

Energy Benchmarking in Schools

Local Energy Solutions Conference – Concord, NH

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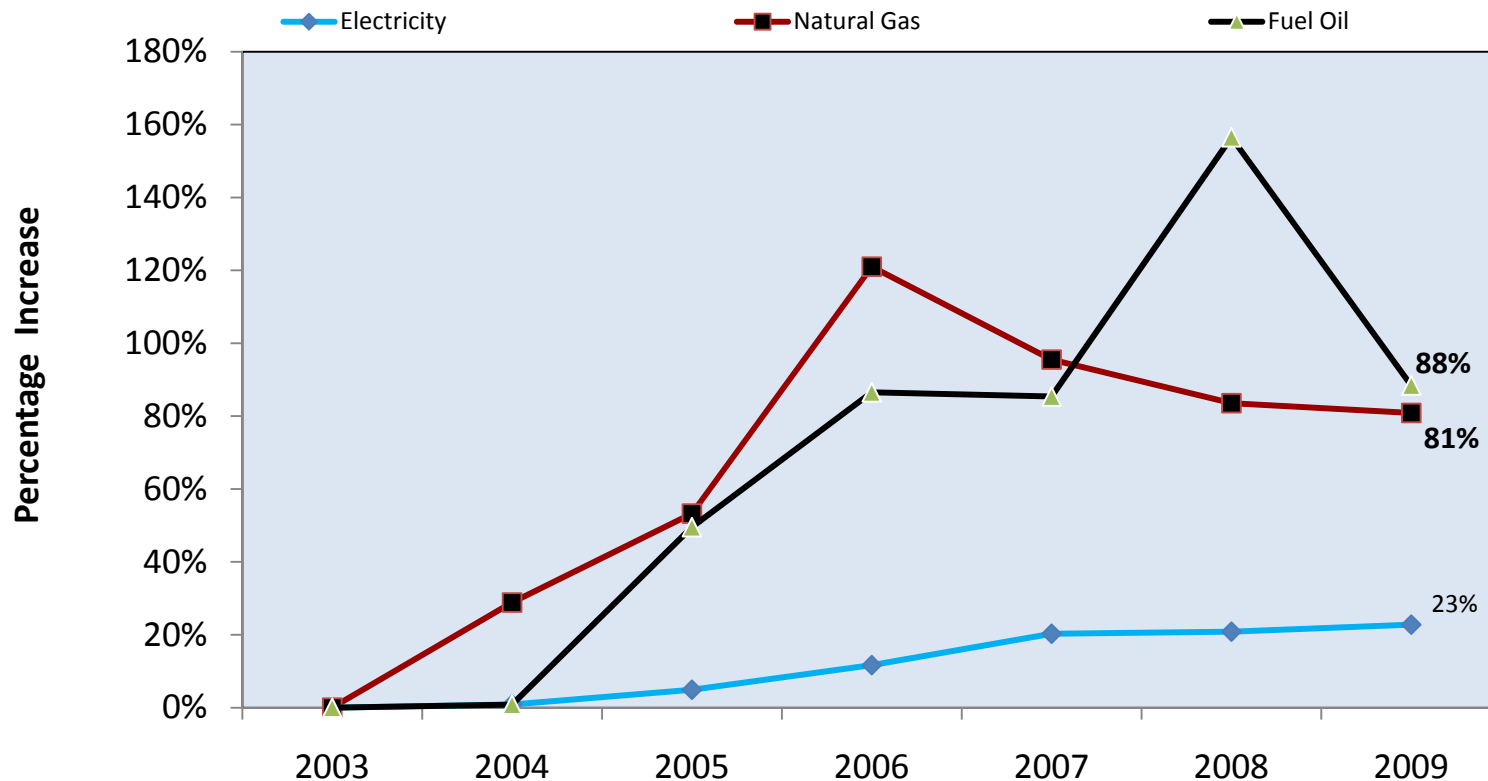
Energy....Why Do We Care?

- Increasing Cost of Energy
- Improved Learning Environment
- Health & Safety
- Environmental Impact
- Leading by Example



Why Care About Energy Costs?

New Hampshire State K-12 Schools Energy Cost Trends



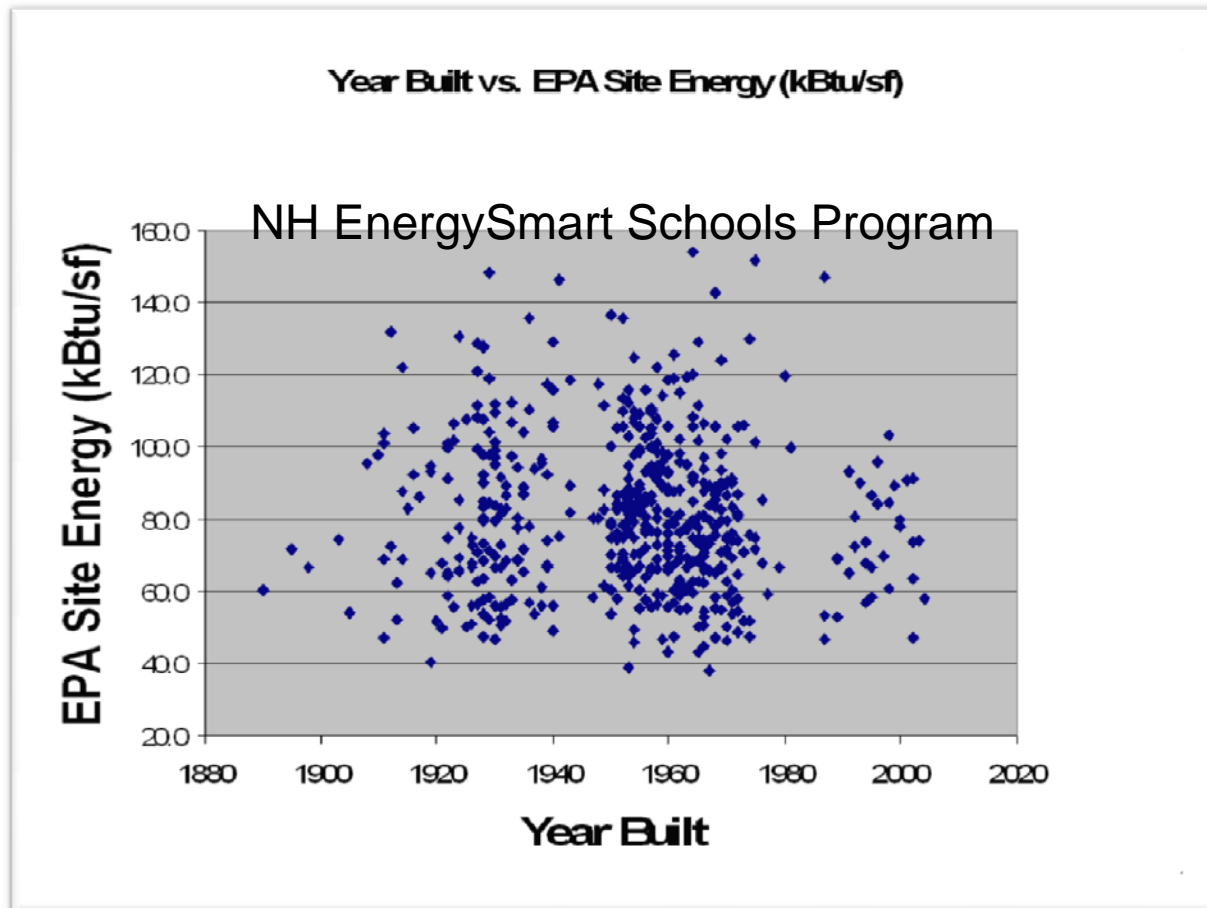
Energy in Schools – National Perspective

- Annual energy bill to run America's K-12 schools is \$6 billion — more than is spent on textbooks and computers combined
- The least efficient schools use three times more energy than high efficiency schools
- Top performing ENERGY STAR labeled schools cost 40¢/sf less to operate than the average performers
- Energy efficient schools can lower a school district's operating costs by up to 30%

Where Do I Start?

- My Oldest Schools
- My Biggest Schools
- My Schools With the Longest Operating Hours
- My Buildings With the Most A/C
- ???

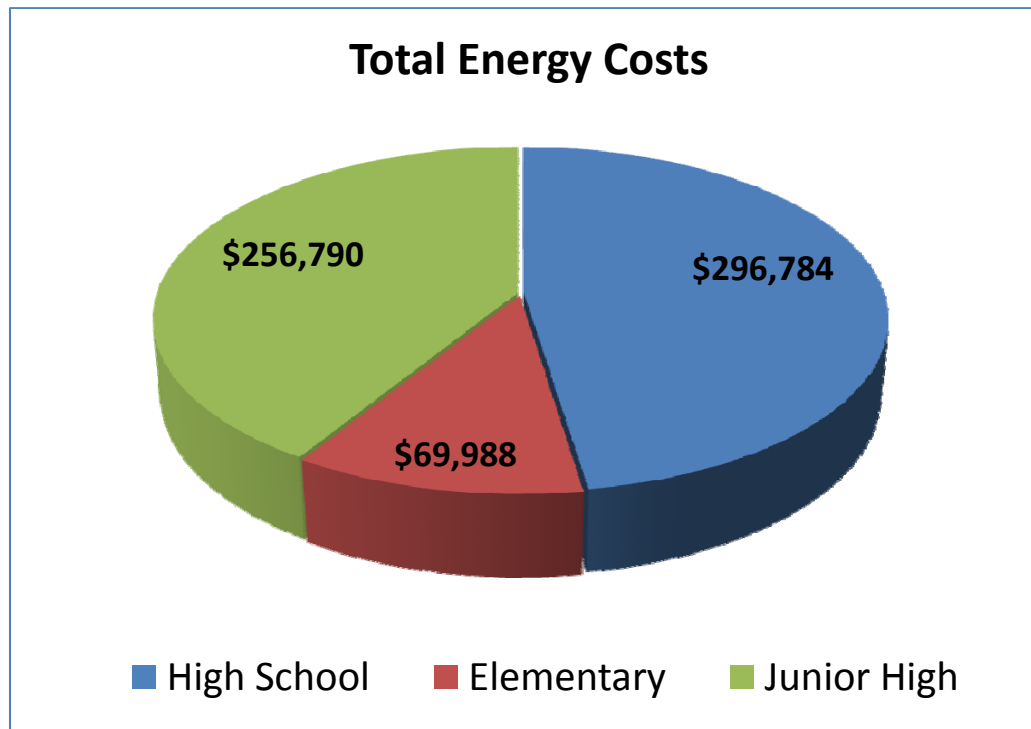
Where Do I Start?



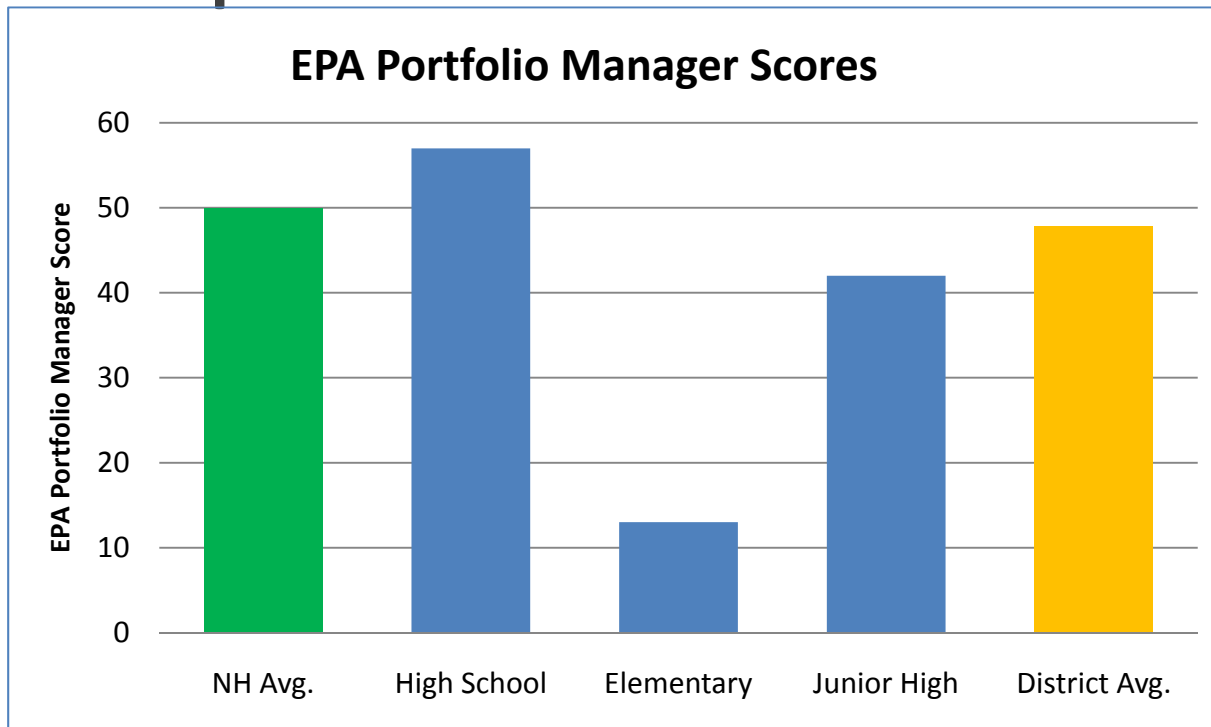
With Energy Benchmarking!

- Allows you to gauge your school's efficiency by:
 - Comparing buildings across the school district
 - Comparing buildings to NH State Average
 - Comparing individual buildings from year-to-year
- Provides the first step to developing an energy efficiency plan and a mechanism for tracking

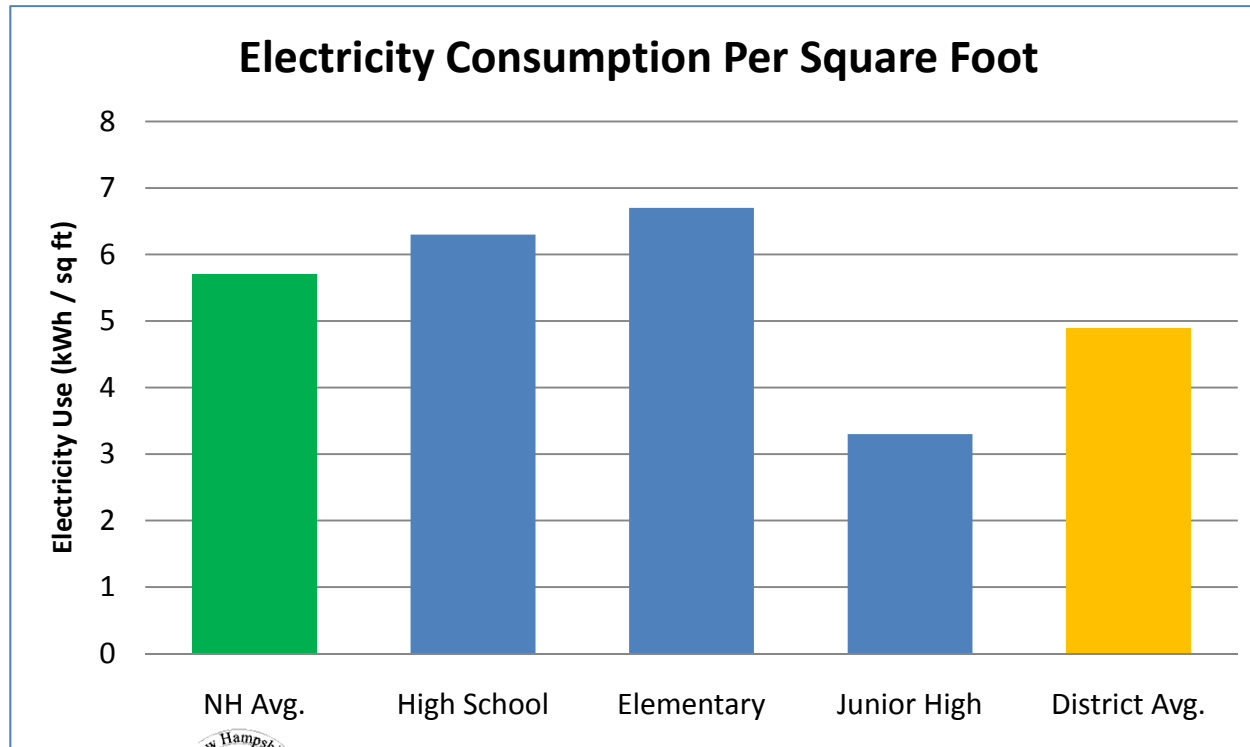
Sample NH School District



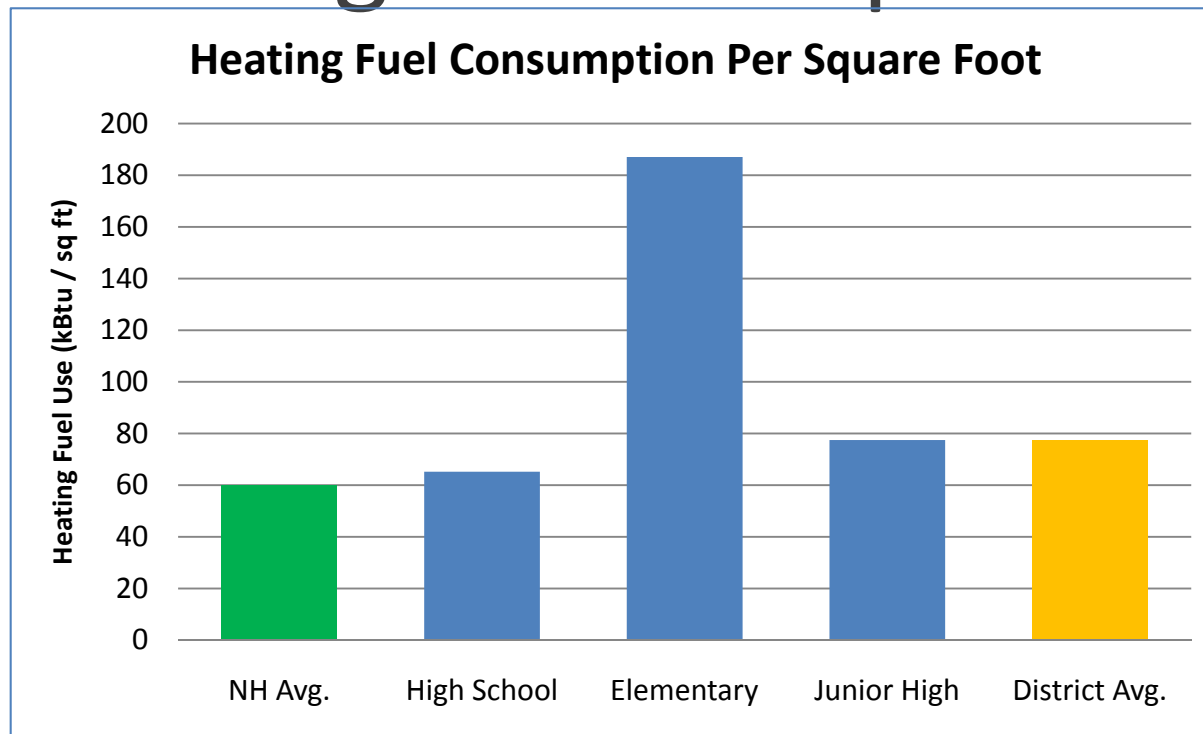
Sample NH School District



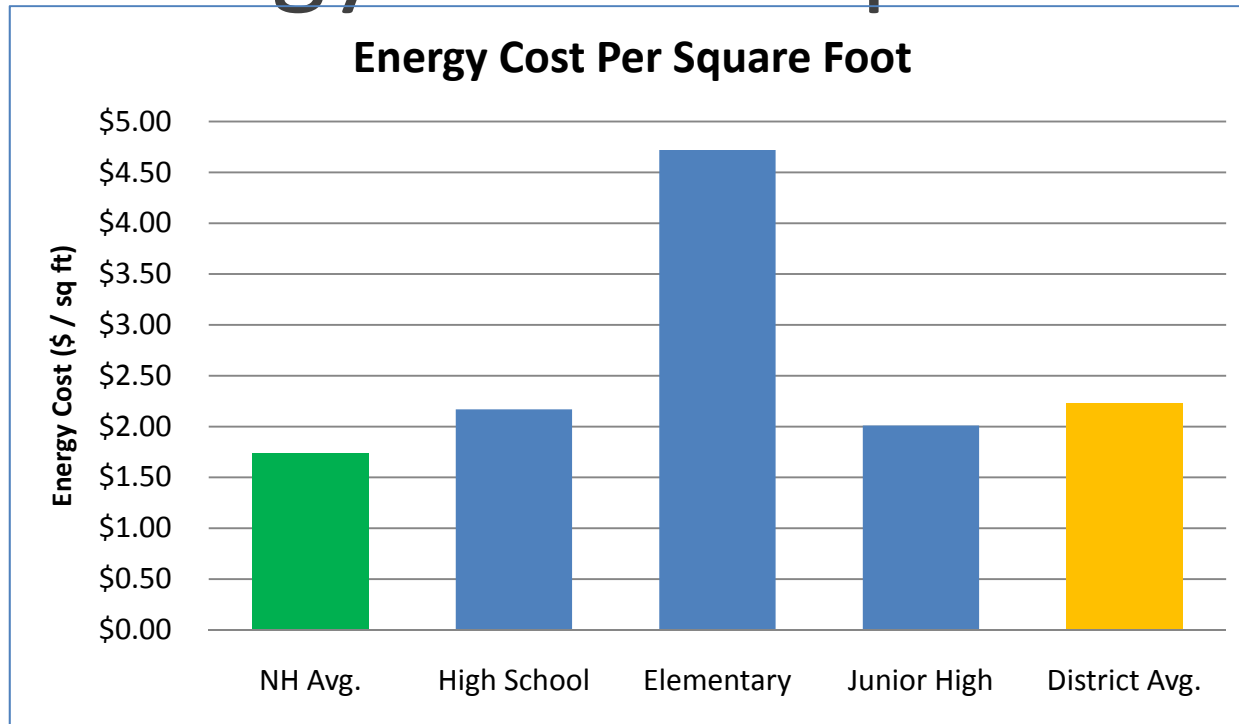
Electricity Comparison



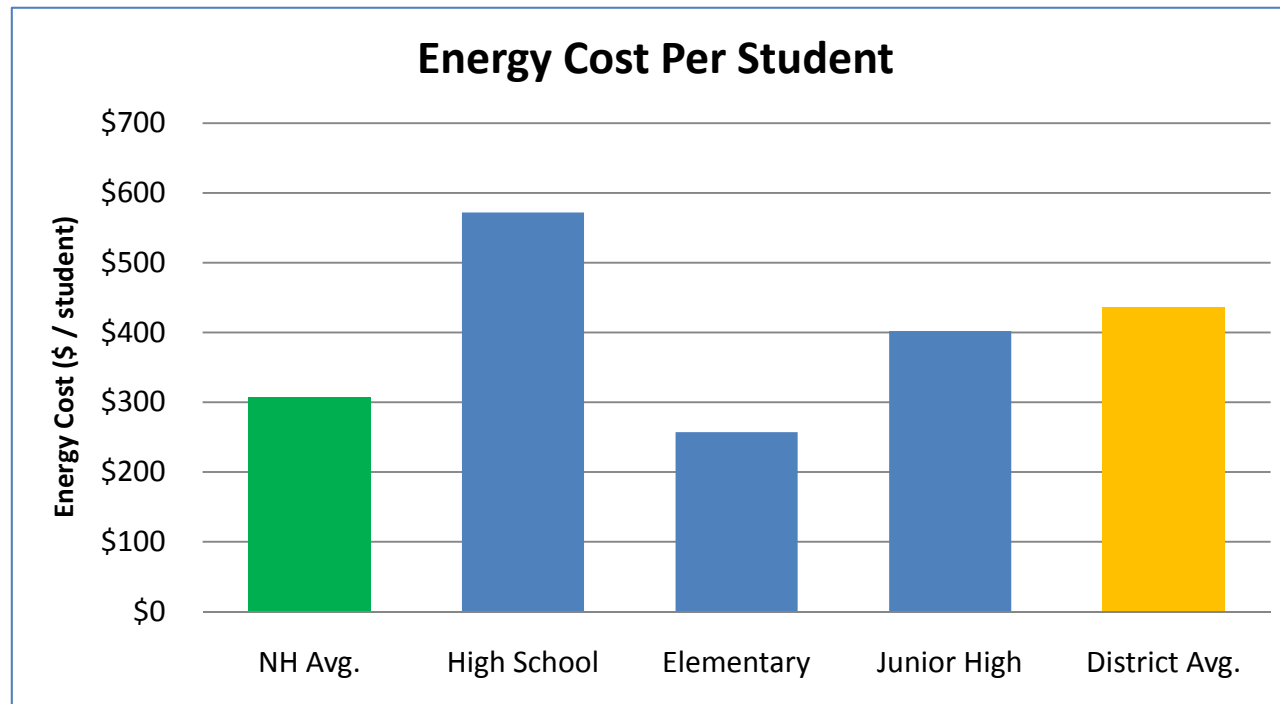
Heating Fuel Comparison



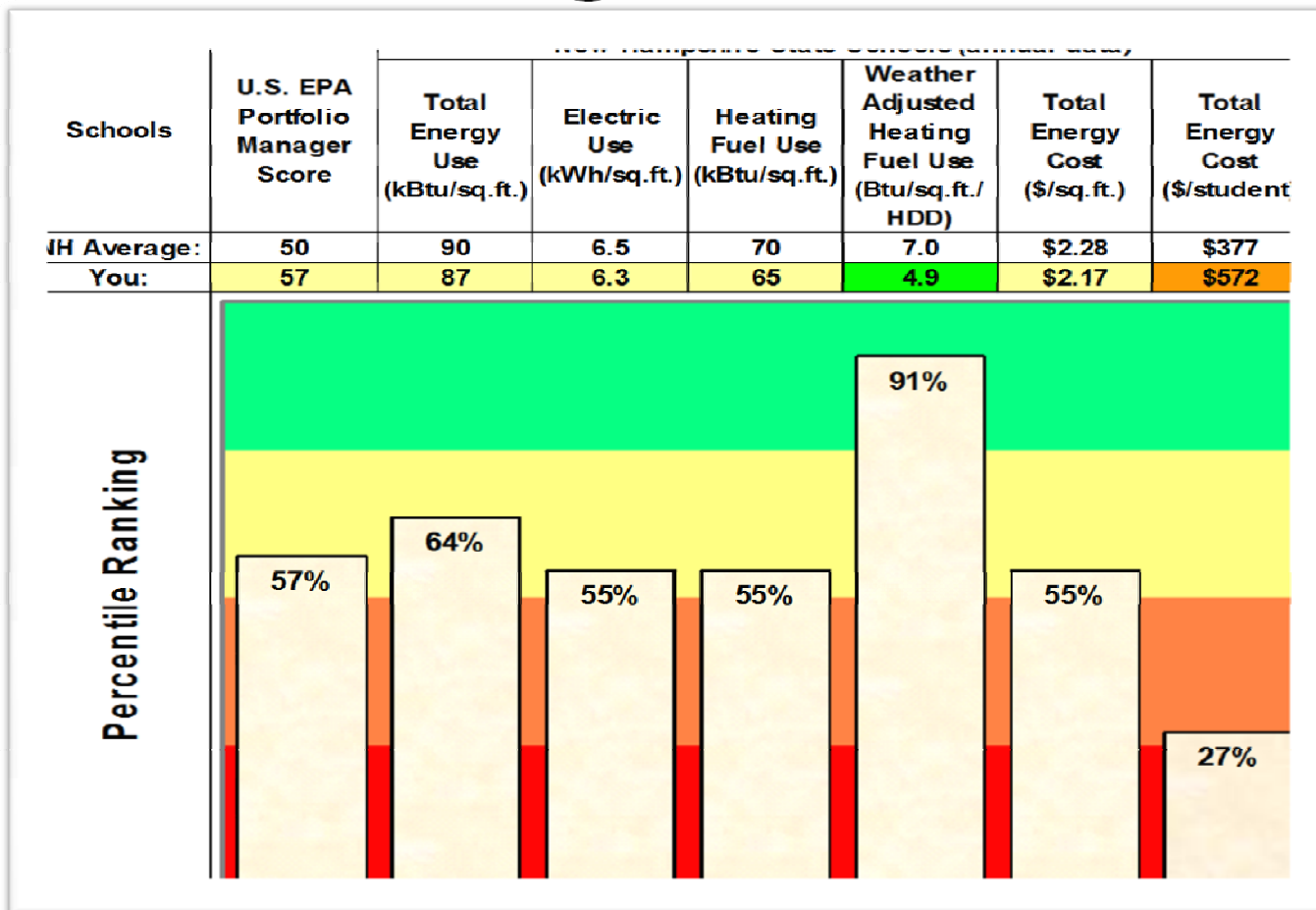
Energy Cost Comparison



Energy Cost Comparison



Building-Level Data



What Good Does It Do?

New York State K-12 Schools Evaluation Report

Schools that participated in Benchmarking with EPA's *Portfolio Manager* were found to have a:

- 21% decrease in overall energy consumption
- 200% improvement of EPA *Portfolio Manager* Score — from 21 to 62

NH EnergySmart Schools Program

- Free Energy Benchmarking Service funded by the NH PUC through RGGI
- School District provides school building data, including historical utility consumption
- Program provides individual school building reports and district-level summary
- www.nhschoolbenchmarking.com

NH EnergySmart Schools Program

- Parameters reported:
 - EPA Portfolio Manager Score
 - Energy Use & Cost – total, electricity, heating fuel
 - Energy Cost – \$/sq ft, \$/student
 - Carbon Emissions – total, electricity, heating fuel
 - State-wide and District-wide comparative summary

NH EnergySmart Schools Program

New Hampshire
EnergySmart
Schools Program



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Did You Know?

The average New Hampshire school spends an annual \$377 per student on energy.

Helping New Hampshire schools save energy and money

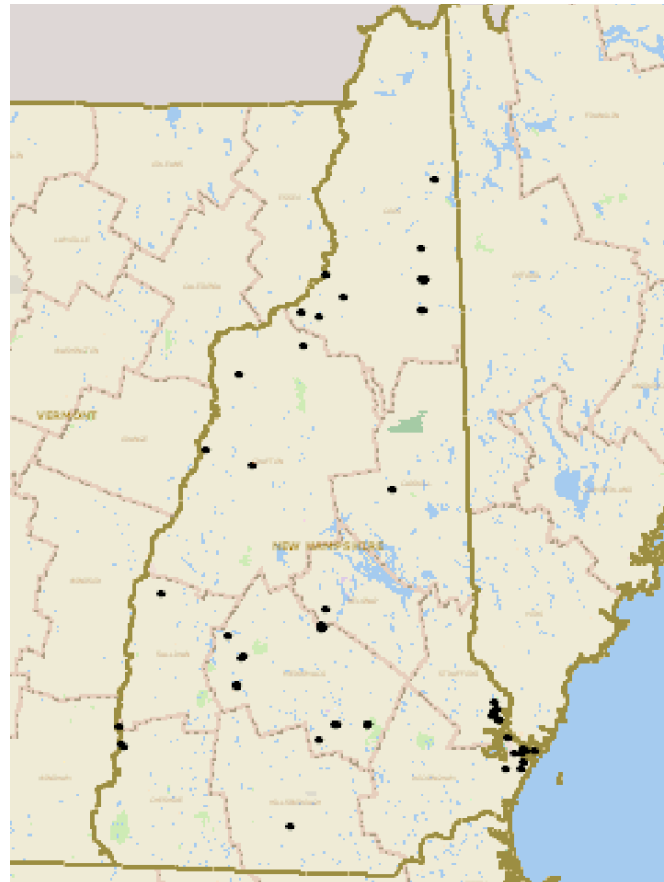
The New Hampshire EnergySmart Schools program is supporting K-12 public and private schools across the state pursue energy efficiency initiatives to control energy use and save money. The program utilizes an energy benchmarking system designed to help you:

- Understand the energy consumption and cost trends at each of your school buildings;
- Learn how your buildings are performing compared to other schools locally and nationally;
- Identify opportunities for improving operations and reducing costs; and



NH EnergySmart Schools Program

Geographic
Distribution
Of Schools
Benchmarked
To-Date



NH EnergySmart Schools Program

- 50 NH schools benchmarked
 - 17 school districts
 - 17,934 students
 - 2,765,330 square feet
 - 16,917,192 kWh
 - \$5,105,469 of total annual utility costs
 - 7 Schools Identified as ENERGY STAR Eligible

ENERGY STAR[®] Recognition

- ENERGY STAR Leader
 - Portfolio-wide energy efficiency improvements of 10%, 20%, 30% (or more) reductions in normalized energy use
- Top Performers
 - An average rating of 75 or better portfolio-wide
- EPA's Energy Star Building Label
 - Schools that achieve a score of 75 or higher



NH EnergySmart Schools Program

Sign up today!

www.nhschoolbenchmarking.com

TRC Energy Services

603-766-1913

