Optimize Your Building’s Operational Performance: Tools for Re-Tuning

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Avoiding Low Delta T syndrome in Chiller Water Plants with Primary Secondary loops
Steam Traps
Setting low pressure boilers to the proper operating pressure
Using Pressure Independent Valves

Pressure Independent Valve

Energy Valve
BAS Trending

• Essence of BRT

• Key to energy management of large portfolios
  • No day-to-day analysis of every building/system
  • Inherited or legacy BAS’

• Trends go hand-in-hand with energy data (& complaints)
  • Understand anomalies/deviations
  • Low hanging fruit (macro problems)

• Trending as BAS RCx tool
  • Understand sequence of operation for legacy BAS’
  • Understand deficiencies & limitations of BAS (micro problems)
BPL LEAN Dashboard

Fuel LEAN Metrics

- Heating Change Point
- Baseload
- Heating Sensitivity

Fuel LEAN Metrics Graph

- BTU (Daily Average/SqF)
- OAT

- FLEC
  - R²: 0.96
  - CV-RMSE: 6.84

- FUEL
  - R²: 0.95
  - CV-RMSE: 21.95
BRT for Energy Data Anomalies

HW Valve & Economizer Problems
BRT for Energy Data Anomalies

Schedule Problem

“Fan Only”

“Free Cool”

Coney Island Ac2
Operation data: 11/08 to 11/10
BRT for BAS RCx

Mode Overload (18 modes)

Set-point, actual set-point, effective set-point, BAS set-point, fake set-point????
Reasons to Trend

• Trending may not have been done during Cx of your system (if your system even had Cx)
• Trending informs BAS over-haul
• Trending can explain (and illustrate) energy anomalies and temperature complaints
• Trending can catch rogue thermostat manipulators