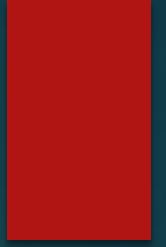


Greening Hospital & Clinic Operations



President's Climate Leadership Commitment: Carbon-Neutral by 2040



- ▶ https://sustainability.utah.edu/wp-content/uploads/sites/56/2024/01/24-0128-CAP-Booklet_v10.pdf
- ▶ <https://secondnature.org/climate-leadership-network/signatories/commitments-implementation-handbook/>
- ▶ <https://sustainability.utah.edu/climatecommitment/>

Operational Emissions Reduction: 2-Prong Strategy

1. Increase Building Efficiency

▶ HVAC

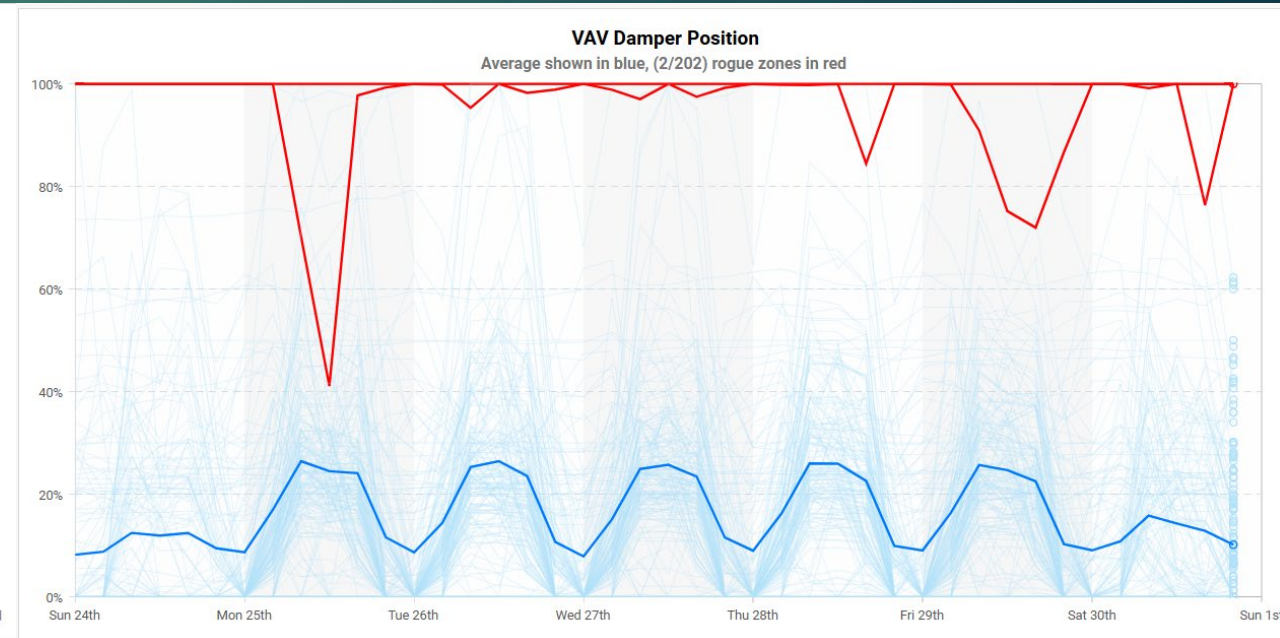
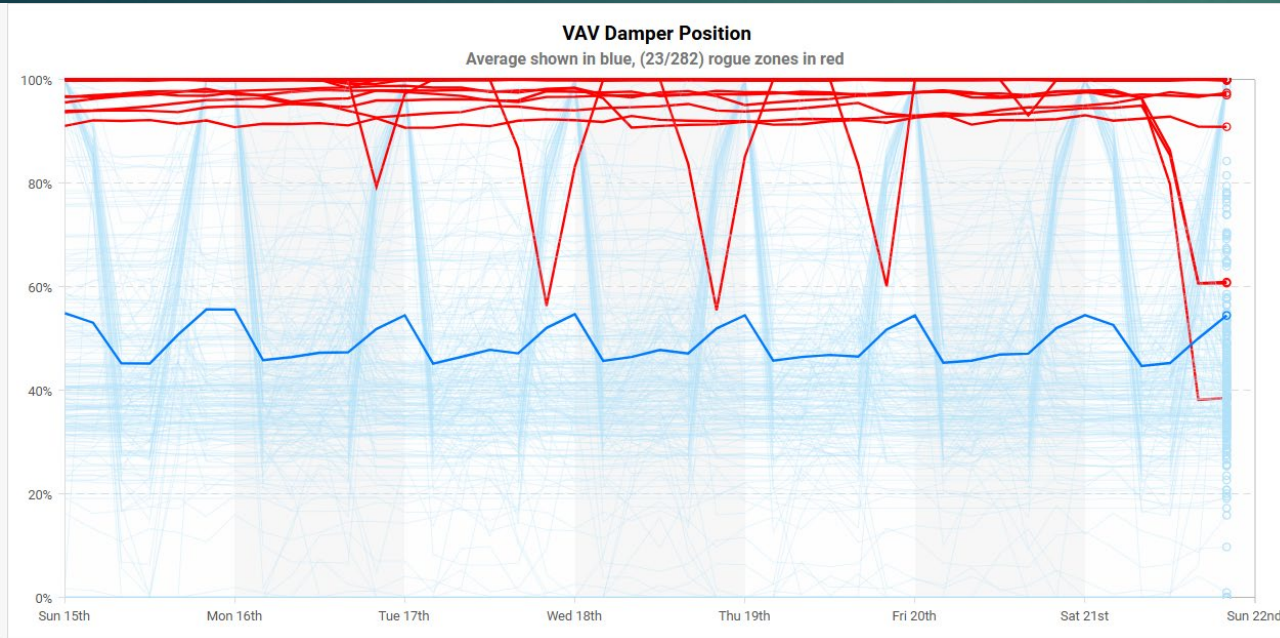
- Scheduling – reduce 24/7 conditioning in spaces that can be scheduled
- Smart Programming – reduce over-conditioning & simultaneous heating/cooling
- Air Handler Optimization – reduced flow & conditioning
- Pneumatic to DDC Upgrades
- Energy Dashboard & Monitoring-Based Commissioning – long-term efficiency

▶ Lighting Conversion to High-Efficiency LED

2. Renewable Energy

- ▶ Power Purchase Agreements
- ▶ Onsite Renewables
- ▶ Renewable Energy Credits

HVAC Scheduling & Smart Programming Orthopaedics Center

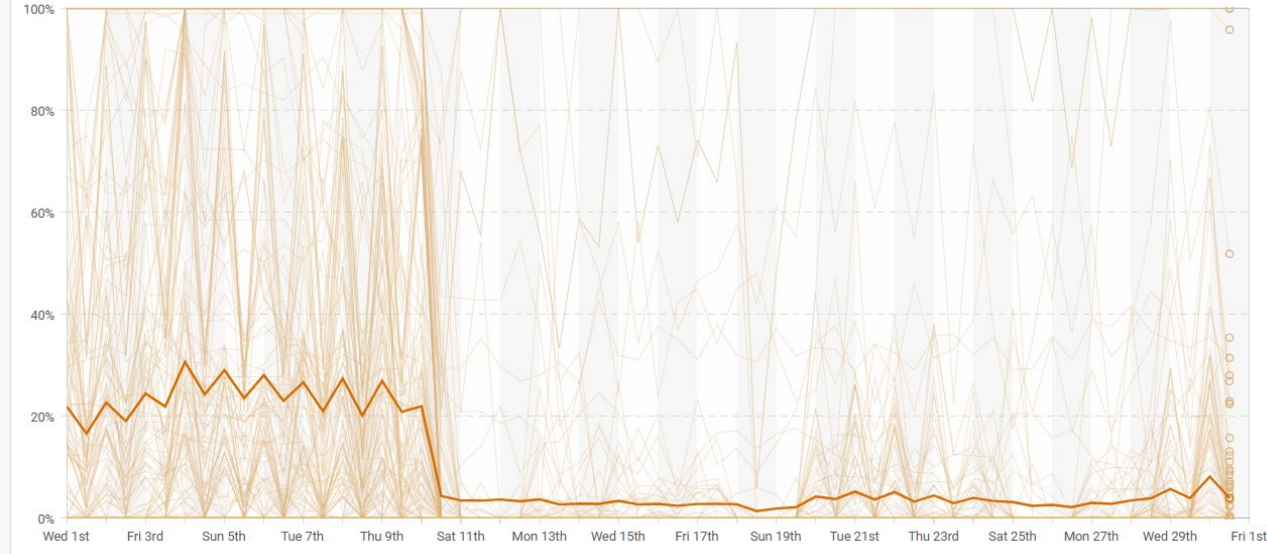


HVAC Scheduling & Smart Programming Farmington Health Center



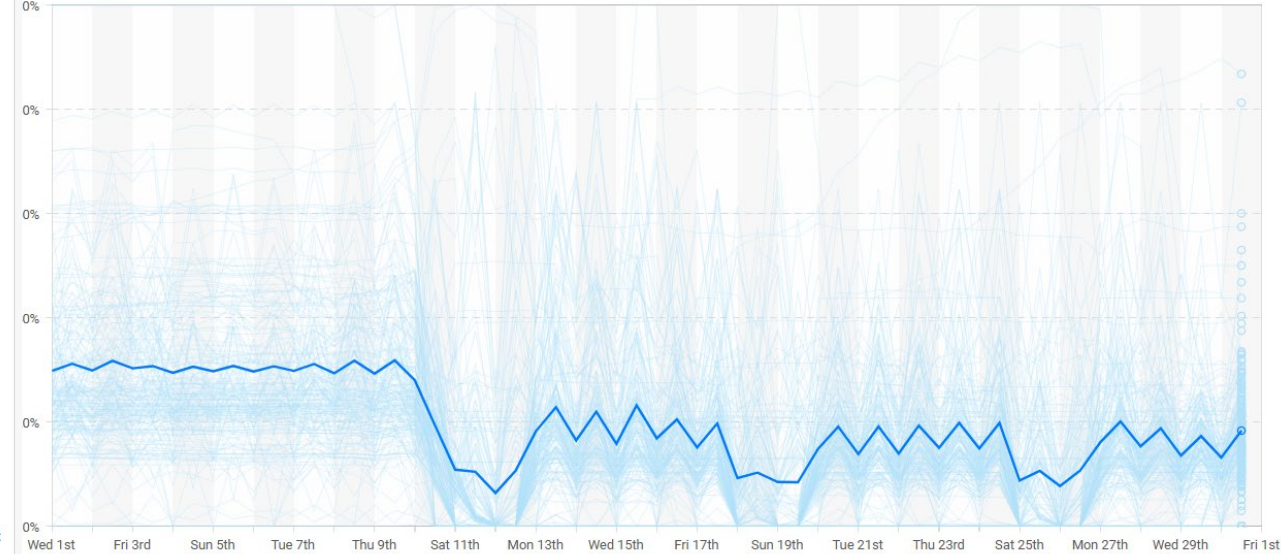
VAV Reheat Valve Position

Avg shown in orange, (0/202) rogue zones in red



VAV Damper Position

Average shown in blue, (0/202) rogue zones in red

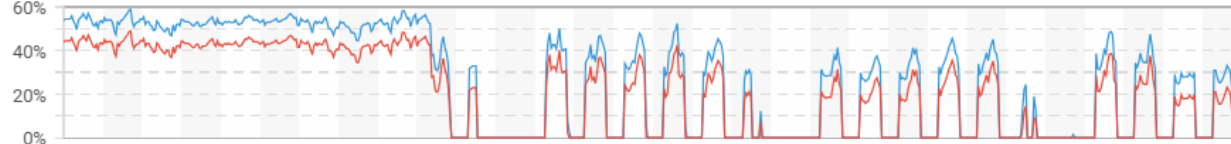


Air Handler Optimization Farmington Health Center & ACC Acute Care Center

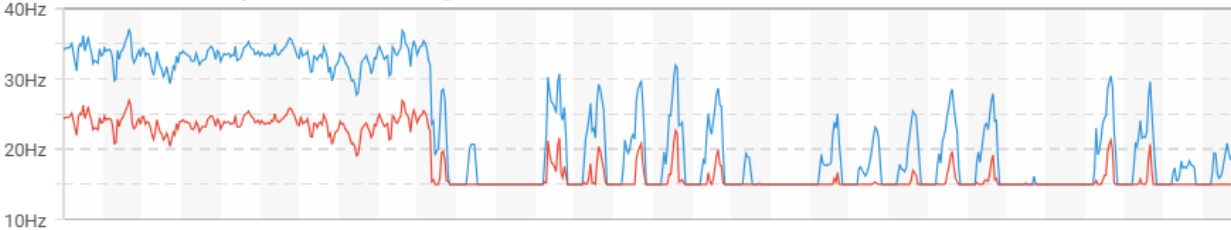
Fan Trends AHU4

Speeds

● AHU4 DaFanSpd ● AHU4 RaFanSpd



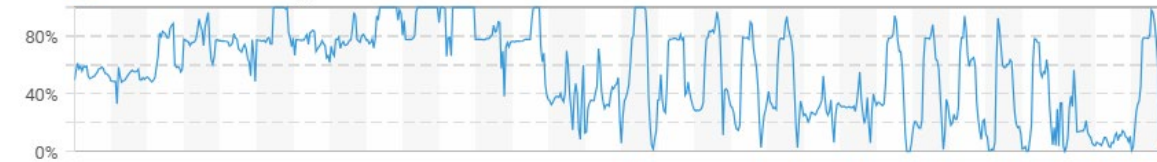
● AHU4 DaFanFreq ● AHU4 RlfFanFreq



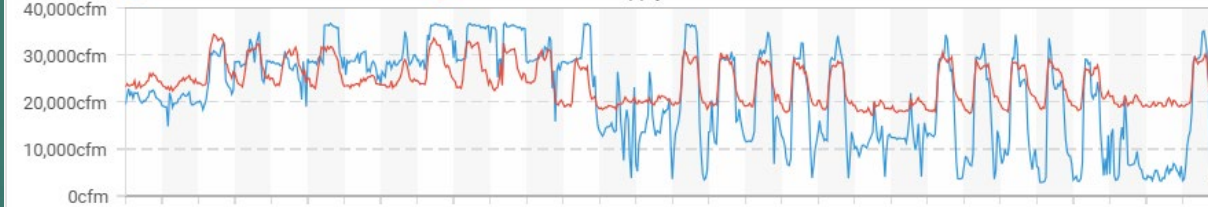
Fan Trends ACC 5100 AHU1

Speeds

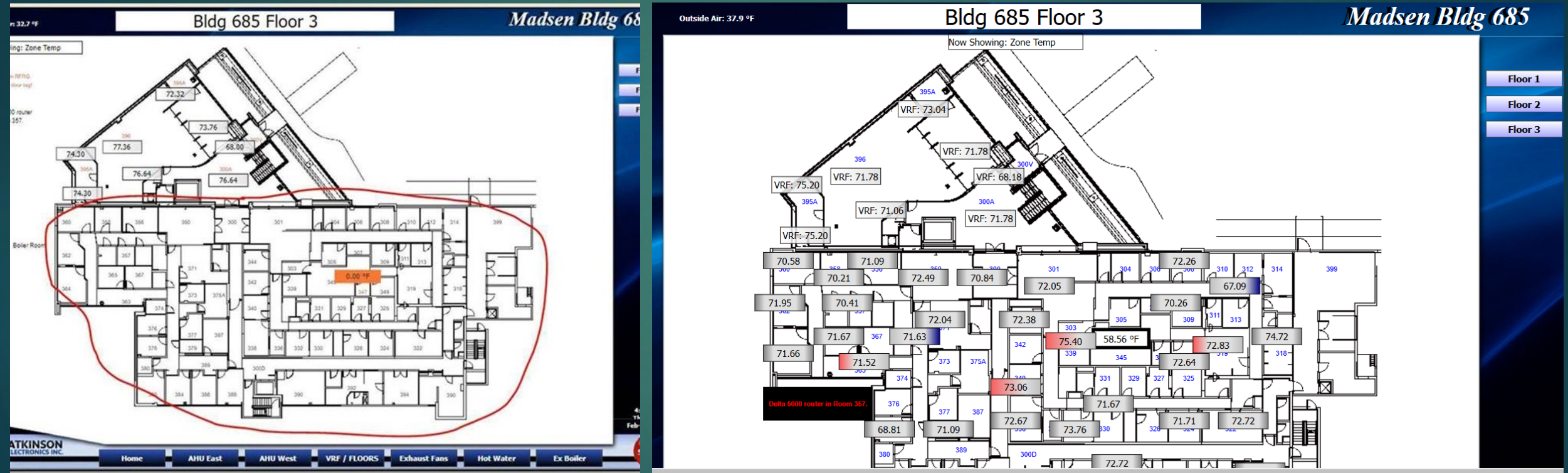
● ACC 5100 AHU1 RF_Signal



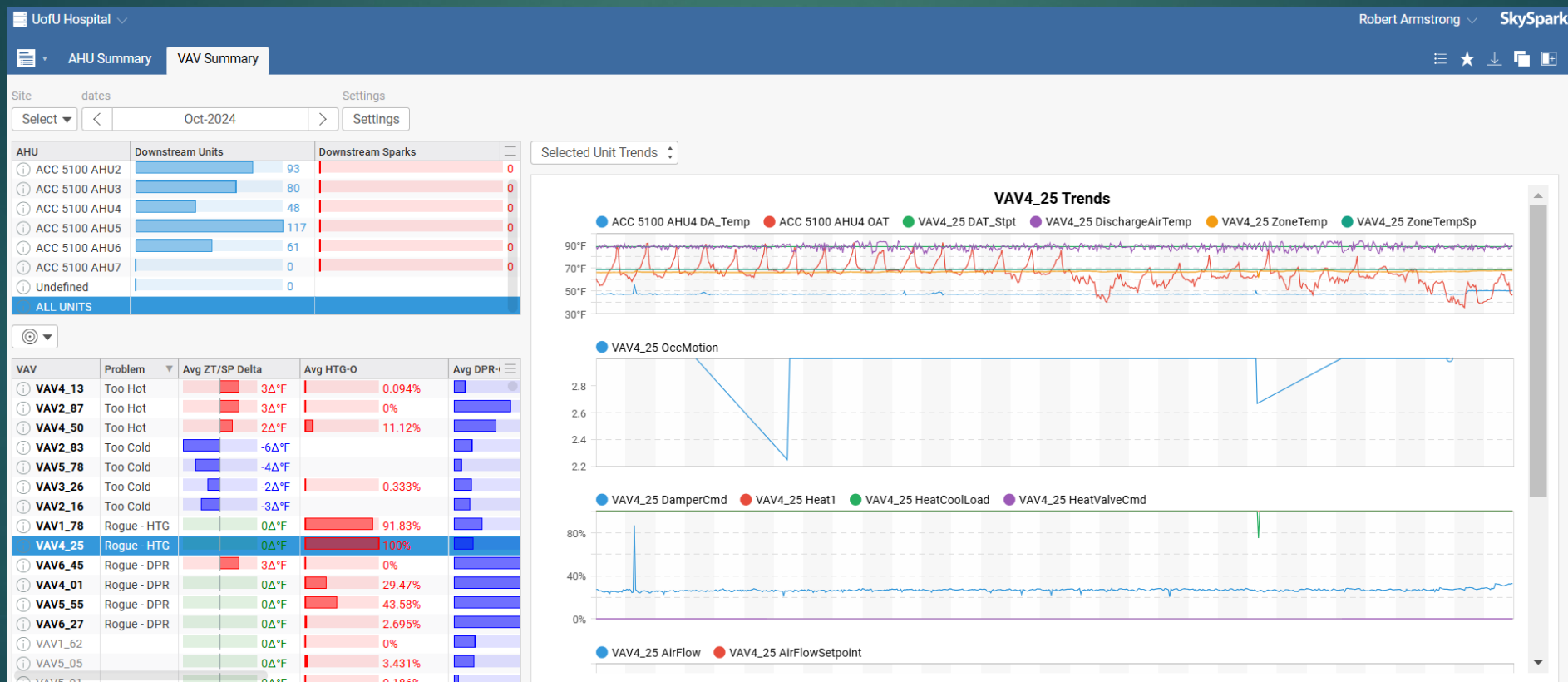
● ACC 5100 AHU1 Return_Flow ● ACC 5100 AHU1 Supply_Flow



HVAC Pneumatic to DDC Controls Upgrades

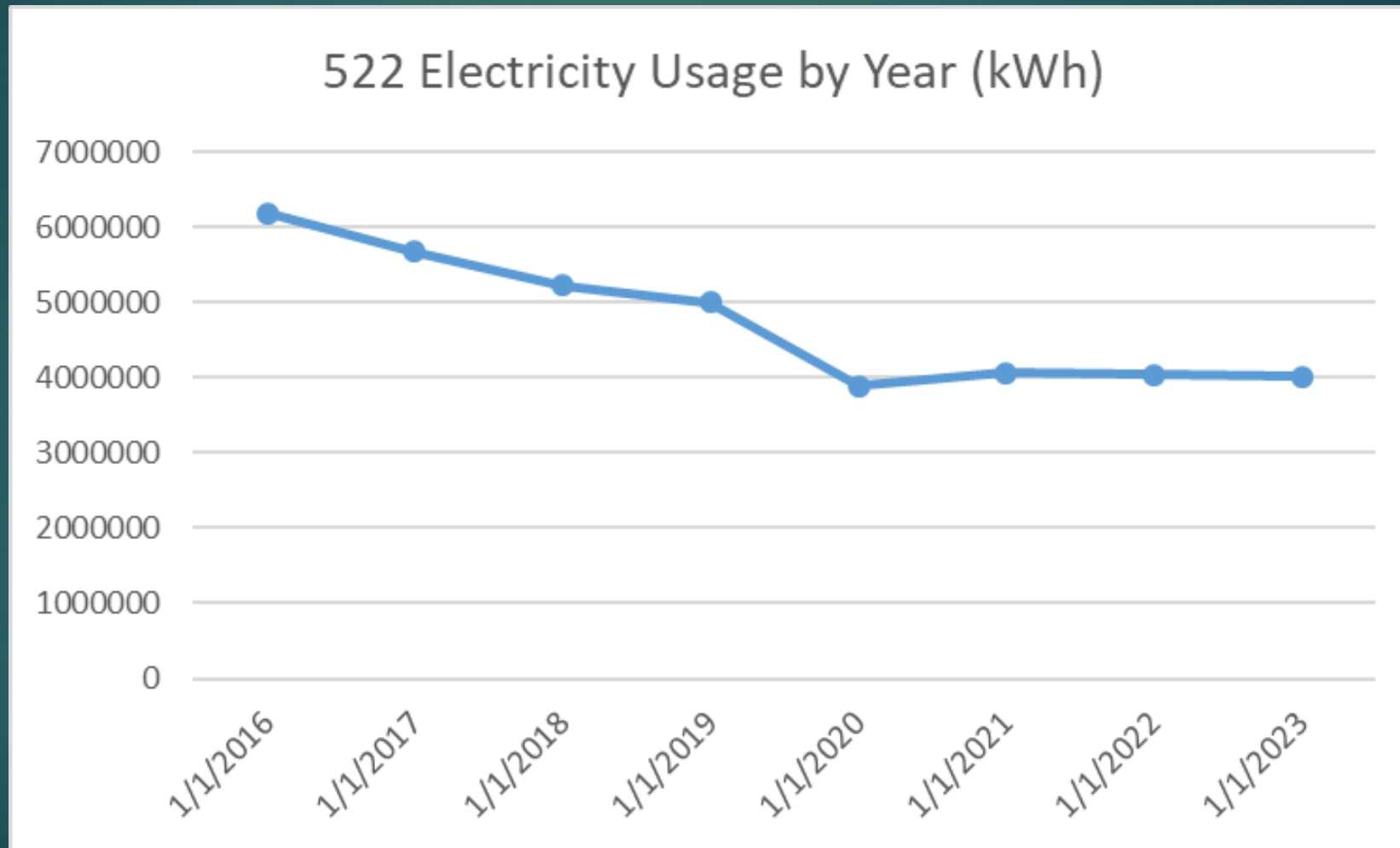


HVAC Energy Dashboard & Monitoring-Based Commissioning



Lighting Upgrades

- Projects can achieve 40% to 65% wattage reduction



Renewable Energy

1. Power Purchase Agreements

- ▶ Cynq geothermal contract started in 2019 provided 50% of UofU campus power. Geothermal plant near Beaver, UT
- ▶ Castle Solar field came online May 2024 provides an additional 20% of campus power. Solar field near Delta, UT
- ▶ SLC Climate Positive 2040 – SLC has pledged to team with Rocky Mountain Power to achieve 100% renewable electricity by 2040. Elektron Solar Project near Tooele. Pledge to achieve 80% carbon reduction by 2040.

2. Onsite Renewables – Future consideration

- ▶ Campus Emissions Reduction Plan kicked off in 2024 is looking at reducing emissions from natural gas burned on campus. Capital projects – heat pumps, etc.
- ▶ Additional onsite solar may be needed for community clinics not in SLC

3. Renewable Energy Credits – purchase credits for whatever is left