very pleased with the award and it underscores once again how innovative our solution is. It boasts features that are unique on the market – especially in terms of ice energy storage”, says Frank Winters, CEO of Viessmann Refrigeration Solutions.***

The main focus of **ESyCool green** (Energy System for Cooling applications) is on refrigeration, which accounts for more than 50 percent of a supermarket's electricity consumption. At the heart of the new refrigeration/heat composite system are brine-water heat pumps that are operated with the natural refrigerant R290 (propane) in small, hermetically sealed refrigeration circuits.

Thanks to the innovative heat pump technology, around 95 percent less refrigerant is required. Whereas conventional refrigeration systems in a discounter store require approx. 100 kg of refrigerant, depending on the size of the market, **ESyCool green** reduces the amount of refrigerant to less than 5 kg of natural refrigerant.

Another special feature of Viessmann's innovative energy system is the ice energy storage system, which uses the phase change energy from water to ice. On particularly cold days, additional heat can be extracted very efficiently from the thermal storage. In summer operation, the heat pumps can also be used to build up ice in the ice energy storage system during the day via the photovoltaic system. Thus, the stored regenerative solar energy can be used at night to operate the cooling units. Viessmann calls this function "Power2Ice".

The fact that the environmentally friendly ESyCool green energy solution also works in practice has been proven by the cooperation with ALDI Nord in pilot projects in several branches of the

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discounter retailer. After two years of intensive testing, there are signs of a significant reduction in electrical energy consumption, but also in total store CO2 emissions.

## **About Viessmann:**

The Viessmann Group is one of the world's leading manufacturers of heating, industrial and refrigeration systems. Founded in 1917, the family business employs around 12,000 persons and the Group generates EUR 2.25 bill. of sales each year (2016). Viessmann operates internationally with 23 production companies in 12 countries, sales companies and representatives in 74 countries and 120 sales outlets worldwide. 54 percent of sales are generated outside Germany.

Viessmann Refrigeration Solutions is one of Europe's leading providers of innovative cooling solutions. The product portfolio includes refrigerated cabinets with remote and plug-in refrigeration technology, cold and freezer rooms, refrigeration systems and units as well as accessories. Installation and support services round off the complete range of commercial refrigeration services.

[cooling.viessmann.com](http://cooling.viessmann.com)

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**Captions**

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Frank Winters, CEO of Viessmann Refrigeration Solutions

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Efficient ESyCool green energy system from Viessmann

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