



Attune™ Advisory Services — Energy Optimization Report

Sample Customer

This Attune™ Advisory Services – Energy Optimization Report is subject to and governed by the agreement between Honeywell and the customer.



Typical Findings

- **Scheduling Issues**
 - **Sequence of Operations (changes)**
 - **Schedule Changes**
 - ◆ Lighting and HVAC
 - **Set Point Changes**
 - ◆ Night set-back
 - **(reset) Over-rides**

- **Peak demand**

- **Simultaneous heating and cooling**

- **Inefficient control strategies**
 - **Cooling tower efficiency**
 - **Boiler efficiency**
 - **Demand control ventilation**
 - **Change of Use**

- **Equipment Replacement**

- **Correct Mechanical Failure**

- **(re-) Calibration (sensor/meter)**

- **Comfort**



Sample Recommendation

ORTU2: Excess Outside Air Damper Usage

Estimated Annual Savings	\$14,700
Cost to Implement	\$2,061
Simple Payback	2 months
Category	Controls
Root Cause	Controls Programming
Recommendation	Approve Analysis & Re-Programming

Data Evaluation

When the outside air temperature is below the balance point of the building, which is estimated at 55°F (represented by the grey dotted line in 18), the outside air damper should be at a minimum position. In this scenario, excess outside air introduced to the mixed air will cause unnecessary re-heat (via ORTU2’s heating coil and boiler perimeter heating system). Prior to February 12th, the outside air damper is modulating during post-occupancy which is undesirable. However, this was caused by the manual over-ride into 24/7 operation during the boiler change out period which ended on Feb. 12.

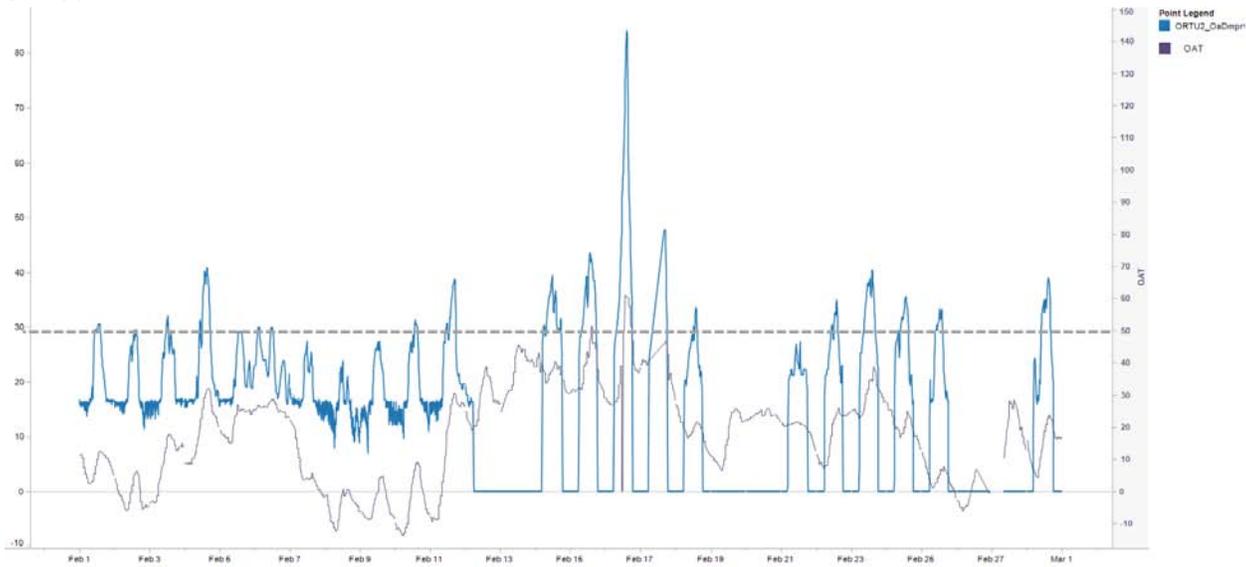


Figure 1- ORTU2: Excess Outside Air Damper Usage

Savings Opportunity

The programming logic for the outside air damper on ORTU2 should be reviewed to identify why the outside air damper is opening far below the balance point of the building. The potential savings for correcting the outside air damper programming logic is **estimated to be \$14,700 annually** from a reduction of 4,800 kWh and 20,500 therms.



Sample Recommendation

RTU2 Discharge Air Temperature is approximately 10 Degrees to Low

Estimated Annual Savings	\$7,162
Cost to Implement	\$150
Simple Payback	<1 month
Category	Controls
Root Cause	Controls/Program
Recommendation	Investigation of Root Cause

Data Evaluation

RTU2 discharge air temperature setpoint is 50 degrees but the temperature is holding between 47-48 degrees (Figure 1). The spaces are able to maintain setpoint with no problem. Most VAV boxes are between 18-35% (Figure 2) when they should be open 40%-100% to deliver design airflow to the space. The impact of the low DAT setting is causing 3 compressors to run all day when the Outside Air Temperature does not warrant operation.

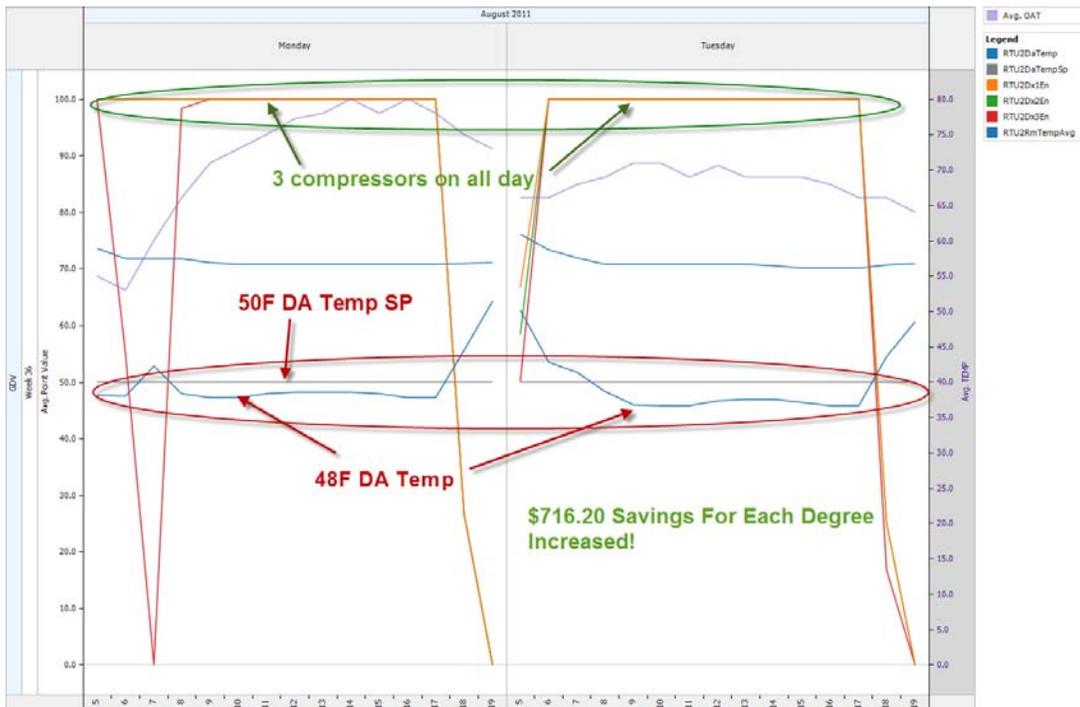


Figure 1 - RTU2 DAT, DAT-SP, RTU Compressor Status

Savings Opportunity

Raising the discharge air temperature on RTU2 by 10 degrees F will save \$7,162 per year (\$716 for each degree raised). This will allow the compressors to run less, open up the VAV boxes to deliver the design airflow to the space and help out with the overall balance problem.