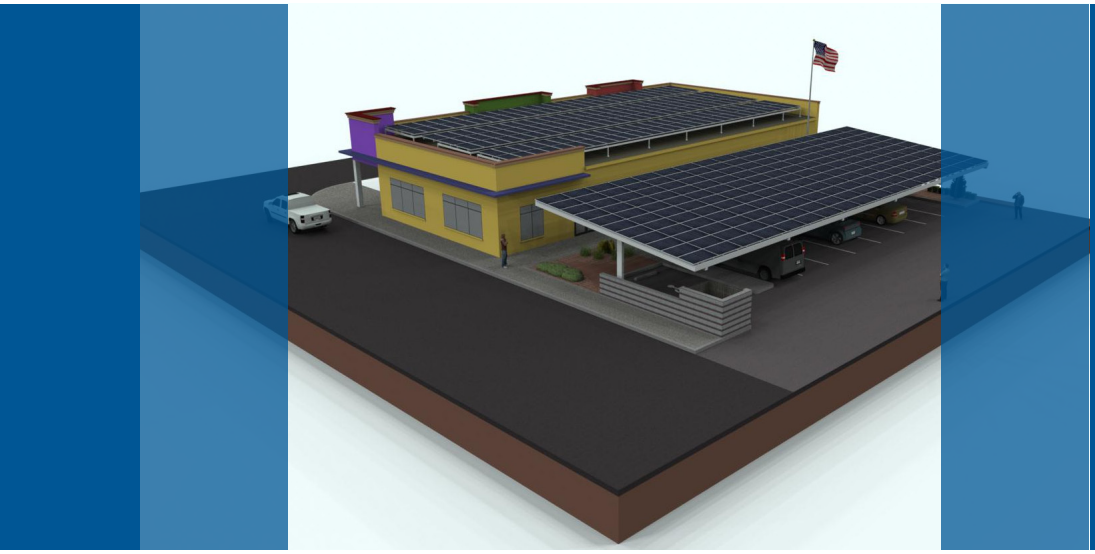
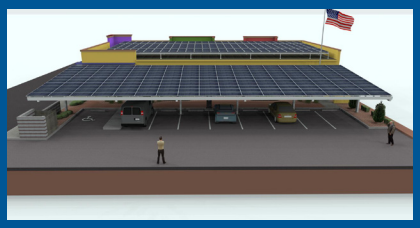


St. Petersburg's First Net Zero Commercial Building



Net Zero Commercial Building

Bosch has assembled a comprehensive system of heating, cooling, water heating, and electricity generating technologies that, when installed, reduce energy usage. This is achieved by utilizing intelligent product designs at higher efficiencies.

In addition, this approach enables the home or building to generate enough power to offset the already reduced energy demand.

The result is a Net Zero Building, a whole systems approach to creating a building that is not an energy drain on the planet's finite resources. Its technology helps reduce monthly utility bills to zero while protecting the environment.

Bosch and their local Florida sales representative, G.L. Spies, have partnered with All Florida Management to build the first Net Zero Commercial building in St. Petersburg, FL. The building will house three commercial businesses: The Sierra Club, an organization that is involved in campaigns for Smart Energy, Safe and Healthy Communities, and Protection and Restoration of the Everglades; Big Sea Design and Development, and Roundhouse Creative Studio.

These three businesses will not only enjoy the peace-of-mind from working in a building that is not a drain on the environment, they will also enjoy was it means to work in a Net Zero space - no energy bill!

Bosch Technology Enables Zero Energy Bill

FHP/Bosch Group Geothermal Heat Pump

As the cost of energy increases geothermal installations become the system of choice. The earth has a tremendous capacity of storing thermal energy which can be utilized to heat or cool a building.

Although the initial cost of a geothermal application may be higher, if one considers the life cycle savings in energy and the reduced maintenance cost then geothermal is the smartest decision for your project.

Geothermal systems are especially recommended in areas that have significant heating and cooling loads, like St. Petersburg, FL.

The Net Zero Building is equipped with three FHP AP Series Geothermal heat pumps. The AP Series, rated as the most efficient product on the market today, features a state of the art two-stage unloading scroll compressor. When controlled by a multistage thermostat, this unloading-compressor matches the demand for heating and cooling. Resulting in up to 70% savings on energy bills, while improving humidity control and overall comfort, FHP's AP series helped to attain the highest LEED points for geothermal installations.

Bosch Tankless Water Heaters

Bosch tankless water heaters work "on-

Sierra Club, Net Zero Building St. Petersburg, FL

Project Goal:

To achieve a wholly self sufficient office building and a net zero energy usage.

Resolution:

- Installation of two AP035 FHP Geothermal Heat Pumps (horizontal configurations)
- Installation of one AP071 FHP Geothermal Heat Pump (horizontal configuration)
- Installation of two US3 Bosch Tronic 3000 Series Tankless Point of Use Water Heaters
- Installation of one GL4 Ariston Pro Series Point of Use Electric Mini Water Heater
- Installation of 182 Bosch Photovoltaic Solar Modules

Results:

- New LEED Platinum development in Grand Central District St. Pete
- Net Zero energy building with 100% utility offset and independence
- Fully insulated building envelope
- Largest renewable solar system in Pinellas County

BOSCH

Invented for life

demand" to produce hot water when needed, for as long as needed. There is no storage tank, so you never have to worry about running out of hot water or waiting for the tank to recover, even during peak use.

The Net Zero Building is equipped with three Bosch water heaters. These ultra efficient heaters are equipped with low kW settings and provide hot water at 99% efficiency. With minimal stand-by loss, these water heaters save both energy and water.

Bosch Solar Photovoltaic (PV) Modules
The Net Zero Building generates electricity with 182 Bosch Solar Photovoltaic modules. The system is attached to the power grid, generating electricity during the day to power the building and feeding excess energy into the grid. If the energy generated by the system is less than the demand, the necessary additional electricity is pulled from the grid. Over a year under ideal conditions, the building's energy usage is forecasted to net out at zero, meaning that the building will supply as much energy as it uses.

The success of this project will demonstrate how total system integration from one source can effectively reduce the carbon footprint while increasing profit margins for commercial applications.

To learn more about Bosch products visit **www.Bosch.us**

To learn more about the St. Petersburg Net Zero project visit: **SierraClubNetZeroBuilding.com**

"A very exciting project, and a template for future geothermal projects in Florida!"

- Leon Boe, GL Spies

Bosch Thermotechnology Corp.
Londonderry, NH • Ft. Lauderdale, FL
www.bosch-climate.com

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