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## Service and Product Provider Success Story

### **Service and Product Provider Partner** ***Haglid Engineering & Associates, Inc.***

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### **Customer**

***Hopewell Valley Regional School District***  
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**Hopewell Valley Regional School District cuts energy consumption by over 32.1% in five years in partnership with Haglid Engineering & Associates.**

### **Project Scope**

Haglid Engineering & Associates, Inc. began working with Hopewell Valley Regional School District in 2003 to improve energy efficiency and indoor air quality in the district's six schools. Using EPA's ENERGY STAR Portfolio Manager tool and energy performance rating system to benchmark and rate each school's energy use, Haglid assisted Hopewell in making operational changes and upgrade decisions that yielded the greatest and most cost-effective energy reductions.

### **Project Summary**

Haglid has improved energy efficiency practices at Hopewell by systematically tracking energy use, modeling potential energy efficiency projects to demonstrate possible energy and cost savings, and implementing selected projects. A number of projects were selected for implementation based on projected energy savings, cost savings, and environmental and indoor air quality benefits. Demand-side ventilation systems were installed in thirteen classrooms around the district, recapturing up to 80 to 95 percent of the thermal energy that is normally exhausted from an average classroom. Additional projects included two solar electric systems, installation of geothermal technologies, building retrofits to include floor to ceiling windows for optimal lighting, and more.

- **Energy Savings**  
Hopewell reduced electricity consumption in retrofitted areas by 758,435 kWh/year, or 25 percent. Heating and cooling loads were also reduced by 30 to 40 percent.
- **Investment**  
Demand side ventilation retrofits, solar electric systems, and other energy recovery projects totaled \$1 million. In addition, Haglid helped Hopewell to obtain over \$300,000 in incentives from the New Jersey Clean Energy Program for the solar electric systems.
- **Financial Return**  
Return on investment of 2 years for demand side ventilation projects, and an estimated 7 years for solar electric systems.
- **Other Benefits**  
Improved thermal comfort and indoor air quality, and provided an opportunity to educate students and faculty on how to effectively save energy.

### **Monitoring & Verifying Energy Savings**

Continuous monitoring of energy bills and comparing actual consumption tracked in Portfolio Manager allows Haglid and Hopewell to quantify and verify energy savings. Monitoring has also enabled rapid identification of potential inefficiencies, and implementation of fixes to ensure continued efficiency in operations.

### **Distinguishing Value**

As a result of these innovative energy projects, Hopewell received New Jersey Clean Energy Program's "2008 Clean Energy Educator of the Year Award" for educating others about how to practically and effectively implement energy efficient technologies. Haglid continues to work with Hopewell to evaluate and implement energy efficiency measures, track savings, and replicate successful projects district-wide.

