



An innovative technology system that uses solar energy to heat buildings all year round is being installed for the first time in a commercial property.

The Zero Carbon Solution, which combines PV-T, heat pump and thermal energy storage, is being fitted into a 550m² office building in Faversham, Kent. Located at the Foundry business park, the property is a standard metal-framed construction and will boast no obvious visible signs of its carbon neutral credentials.

Built by developers Quinn Estates, the commercial unit will be home to renewable energy specialist Newform Energy, which is a joint venture partner in the Zero Carbon Solution with house builder Caplin Homes.



Keith Willett, managing director of ZCS/NFE commented: “We wanted to practice what we preach and using the technology in our own office building seemed like the ideal way to do that. There is no reason why ordinary construction can’t become extremely energy efficient and we want this project to act as a demonstration.”

An array of solar PV-T panels, housed on the building’s roof, will be used for space heating and hot water, to power high-performing LED lighting, and to run the building’s heat pump and integrated controller. In the building’s footprint, a patented interseasonal heat store, the Earth Energy Bank (EEB) will be used to collect any excess energy generated during the summer months. This will then be drawn upon in winter to heat the offices.



Temperatures within the building will be monitored using the system's sophisticated controller and regulated by destratification. The Earth Energy Bank has just been installed on site and construction is due to be completed in June.

Keith added: "We're looking forward to moving into the new offices and having a working model to show to potential customers and the industry in general."

The technology was first tested in the Solar House, which is believed to be the first new-build home in the UK to be powered solely by the sun's energy. Originally designed for use in housing developments, the Zero Carbon Solution is also suitable for a range of commercial properties, which the Foundry project will demonstrate.