

By the Numbers

68,000 BTU heat output

5,610 sq. ft. area heated

1 Okofen Auto-pellet boiler

Flexible pellet silo

\$28,000 in funding for the
\$38,000 pellet boiler

30% tax rebate for the
\$16,000 solar hot water
system

Montague Apartments 255 Federal St

The Montague Apartments are a 6-unit rental property owned and managed by Barry Elbaum. The 5,610-square foot building is heated with a system that includes a wood pellet boiler, solar hot water, and a back-up oil-fired boiler.

The fully-automatic wood pellet boiler has a heating output of 68,000 BTU/hr. The boiler is connected to a flexible pellet silo, located indoors, that can be refilled from the outside via bulk delivery.

Six solar panels provide all the building's hot water needs in the summer and pre-heat water for heating and domestic hot water use the rest of the year. The solar hot water system contains two 116-gallon storage tanks, in which glycol-filled coils exchange heat from the solar array with the hot water system.

Water from the solar hot water system is fed into two storage tanks that can be further heated by the pellet boiler, and if necessary, supplemented by the oil burner. If the pellet boiler can maintain adequate temperature, the oil burner will not fire. When there is a greater heat demand than the pellet boiler can provide, the oil burner operates in backup capacity to ensure adequate heat and hot water.

A computer system connected to temperature sensors in the tanks and on the pellet and oil boilers allows Mr. Elbaum to coordinate the three separate systems. Over the years, he has adjusted the controls to heat the building at maximum efficiency and cost effectiveness. Prior to installing the solar panels and pellet boiler, Mr. Elbaum invested in extensive piping and wall insulation to increase the building's overall efficiency.

Montague Apartments
255 Federal St
Montague, MA 01351

