

**LOCATION:** Edgewood, Kentucky, United States



## NET ZERO

**PROJECT TYPE**  
Educational Facility

**STATUS**  
Complete

**DISTRIBUTOR**  
Holdfast Technologies, LLC

### PROJECT DESCRIPTION: Turkey Foot Middle School

- A 133,000 sq. ft. high-performance building envelope with NUDURA Insulated Concrete Forms for interior and exterior walls. It is the **second Net-Zero School in Kentucky** and earned a **Merit Award in the 2011 AIA Kentucky Awards for Excellence in Architectural Design**.
- **Strategies to Reduce Energy Consumption:** Integrated design process, geothermal HVAC, daylighting, thermal envelope, kitchen, monitoring/verification, student/staff involvement.
- **Thermal Envelope Strategies:** NUDURA Insulated Concrete Forms-no mezzanines, low infiltration (avoided pitched and vented roof systems), non-daylight glass percentage minimized, good roof insulation.
- **Renewable Energy Strategies:** Solar Panels - \$2,600,000 cost or \$6.70/kW. Awarded \$2,000,000 grant from stimulus funds. Anticipate \$100,000 annually from SRECS.

#### Solar Electric Generation:

*Phase I* – 385 kW total (275 kW thin film and 110 kW crystalline)

– 450 MWh/yr electric production

– Reduced grid energy usage from 21.7 kBtu/sf yr to 10.2 kBtu/sf yr

*Phase II* – 315 kW anticipated.



**Second Net-Zero School in Kentucky.**

**2011 AIA Merit Award for Excellence in Architectural Design.**

