

SITUATION:

An existing multi-story, 56,000 ft² laboratory and office facility with multiple tenants (fully occupied) is operating with high energy costs. The building houses R & D laboratory tenants as well as office tenants. The building includes a central water cooled heat pump plant, air cooled chillers and natural gas fired steam boiler system for humidification and process steam.

ACTION:

The building owner engages JennErik Engineering to perform an energy audit of the facility. The audit quickly reveals that a 3 year average energy billing is in the \$9/ft² range. JEI investigates the current operation of the facility via interviews of the facility tenants and facility engineers. The building operation reveals several energy savings opportunities. A report is developed and functions as an energy saving master plan for the property.

All items have first cost requirements in order to achieve savings and are prioritized based on simple payback calculations. Some of the items are in fact pursued via subsequent design and construction programs. These items include adding air side heat recovery as well as installing heating water variable frequency drives.

First Cost = \$ 185,000 total cost
Payback Calculated = \$ 120,000
Actual Energy Reduction Realized = TBD
Actual Simple Payback = 1.6 years