



Case in Point

Holt Schools \$4 Million Energy Initiative Project in Michigan



The schools in Holt, MI are enjoying increased energy savings thanks to a 4 million dollar energy Initiative project featuring Lochinvar's SYNC boilers. The project included the installation of energy efficient lighting, the replacement of a 160 ton chiller with a frictionless magnetic bearing chiller, low loss window replacements and of course, dramatic upgrades to the space heating and domestic water heating systems.

Within the school district Mr. Virskus reports that the school district has already saved \$557,000 on construction and energy costs based on the design and implementation of energy efficient system design. Additionally, the district will receive \$300,000 in rebates, \$30,000 specifically for installing high efficiency SYNC Boilers.

Of the many companies involved in this project, Millenium Energy Company played an important part. Millenium Energy is an energy consulting firm that helps businesses and institutions design and operate compatible, energy efficient systems. Vytas K. Virskus, M.E., J.D. the founder and principal of Millenium Energy guided the project through the selection of the equipment and the integration of all systems into a Tridium energy management system in 12 buildings totaling 1.1 million square feet.



Seven SYNC boilers and one Shield water heater were installed in the summer/fall 2010 in four different schools with more installations planned. The products were installed in Elliot Elementary School, Hope Middle School, Sycamore Elementary School and Holt High School. The new high-efficiency, condensing SYNC boilers replaced high-mass, cast iron boilers and welded steel fire tube boilers.



PROJECT:

HOLT SCHOOL SYSTEMS
ENERGY EFFICIENCY
UPGRADES



LOCATION: HOLT, MI

LOCHINVAR PRODUCTS INSTALLED:

- 7 – SYNC® BOILERS
- 1 – SHIELD® WATER HEATER

CONSULTANTS:

Millenium
Consulting Firm



Clark, Trombly
& Randers



INSTALLERS:

John E. Green Co.
Michigan



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The centerpiece of the project was the conversion from steam to hot water at 3 schools featuring the SYNC boilers and in many locations, the SYNC boilers were installed along with existing equipment. The SYNC boilers were arranged to work with the existing equipment in a control strategy called “Front End Loading”. Front End Loading is a controls technique that gets the

best possible advantage of a system featuring high efficiency and low efficiency boilers.

Typically a boiler system will operate at full capacity on a small number of days during the coldest part of the boiler season. During the “shoulder months” the demand will be lower and often times, the system water temperature will be lower.



Front End Loading control will operate the low temperature condensing SYNC boilers first. This will make the best use of low water temperatures and low input rates to deliver the highest possible efficiency, up to 98% thermal efficiency. Then when system demand is at its highest, the low efficiency back-up boiler will fire. Additionally, this happens when the outdoor temperature reset curve has increased the system water temperature into the non-condensing range.

The SYNC boilers were installed by John E. Green Company, a leading mechanical contractor in Michigan. John E. Green brought the project in on time and with low installation costs based on such SYNC features as PVC vent piping. PVC vent piping offers low cost and flexibility, especially in retro-fit installations like Holt schools.



Consulting Engineers, Clark, Trombley & Randers and wholesaler, Michigan Supply Company both in Lansing, MI also provided important services that helped the Holt schools project become a success.

For more information, visit www.Lochinvar.com.

ABOUT LOCHINVAR

Lochinvar, LLC is a leading manufacturer of high-efficiency water heaters, boilers, pool heaters and storage tanks. Based in Lebanon, TN, with facilities in Detroit, Orlando, Tampa, Pompano Beach, Dallas, Phoenix, and Chicago, Lochinvar stocks all products in all locations.

