

## **Taurus plans 7,500 energy-neutral homes in the USA**

Taurus to build carbon-neutral housing development on 900 hectares of former farmland.

The investor Taurus is making use of German technologies - from companies including Bosch - in its new 900 hectare residential development in Austin, Texas. The development's entire energy supply will come from solar and geo-thermal sources. And, thanks to a revolutionary method of financing, the houses will remain affordable to future home-buyers. In total, around 7,500 houses and 186,000 m<sup>2</sup> of commercial space is to be constructed in Austin.

BY LARS WIEDERHOLD

### **Energy savings cover extra costs**

When it comes to energy efficiency and climate change prevention, the USA hasn't exactly played a leading role so far: private households are responsible for 20% of national energy consumption; a majority of the country's energy is generated from burning fossil fuels; and air conditioning units are the largest drain on energy. There are however exceptions: Austin in Texas, known as the greenest city in America, is stepping up to the plate. According to the city's Municipal Building Code, all houses built within the city's limits from 2016 will have to meet the so-called Net Zero Standard, meaning they must operate on a carbon neutral basis. By 2050, the city wants all of its buildings and houses to be carbon neutral.

The first step towards this is the Whisper Valley pilot project – a master planned community covering 900 hectares of former farmland. In total, 7,500 homes and apartment buildings, along with 186,000 m<sup>2</sup> of retail and office space, are planned. The city's private sector partner, the investment house Taurus, has already acquired the land. Even by American standards, this is a gigantic project. “This is one of the ten biggest developments of its kind in the USA,” reveals Lorenz Reibling, Taurus Co-Founder. New housing is desperately required: “Austin is one of the county's fastest growing cities,” says David Czyzewski, Director of Sales. The population of the city has pretty much doubled over the last 20 years.

Since the financial crisis, demand has far outstripped supply, as banks have been unwilling to satisfy the financial requirements of the project development market. As Taurus promised to create a new green quarter for the city, Austin provided bonds. Without its “green” expertise, Taurus would not have been permitted to enter the market. A third of the development area is designated as parkland. “We had to make concessions,” says Czyzewski. Taurus, unlike typical projects developers, is not going to fill every last square meter with real estate.

Taurus' energy supply concept was developed in collaboration with technology and engineering experts at the investor's German partners such as Bosch, BASF and Rehau. Rehau, for example, has developed a combination of individual and centralized heat circulation systems, Bosch is providing the ground source heat pumps, and the energy-efficient wall components will come from BASF. Alongside the German partners, American companies are also heavily involved. Manufacturers are providing 25-year guarantees on their products to future homeowners.

The jointly-developed EcoSmart programme requires that the energy needs of every house constructed in the new quarter are met by geo-thermal and solar energy. In addition, the houses will be fitted out with energy-saving household appliances and hot water systems. Connection to these energy and heating circulation systems is mandatory for every single home and the resulting

economies of scale mean that savings are maximized and costs are kept to a minimum. This is the first time that EcoSmart is being implemented with such comprehensive coverage.

The homes will be sold for between USD 175,000 to USD 300,000. Homeowners will pay a monthly fee equivalent to EUR 144 – 176 to cover the extra costs of the equipment and their maintenance. This fee is more than offset by energy savings amounting to EUR 150 to 250 per month. The financing functions as a type of “energy contracting”, with the major advantage that home-buyers don't have to worry about the initial set-up costs. In the past it was often these initial expenses that discouraged American home-builders from installing this kind of energy-efficient equipment. The fact that banks are more generous in relation to energy-efficient homes is an extra benefit. According to a study carried out by the Institute for Market Transformation, the mortgage default rate for houses with Energy Star certificates is 32% lower than the rate for regular houses. The owners of such houses are classed as more reliable. “More “green” mortgage products are being launched all the time,” explains Axel Lerche, CEO of EcoSmart Solutions. A study published by Ramya R. Aroul and J. Andrew Hansz reveals that the resale value of energy-efficient real estate in the USA is significantly higher.

The transaction volume for the land in Whisper Valley is in the USD 600 – 700 million range. Taurus will sell parcels of land onto large American construction companies such as Horton. “We are doing with equity what the banks used to do,” says the Taurus founder Reibling. The project and the required infrastructure will be constructed in stages. The company has already signed contracts for 250 parcels of land. Taurus is planning to roll the Eco-Smart program out in other locations across the US. The American market could easily absorb one million properties per year. It is not only in Austin that prices have doubled over the last two years. A number of potential co-investors have already approached Taurus. As Reibling reports, “I have been in this business for more than 40 years, but many of the financial backers coming to us now are doing so for the very first time.” These potential backers include sovereign wealth funds, high net worth individuals and one of the world's leading telecommunications companies. They are not just interested in maximizing returns, more than that, they want to invest in the future. Reibling is irked, “Real estate developers are the worst culprits when it comes to CO2 emissions.” Things have to change.

Carbon neutral homes in the USA achieve higher prices and benefit from more attractive financing conditions from banks. Photo: Taurus