



# Building Analytics

## Quarterly Report

For the period of:

October 20, 2012–

January 20, 2013

Anon Customer

### Avoidable Energy Cost

**\$33,265**

Total This Period

**\$5,201**

Decrease Since Last Period

- Much of the avoidable cost decrease may be attributed to fixing the cooling coil leak on AHU 1 (October 10, 2012). It is possible the actual savings are greater, since we are in heating season this quarter, and the building is not calling for much cooling (making a potential leak more detrimental).
- The current most costly equipment faults are possible leaking cooling valves on AHU 11, 6, 5, and 4. These issues are being flagged because the supply air temperature is as much as 25°F lower than the mixed air temperature while the cooling coil is off. On AHU 4 and 5, this is also creating comfort issues, since the supply air temp is too low.
- There are quite a few CAV boxes that have different chronic control problems. CAV8\_2 has a temperature setpoint of nearly 80°F. The room temperature is over 70°F and struggling to increase. The reheat valve is constantly open, probably indicating excessive reheat, and the supply air flow is higher than setpoint. Alternately, CAV3\_5 and CAV2\_26 are serving an overheated space with closed reheat valves, and wide open dampers. However, air flow is lower than setpoint. There are other CAV with problems, but these are the most severe and frequent.
- AHU 10 and 11 are struggling to meet static pressure setpoint. This is causing the fan VFDs to remain at 100% continuously. It may be worth checking the air flow balance of the affected AHU/CAV systems.

### Period Trend Summary



#### Energy –

Daily avoidable energy costs average \$378/day.



#### Maintenance –

Priority unchanged; 289 total daily incidents.



#### Comfort –

Priority unchanged; 267 total daily incidents.



### Facility At A Glance

**Customer:**  
Anon Customer

**Building name:**  
Anon Hospital

**Location:**  
Mytown, FL 00000

**Building type:**  
Hospital

**Year Built:**  
2008

**Number of buildings:**  
1

**Total square footage:**  
170,800 sq. ft.

### Prepared By:

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Anon Customer



## Top 5 Issues

 Energy			
Building	Equipment	Notes	Cost/Qtr.
Anon Hospital	AHU_6_CAVs	Low Damper Position – opportunity for static pressure reset.	\$11,120
Anon Hospital	AHU_11	No supply temp reset. Cooling valve issues.	\$7,778
Anon Hospital	AHU_6	No supply temp reset. Cooling valve issues.	\$6,163
Anon Hospital	AHU_5	Supply temp lower than setpoint. No supply temp reset. Cooling valve issues.	\$5,029
Anon Hospital	AHU_4	Supply temp lower than setpoint. No supply temp reset. Cooling valve issues.	\$4,318

 Maintenance			
Building	Equipment	Notes	Severity Priority
Anon Hospital	AHU_11	Static pressure lower than setpoint. Supply fan speed constant. Return fan speed constant.	6
Anon Hospital	AHU_10	Static pressure lower than setpoint. Supply fan speed constant.	6
Anon Hospital	CAV8_2	Room temp lower than setpoint. Stuck reheat valve.	4
Anon Hospital	CAV5_82	Supply flow lower than setpoint. Stuck reheat valve. – May be sensor error.	4
Anon Hospital	CAV3_11	Sensor error. Stuck reheat valve.	4

 Comfort			
Building	Equipment	Notes	Severity Priority
Anon Hospital	CAV1_16	Sensor error. Room temp higher than setpoint. Supply flow lower than setpoint.	10
Anon Hospital	CAV3_5	Room temp higher than setpoint. Supply flow lower than setpoint.	10
Anon Hospital	CAV4_45	Room temp lower than setpoint. Supply flow higher than setpoint.	10
Anon Hospital	CAV2_26	Sensor error. Room temp higher than setpoint. Supply flow lower than setpoint.	10
Anon Hospital	CAV11_22	Room temp higher than setpoint. Supply flow lower than setpoint.	10

## Recommended Actions

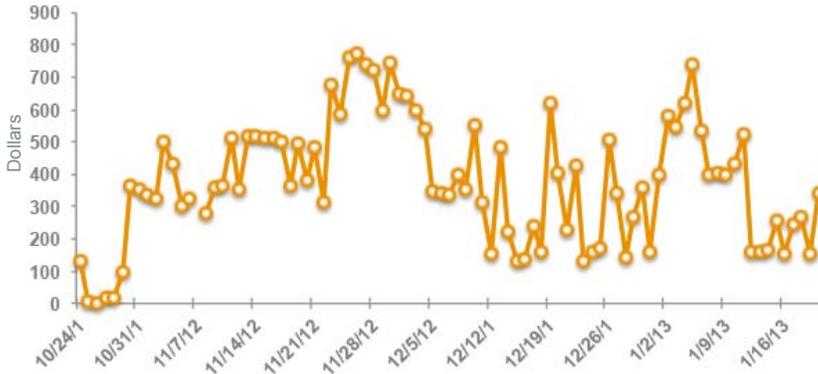
- The AHU 6 static pressure is being driven by one zone – you could get over \$11,000 savings by lowering it
- Review temperature performance and air flow balance of CAV units with high comfort priorities
- Check AHU 4, 5, 6, and 11 for leaking cooling valves
- Check flat-lined temperature sensor in zone served by CAV1\_16
- Explore why AHU 10 and 11 have such low static pressure
- Check CAV8\_2 and CAV3\_11 for stuck reheat valve – valve fully open, but temperature can't reach setpoint

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Anon Customer



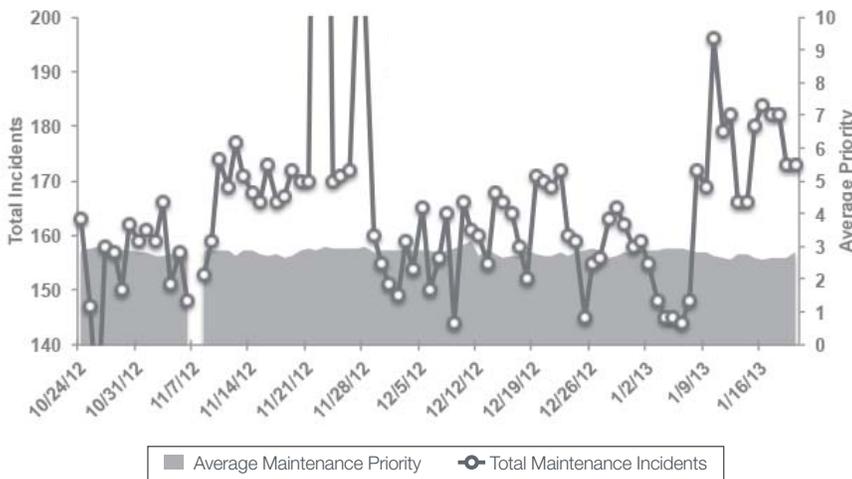
## Total Avoidable Energy Cost Trend



## Energy Cost Trend Analysis

- The avoidable cost per daily analysis is fluctuating a great deal, probably due largely to weather patterns.
- The biggest cost issues seem to be leaking cooling valves, and this is definitely a problem that would fluctuate with the weather.

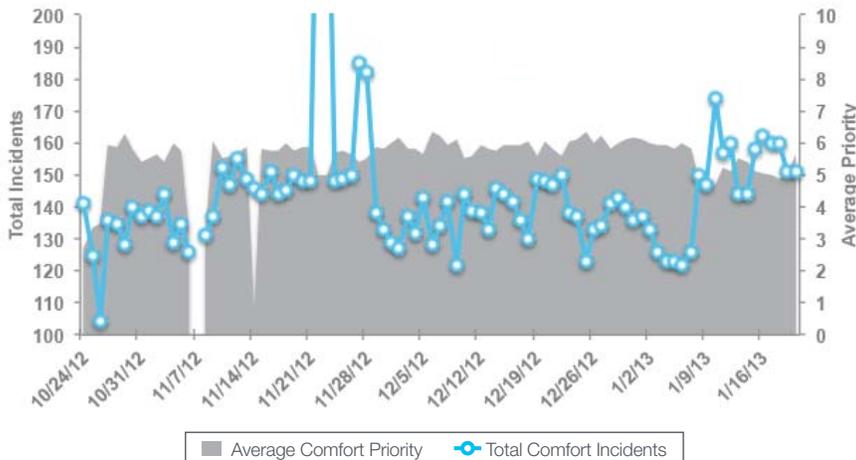
## Total Maintenance Incidents Trend



## Maintenance Trend Analysis

- This graph shows some chronic issues which have not been addressed.
- The low maintenance priority indicates that these issues are either on non-central systems, or that they are generally not severe (or both).

## Total Comfort Incidents Trend



## Comfort Trend Analysis

- This graph shows some chronic issues which have not been addressed.
- Many of the CAV units and AHU have comfort issues, although the severity is variable.