

## By the Numbers

**573,000 BTU** heat output

**37,000 sq. ft.** area heated

**3 MeSys Pellematic-56** pellet boilers

**25-ton** pellet silo

**80 tons** of pellets consumed/year

**\$10,000** in annual fuel savings

**\$335,600** total cost (design and installation)

## Sanderson Academy

Sanderson Academy is part of the Mohawk Trail Regional School District and serves 165 students, primarily from the towns of Ashfield and Plainfield. In October 2016, another school in the district, Hawlemont School, installed three wood pellet boilers to replace the old oil boilers with a more efficient system.

In November 2017, Sanderson Academy, seeing Hawlemont's success, installed a nearly identical modern wood heating system. The three wood pellet boilers now provide 90% of heating needs with oil providing back-up heat. The pellet boilers are low emission and fully automated. The self-modulating system can turn on one or more of the boilers as needed to satisfy demand.

Prior to installation of the pellet system, the school spent up to \$35,000 per year to heat with oil, typically consuming nearly 12,000 gallons. The school estimates that the new wood pellet system will reduce oil usage by 90% and save an estimated \$10,000-\$15,000 in fuel each year.

By making this necessary heating system replacement with a pellet boiler, the project was eligible for a DOER SAPHIRE grant. The grant covered 75% of the total cost. The SAPHIRE program promotes renewable thermal heating and cooling and efficiency upgrades in public schools and state public housing.

Sanderson Academy commissioned a feasibility study for the new system in September 2015 and was awarded SAPHIRE funding in January 2016. Design proposals were solicited in late winter/early spring of 2016. WV Engineering of Keene NH was awarded the contract to oversee the design and construction. After being bid in the spring, the construction contract was awarded to M&W Heating and the system began operating in November 2017.



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Pellet Boilers

Pellet Silo