

AIRSTAGE  
Cloud

# HVAC Contractor

## CUSTOMER

Commercial property owner in Northern California with 2 million ft<sup>2</sup> under management

## PROJECT

Commercial office building energy retrofit

## EQUIPMENT

AIRSTAGE Cloud Edge Supervisor, AIRSTAGE VRF, existing RTUs, wireless smart thermostats

- **Single story** 60,000 ft<sup>2</sup> office building
- **20 5 ton** all electric RTU HVAC system
- **10 RTUs** are end of life and will be replaced with VRF
- **Remaining 10 RTUs** will remain in service until they reach end of life
- **Customer goal is to increase energy efficiency** and reduce operating expenses

“...A DOE study found that a BMS can provide 22% reduction in energy usage, and industry data shows they can reduce annual HVAC maintenance costs by about 20%.”

## Problems

- **Net zero 2050 Corporate goal**
- **Tight capital budget**
- **Need to lower operating expenses**
- **Electric energy** in Northern California is current \$0.47/kWh
- **Average energy** use intensity for office space is 15.5 kWh/ft<sup>2</sup>
- **60,000 ft<sup>2</sup> office building** will use about 930,000 kWh/year
- **\$437,100 average annual energy bill**





## Solution

Upgrade failing RTUs with AIRSTAGE VRF, add smart thermostats to remaining RTUs and control everything with an AIRSTAGE Cloud virtual private building management system

**The AIRSTAGE Cloud BMS** made it possible to reduce the building energy consumption by a bit more than 20%. When half the RTUs were replaced by ultra-high efficiency AIRSTAGE VRF there was an additional efficiency gain. The total average energy consumption was reduced by approximately 30%.

## Equipment

- **50 T AIRSTAGE VRF**
- **10 Schneider** 8650 thermostats
- **1 AIRSTAGE Cloud edge supervisor**
- **AIRSTAGE Cloud account** with Site Manager and Service Manager



## Results

- **AIRSTAGE Cloud and AIRSTAGE VRF** combined to reduce the sites energy usage by 30%
- **AIRSTAGE Cloud** coupled with AIRSTAGE VRF delivered an annual energy cost savings of \$87,420
- **The Return on Investment** for the end customer under 48 months

**“...The AIRSTAGE Cloud BMS made it possible to reduce the building energy consumption by a bit more than 20%”**

