

# Energy Success Story: West Branch Area School District

Morrisdale, Clearfield County, PA



*Can a school district shift from using 100% fossil fuels for its heating needs to a renewable resource, while also helping the local economy?  
The West Branch Area School District did just that by installing a biomass boiler system.*

## The Grantee, In Their Words

The West Branch Area School District is a rural school district located in Clearfield County, Pennsylvania. The school district encompasses 165 square miles, and serves the following townships: Morris, Cooper, Graham, Karthaus, and West Keating. The school district is comprised of one elementary building and one secondary building, serving approximately 1,100 students combined. The elementary and secondary buildings are connected by an interior causeway, making the school district all "under one roof." The square footage of the two buildings is approximately 211,000 square feet.

## The Project, In Summary

The West Branch Area School District embarked upon a win-win solution to a high cost heating bill with a biomass boiler installation as part of a Guaranteed Energy Saving Agreement (GESA) with the McClure Company. This arrangement guarantees the performance of the biomass boiler, and should those savings not materialize, the school district would be paid the savings deficit. This arrangement reduces the risk for the school district in a project with large capital expenditures. The biomass makes up about 80% of the school district's heating needs, versus 100% heating fuel oil prior to the project. The estimated savings in their GESA are 56,963 gallons of heating oil per year, with an associated cost savings of \$118,700 based on the market cost of wood chips compared to heating oil. The school district burned 768 tons of wood chips during its first year of operation, supporting the local lumber industry.

## Project at a Glance

### Name:

Modeling Biomass Excellence:  
Education Advancing the  
Land of Lumber

### Location:

516 Allport Cutoff  
Morrisdale, PA 16858

### Project Size:

Installation of a new 130 HP  
Hurst biomass boiler

### Principal Use:

Renewable Fuel for Heat

### Total Project Cost:

\$2,174,357

### Grant Share:

\$500,000

### Consultant:

McClure Company of State College,  
PA (contractor)  
Messersmith Company of Bark River,  
MI (boiler manufacturer)

### Project Period:

January 2015 - February 2016  
(14 months)

### Grant Project End Date:

February 2016



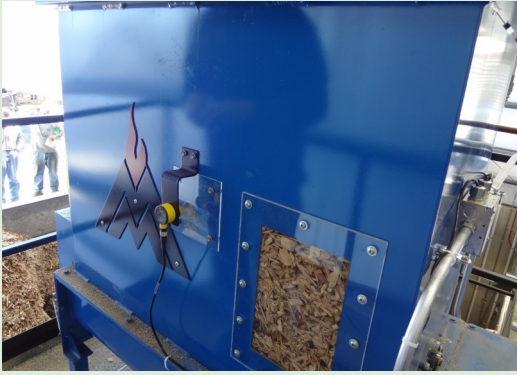
# Project Photos



Wood chip storage, housed in a newly constructed building



Biomass boiler feed conveyor



Messersmith biomass boiler

*“This was a terrific project from conception to implementation! The West Branch Area School District is thrilled with its new biomass boiler and is proud to be contributing in a positive way to the environment while redirecting a significant amount of money over the next 20 years to educational opportunities. Most importantly though, we are now able to put into practice what we preach to our students in the classroom about environmental stewardship.”*

Michelle Dutrow, Superintendent of Schools

## Benefits:

- Annual Savings:**
    - Energy Costs \$121,135
  - Lifetime Savings:**
    - Energy Costs (20 Years) \$1,339,900
  - Environmental Equivalent:**
    - Fuel Savings\* 55,715 (gallons of heating oil)
    - CO2 Emissions\* 1462 (tons)
- \*Annually

## Results: Energy, Economy, Environment

The project construction went smoothly, despite some rainy weather to contend with during excavation of the site. The school district was pleased with the manufacturer of the boiler. The owners of the company oversaw the delivery of the boiler personally, and the boiler technician spent several days in the district for installation, tuning and tours of the boiler, providing great customer service. The total project cost was \$2,174,357. The district received \$500,000 in PEDA funding, and subsequently received an additional \$500,000 for the project through the Commonwealth Financing Authority's Alternative Clean Energy Program.

**Pennsylvania Energy Development Authority** is an independent public financing authority created in 1982 by the Pennsylvania Energy Development Authority and Emergency Powers Act and revitalized through an April 8, 2004 Executive Order. The Authority's mission is to finance clean, advanced energy projects in Pennsylvania. The Authority can award grants, loans, and loan guarantees.