

CITC ETC ENERGY AUDIT

Facilities Summary

- The Ernie Turner Center Facility (ETC) is approximately 14,200 square feet
- ETC was built in 1996.
- ETC houses CITC's residential recovery services unit as well as a medical detox unit.
- ETC is utilized 24 hours a day, 365 days a year.

Energy Audit Recommendations

- General ventilation system- The existing air handler and exhaust fan used for building ventilation be demolished and replaced with a Heat Recovery Ventilator to recoup up to 80% of heat currently being exhausted from ETC.
- Kitchen ventilation -Existing constant volume kitchen ventilation system be replaced with a variable volume system. The current kitchen ventilation system makes up 8% of the total facility energy costs.
- Boiler- the existing 1,703 MBH, cast iron boiler be demolished and be replaced with three smaller, higher efficiency boilers. Since the building's heating load is highly variable throughout the year, multiple boilers are a good option to help control the energy usage.

Energy Audit Recommendations (continued)

- Pumping system- The existing 2 horsepower heating circulation pump be replaced with a new variable speed pump with a premium efficiency TEFC motor. The existing circulation pump operates continuously. A variable frequency drive (VFD) can be used to ramp the pump speed up or down to meet actual pumping demand as the building's heating demand varies throughout the year.
- Lighting fixtures - Existing fluorescent lighting fixtures with T12 lamps and magnetic ballasts be replaced with new fixtures with T8 lamps and electronic ballasts and T8 lamps. The 4 lamp lensed lighting fixtures in the offices should be replaced with recessed indirect 3 lamp fixtures to improve visual comfort and reduce energy. This could provide an energy savings of approximately 6% and would introduce less mercury and other harmful chemicals into the environment.

CITC Next Steps

- While no funding has been secured to complete the work, CITC is moving ahead with completing the design work for the boiler system and the kitchen ventilation system. This will allow us to have plans “in hand” when we pursue grant funds for the improvements.
- These two recommendations were selected as a focus due to the age of the systems and need for eventual refurbishment.
- Design work will include engineer drawings and equipment and parts specs.
- Design work is scheduled be completed by the end of December.

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