



Bosch Net Zero Home At Serenbe

Case Study



BOSCH
Invented for life

Net Zero Home Energy Solution in Eco-Friendly Community

Project Goals:

- ▶ Combine products for a whole system approach
- ▶ Energy efficient housing
- ▶ Create a home that makes as much energy as it uses

Whole System Approach

Bosch has assembled a comprehensive suite of heating, cooling, water heating, electricity generating technologies and energy-efficient appliances that, when installed in a home, reduce the homes energy usage due to intelligent product designs and higher efficiencies. In addition, this approach enables the home owner to generate enough power to offset the already reduced energy demand. To demonstrate how it works, Bosch has worked with its partners to build the 1,650-square-foot Bosch Net Zero Home in Serenbe.

Background

Just south of Atlanta, the award-winning community of Serenbe is focused on creating an easy-living sustainable lifestyle that stretches from locally grown produce to energy efficient home design. To highlight its approach, Serenbe has created a unique partnership with Bosch Thermotechnology Corp. to build energy efficient housing, including Net Zero home solutions, using an affordable whole- systems approach.

What is Net Zero?

The Bosch Net Zero home is a systems approach to creating a house that is not an energy drain on the planet’s finite resources. It’s technology helps homeowners to reduce their monthly utility bills and protect the environment.



“We’ve built a suite of smart products that work together as an integrated system and provide a complete solution for those who want the best in energy efficiency, combined with a sustainable, reliable alternative energy source. This powerful portfolio is designed for reliability – meaning precision engineering and design ensuring years of clean, efficient operation for everyday home comfort needs.”

- Jim French, Vice President/Wholesale Sales,
Bosch Thermotechnology North America.

A Bosch electric heat pump water heater uses the heat and humidity from the surrounding air to heat the water, cooling and dehumidifying the home at the same time. The heat pump water heater is twice as effective compared to a traditional tank water heater, providing up to 60% savings in water heating costs.



To maintain the home’s indoor temperature, a Bosch geothermal system is installed in the home. The technology uses the relatively constant temperature of the earth (thermal energy) to provide heating and air conditioning for the home. Ground and water temperatures, 6 feet below the earth’s surface, stay relatively constant throughout the year. This allows the system to provide extremely efficient heating or cooling all year long in virtually any climate. In general, geothermal systems allow for up to 70% savings and quiet operation compared with conventional heating and cooling systems.

A host of Bosch appliances, including an Axxis washer and dryer; a 24-inch DLX Bar Handle dishwasher; a 30-inch, single-wall oven; a built-in microwave oven; and a five burner cooking surface, ensure that the family can cook and wash using minimal energy.

The Bosch home generates electricity with a Bosch Solar Photovoltaic System. Over a year under ideal conditions, the home’s energy usage is forecasted to net out at zero, meaning that the home will supply as much energy as it uses.

