

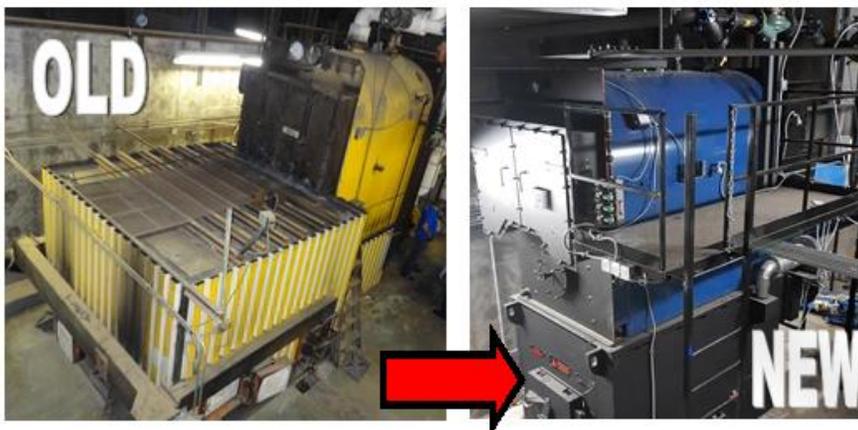
Rib Lake School District Continues Legacy of Biomass

February 2, 2016

During the 2014 facility review and eventual upgrade process, the Rib Lake School District examined their aging heating infrastructure, as part of their commitment to their energy future. District Administrator, Lori Manion, described the District's existing biomass boiler as the "pride and joy of the community". When the existing biomass boiler, which was over three decades old, was inefficient and beyond its intended lifespan, the School Board and administration were faced with the difficult decision of either replacing it or eventually relying solely on the existing natural gas boilers. Further, purchasing wood chips has consistently shown to be more economically advantageous for the District due to the locally sourced, inexpensive cost of wood chips over natural gas.

Beyond this, the new biomass boiler supplies 100% of heat requirements for the Middle School and High School, thus eliminating the need of natural gas for heat all together. The Rib Lake School Board and administration championed the project and sought to implement it in the most economically responsible manner possible. Equally as important is the investment that had been made in a boiler building and conveyor system a generation ago, which remains in good working order today. This investment in the early 1980's cut the project cost in half due to the District being able to utilize the existing infrastructure, thus making the economics of the project much more reasonable. The District worked closely with H&H Energy Services and Messersmith to calculate and weigh costs versus benefits, both tangible and intangible. Calculations showed cost savings of more than \$24,000 per year compared to current natural gas rates. Ultimately, the Rib Lake administration, with strong support from the local community, reasoned that a new biomass boiler system far surpassed alternative options, and they opted to continue to heat their facilities with this local, affordable heat source.

In the fall of 2015, Messersmith installed a Hurst FB 1000 boiler, which will produce nearly 4 million Btu (British Thermal Units) of energy per hour, enough to heat both the Middle and High School on the coldest of days! To help offset the cost of this purchase, the District and its general contracting partner, H&H Energy Services, applied for and received a \$46,000 Focus on Energy rebate. This collaborative effort resulted in the installation of this new biomass boiler, which ensures that the Rib Lake School District can continue rely on existing infrastructure for another generation and can continue the legacy of a "buy local" mentality.



Benefits

33% cost savings over natural gas equating to \$24,000 annual savings

Accepts both dry and wet wood

Biomass is much more stable in price versus natural gas

Integrated heating systems allow for switching between wood & natural gas

Utilizes a local fuel source

Boiler modulates to optimize heating in all seasons