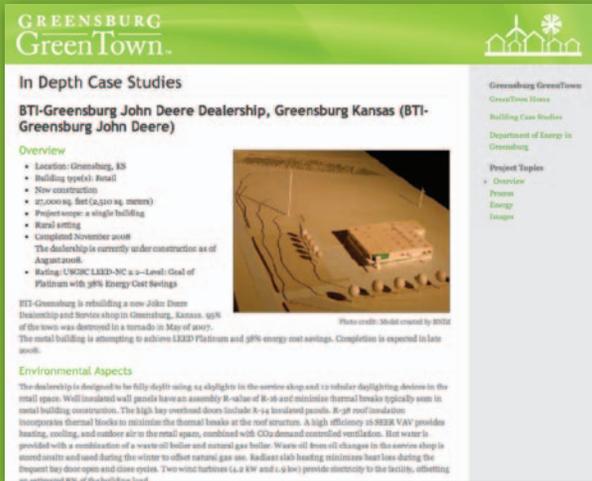


## Case Study Database

The Greensburg High Performance Buildings Database highlights building case studies that include design details and energy information for the town's new commercial and residential green buildings. The database provides a standardized format for displaying performance information as well as a system for collecting data on topics including energy, materials, indoor environmental quality, and land use.



**GREENSBURG GreenTown.**

**In Depth Case Studies**

**BTI-Greensburg John Deere Dealership, Greensburg Kansas (BTI-Greensburg John Deere)**

**Overview**

- Location: Greensburg, KS
- Building type(s): Retail
- New construction
- 27,000 sq. feet (2,150 sq. meters)
- Project scope: a single building
- Retail setting
- Completed November 2008

The dealership is currently under construction as of August 2008.

**Rating: U.S.GBC LEED-NC v2.2-1 Level: Goal of Platinum with 38% Energy Cost Savings**

**BTI-Greensburg is rebuilding a new John Deere Dealership and Service Shop in Greensburg, Kansas. 95% of the town was destroyed in a tornado in May of 2007. The retail building is attempting to achieve LEED Platinum and 38% energy cost savings. Completion is expected in late 2008.**

**Environmental Aspects**

The dealership is designed to be fully staff using 12 daylight in the service shop and 12 indoor daylighting devices in the retail space. Well insulated wall panels have an assembly R-value of R-20 and minimize thermal breaks typically seen in retail building construction. The high bay overhead doors include R-14 insulated panels, R-38 roof insulation (non-toxic thermal breaks to minimize the thermal breaks at the roof structure). A high efficiency 24,000 BTU gas boiler heating, cooling, and outdoor air to the retail space, combined with CO2 demand controlled ventilation. Hot water is provided with a combination of a waste oil boiler and natural gas boiler. Waste oil from oil changes in the service shop is stored onsite and used during the winter to offset natural gas use. Radiant slab heating minimizes heat loss during the frequent hot floor open and close cycles. Two solar hotwater (1.2 kW and 1.5 kW) provide electricity to the facility, offsetting the natural gas use of the hotwater boiler.

*BTI-Greensburg, the local John Deere dealership, is designed to meet the requirements of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) Platinum designation while saving greater than 38% in energy costs, and will be used as the model for future John Deere dealerships.*

## Stay Tuned...

Greensburg is in the early stages of rebuilding, and the Greensburg High Performance Buildings Database will continue to grow as the town does. If you are constructing a green, energy-efficient building in Greensburg, we'd love to hear about it. Visit [greensburg.buildinggreen.com](http://greensburg.buildinggreen.com) and click "submit a project."

To see the Greensburg case studies, visit:  
[greensburg.buildinggreen.com](http://greensburg.buildinggreen.com)

## For Additional Information, Please Contact:

Energy Efficiency and Renewable Energy Information  
Center 1-877-EERE-INF (1-877-337-3463)

[www.eere.energy.gov](http://www.eere.energy.gov)

Prepared by NREL, a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, operated by the Alliance for Sustainable Energy, LLC.

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# How would you rebuild a town – green?



Greensburg, Kansas:  
Building a Model Green Community

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