Embue provides a holistic building intelligence solution at **Abbot Mill**

"The Embue platform provides us with unprecedented visibility and control of our property, from anywhere, and at any time. Embue's actionable alerts for water leaks, and dangerous low temperatures will protect our assets and simplify property management tasks."

Chris Yule
President
Yule Development, Inc.

About Abbot Mill

- High end, mixed use 23-acre historical renovation
- 300 luxury lofts, flats and townhouses
- Onsite renewables

Goals

- Operational efficiency
- Tenant amenities
- Renewables management

Challenges

- Protect from water leaks, freezing temperatures, and high humidity that can cause problems
- Geothermal water loops with wide range WSHPs

Embue

- Smart thermostat amenity
- Deep setbacks in unoccupied spaces
- Central equipment monitoring
- Construction heater control
- Future: Microgrid

Abbot Mill was opened in 1879 and was the home of the Abbot Worsted Company, a wool and yarn manufacturer until it closed in 1956. Today, the 23-acre site in Westford, Mass., which was named to the National Register of Historic Places in 2002, has undergone a complete renovation by Yule Development, with multifamily housing, amenity spaces, offices and a recreation center, and a state of the art building intelligence, control and automation system from Embue.

The old mill site's pond is now the primary energy source for the complex. A heat exchanger extracts heat from the pond during the heating season and ejects heat to it during the cooling season. Energy moves around a water loop system that feeds water source heat pumps in each apartment and common space. The wide temperature range heat pumps work well with the moderate temperatures from the pond and heating is augmented by gas boilers and solar panels that provide some of the electricity needs of the site.

Smart thermostats are located in each apartment and common area, providing a luxury amenity for residents. Abbot Mill's maintenance staff get remote control of common spaces and vacant units, and can monitor temperature extremes in rented units.

Deep setbacks are programmed in each unoccupied apartment and managed by maintenance staff to save energy.

Central equipment loop monitoring is provided and is especially important given the wide temperature ranges present in the loops.

Temperature control, setpoint limits and lockouts in common areas are centrally managed by maintenance staff using Embue Super™, providing remote control of key functions, and ensuring that unheated entry ways, which are susceptible to freezing when doors are propped open, are monitored.

Energy efficiency and temperature control was delivered even during construction, as Embue monitored and controlled construction heaters, saving energy and keeping the building safe from freezing.

Future plans for Embue at Abbot Mill include the management of the site as a microgrid that optimizes renewals, fossil fuel use and grid electricity. Embue will be used to limit energy usage at peak times.

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