

Successful Projects

In Academic Institutions



The Hotchkiss School

Lakeville, Connecticut



An independent boarding school
founded in 1891.

Their 600 students in grades 9-12 come
from across the US and
37 foreign countries.

100% of their students go on to college.





The 827 acre Hotchkiss School Campus has 85 buildings totaling over 1.2 million square feet.





Total Project Cost

\$14,000,000









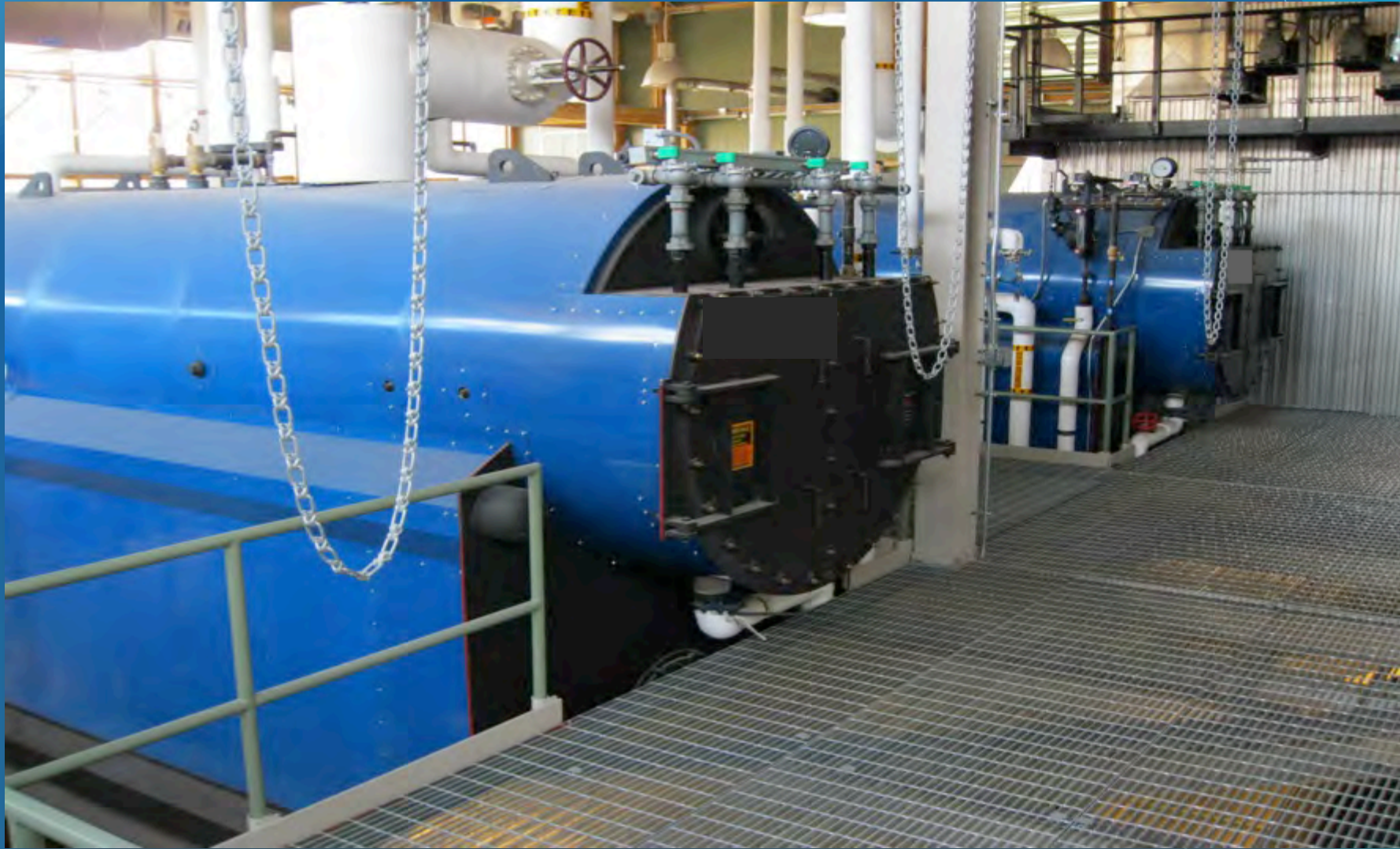


























2012 Fuel Oil Cost

\$852,000

2013 Wood Chip Cost

\$357,000

Approximate
annual fuel savings

\$495,000





Other project benefits:

\$357,000/year invested in the local economy for sustainable fuel

Sulfur dioxide emissions reduced 90%

Campus carbon footprint reduced 45%

(Goal is to be carbon neutral by 2020)



Norwich University

Northfield, Vermont





Founded in 1819



Norwich University is the birthplace of the Reserve Officers' Training Corps (ROTC)

Located in the Green Mountains of Vermont, its 2,300 students come from 45 states and 20 foreign countries.

Total Project Cost \$6,000,000

















































October 15, 2013 thru March 31, 2014

| Chips Tons | Chips Dollars | Oil Gallons Displaced | Cost of Oil Displaced | Fuel Savings |
|-----------------------|--------------------------|----------------------------------|----------------------------------|-------------------------|
| 7,936 | \$493,670 | 484,108 | \$1,358,408 | \$864,737 |

Since the wood chip system will operate throughout the summer, annual savings will be about \$1,000,000.

Old boilers burning #6 oil cost \$19.35/mmbtu

Wood chip Boilers cost \$7.46/mmbtu



Other Project benefits:

Over \$600,000/year invested in the local economy for sustainable fuel

Sulfur dioxide emissions reduced 97%

A Simple Payback of 6 years



Delta/Greely High School

Delta Junction, Alaska





Located near the Alaska Range of mountains

Frequent below zero temperatures are part of each winter

Fort Greely is nearby, a launch site for anti-ballistic missiles and home to the Cold Regions Testing Center

Total project cost \$2,800,000





































Sept 2011 thru Sept 2013

Displaced 71,500 gallons of fuel oil valued at \$266,200.

Fuel is processed by a Rotochopper grinder and is delivered for \$60/ton.

When temperatures are cold (-35° F), two 20 ton truckloads lasts 10 days.



Other project benefits:

Over \$35,000/year invested in the local economy for sustainable fuel

Saved 2 teaching positions

Music program was reopened

School kitchen was remodeled



In Conclusion:

Significant fuel savings are available for both large and small biomass boiler systems

Energy dollars are used locally for a renewable and sustainable fuel

Environmental benefits like reduced emissions accompany cost savings



Thank You

