



Chiller Replacement Report



Device Information

Chiller Number	5200Q64908
Location Name	SUMIKA ELECTRONIC MATERIALS INC
Location City	Phoenix
Postal Code	85034
Site Address	3832 E Watkins St
Time-zone	America/Phoenix
Year of Manufacturing (Age)	2000(24 Years)
Model Number	19XRV5051446DDH464
Report Duration	2022-09-12 ~ 2024-01-02
Chiller Run Hours	79,334



Chiller Replacement Report

Summary

As part of Carrier's connected chiller program our command center experts continuously monitor performance and health of your chiller and its major components to provide real time feedback and less operational disruption.

Your chiller serial number **5200Q64908** was evaluated for Chiller Replacement Analysis. Further Analysis is performed from the real time data from **2022-09-12 to 2024-01-02**. The design efficiency of current chiller is **0.6 kW/T**. The overall efficiency of this chiller is **0.75 kW/T**. Replacing this with a Carrier Aqua Series Water Cooled Chillers can improve the overall efficiency to **0.48 kW/T**. This replacement can improve the chiller efficiency by **36%**. The chiller is running at low loads (<60% RLA) for **91%** during the analysis period and this replacement can enhance design integrated part-load values (IPLV) to as low as **0.39 kW/T**.

Chiller Replacement Benefits:

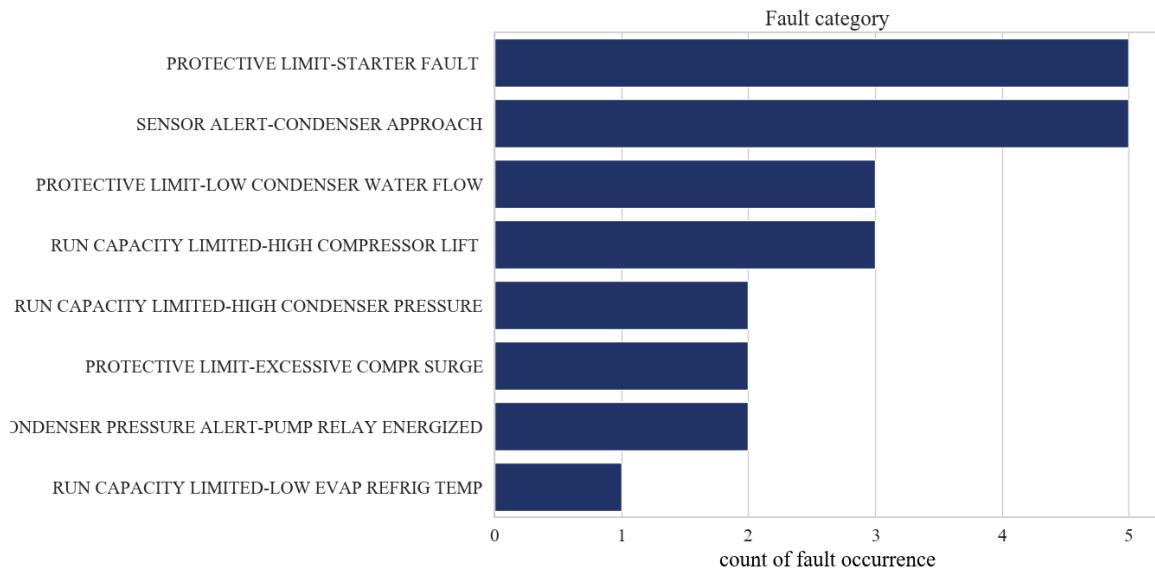
- Improved Efficiency
- Reduces operating expenses.
- Easy to maintain.
- Quiet operation
- Reliable operation
- Environmentally sustainable refrigerant
- ASHRAE 90.1 compliant
- High-efficiency optimization
- Diagnostic controls

Based on the performance of the chiller operation versus measured parameters, Carrier recommends further evaluation of the Chiller Replacement by our certified technician. This will ensure optimal performance of the Chiller.



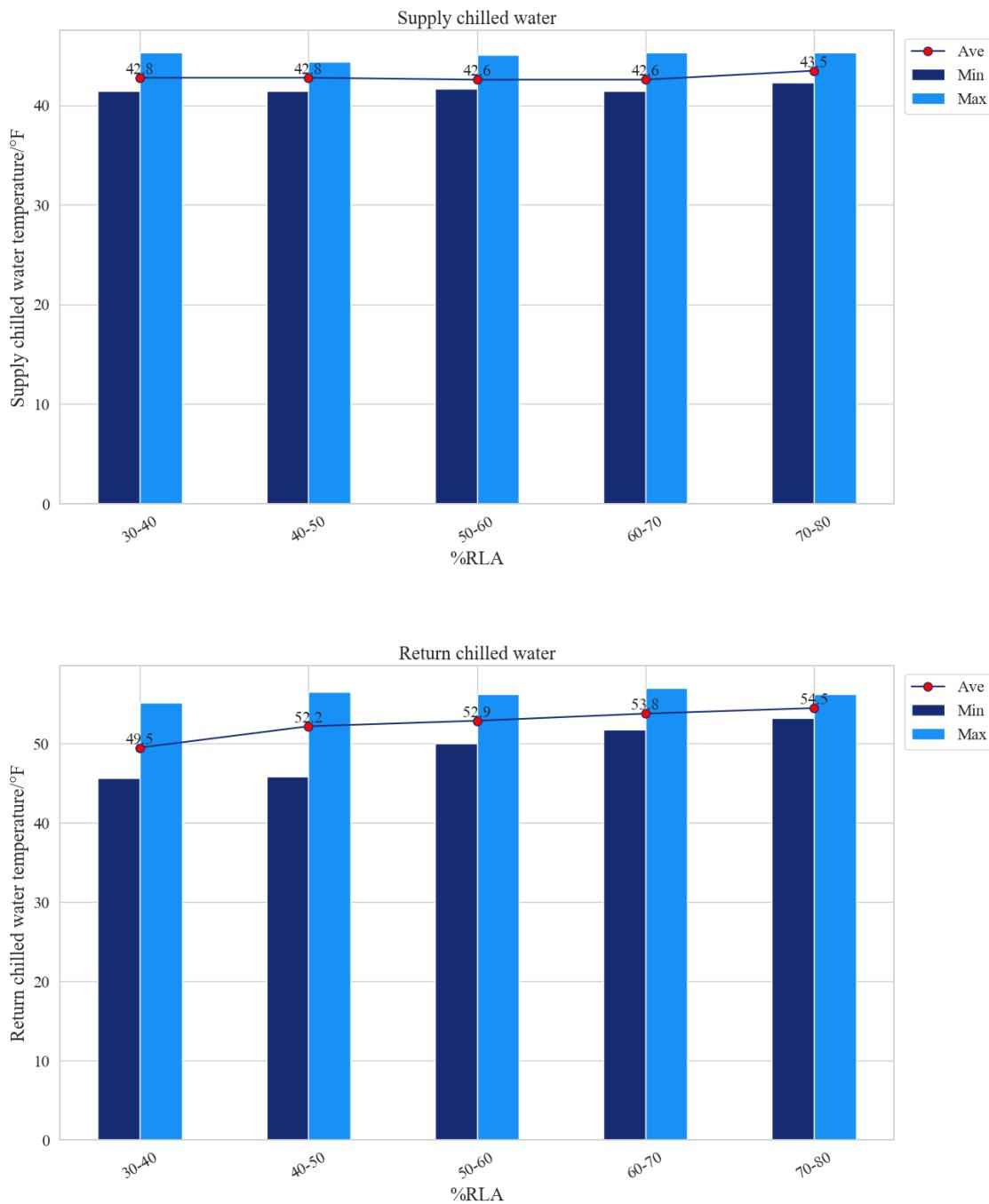
Chiller Replacement Report

Alarm/Setpoint Analysis

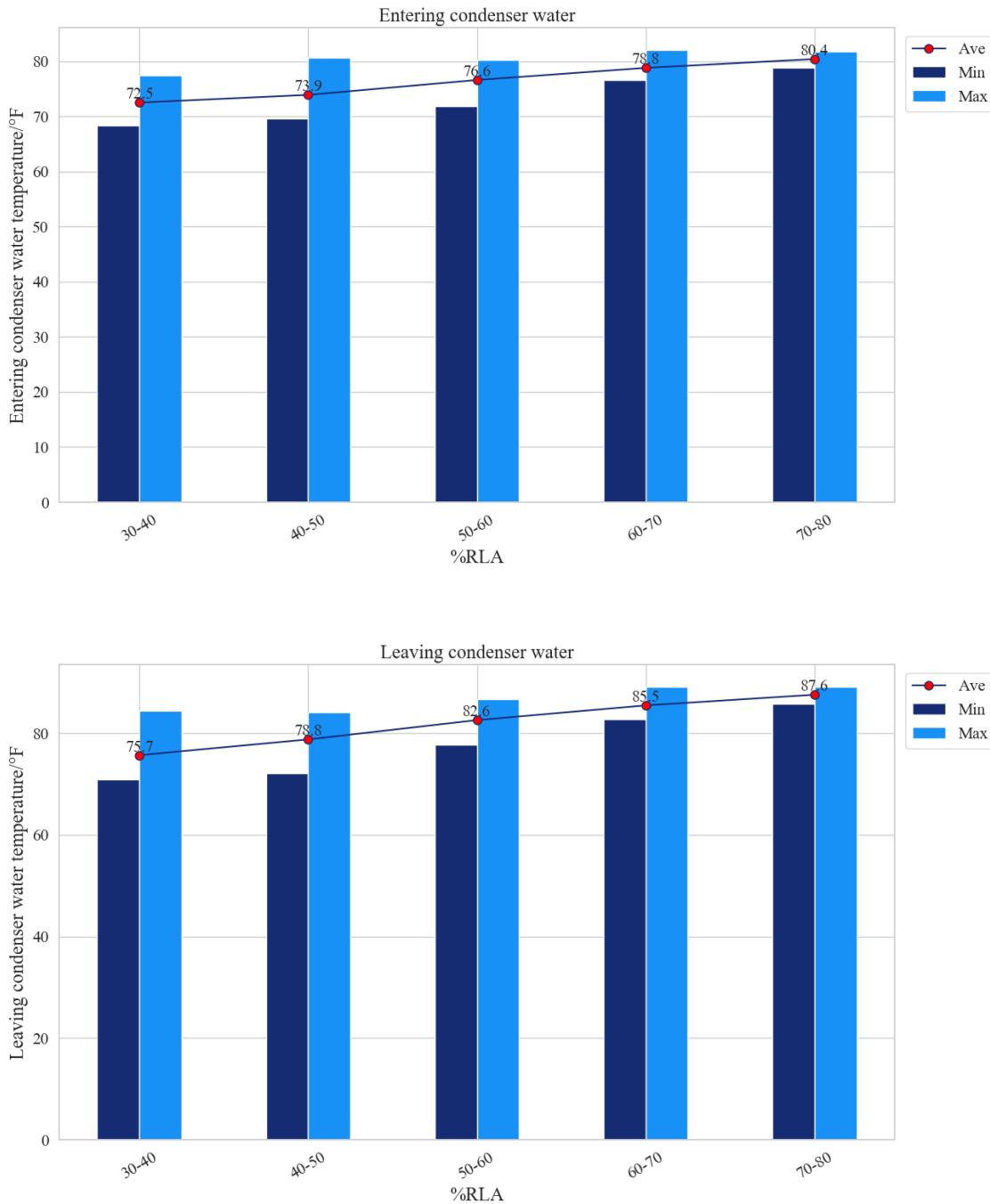


The analysis result show that setpoint not meeting **0%** of time.

Chiller Replacement Report



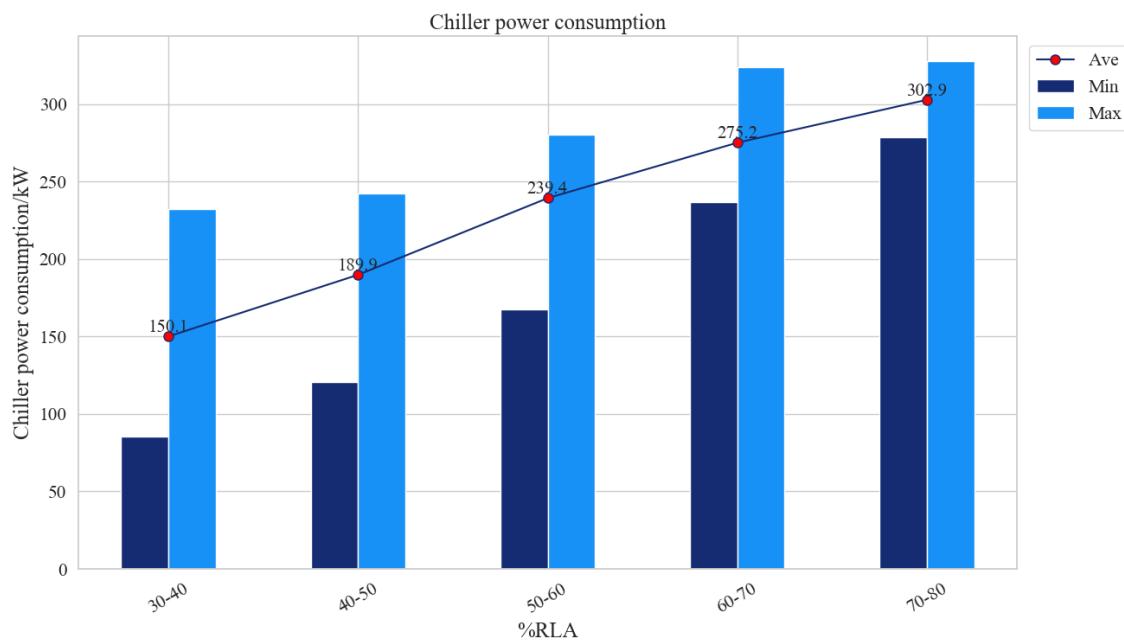
Chiller Replacement Report



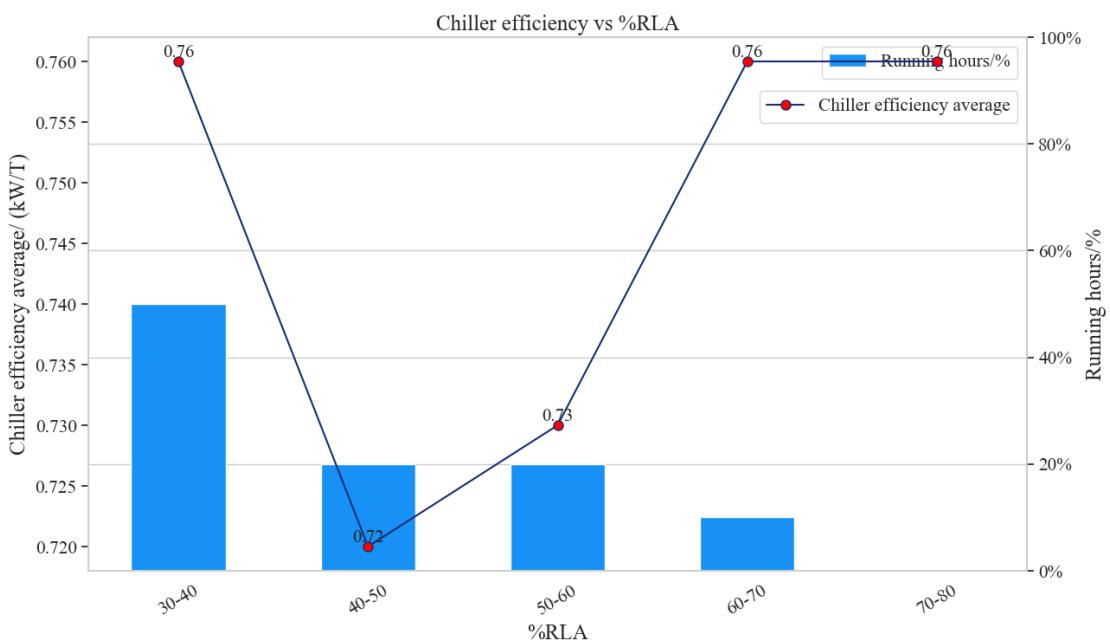
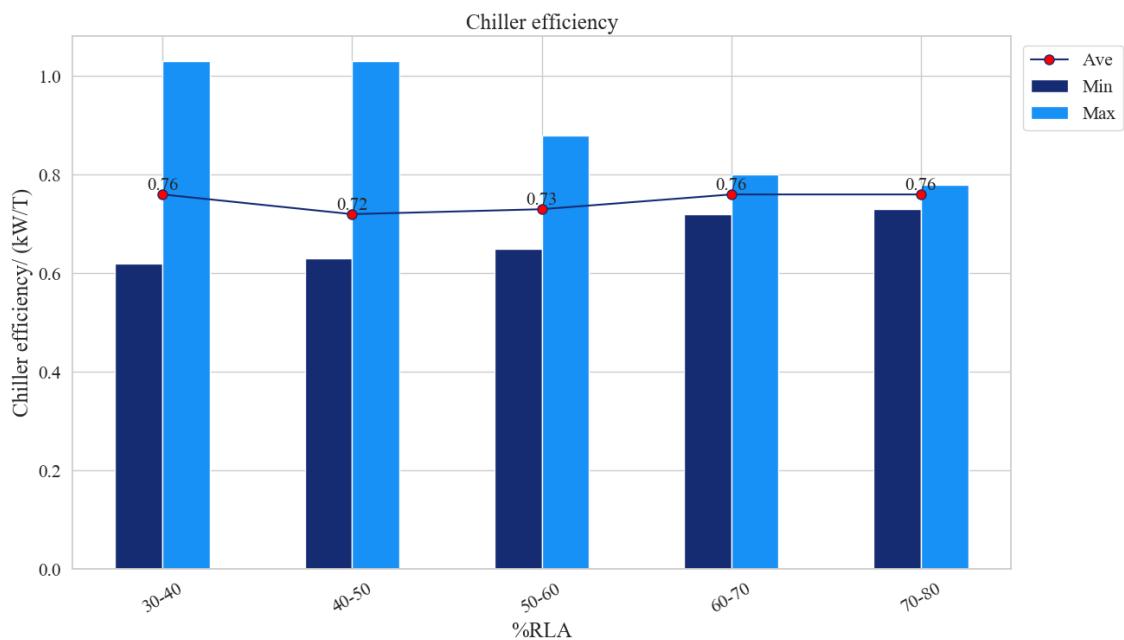
Comments

The Average Cooler supply water temperature is between 42.6 to 43.5 (°F) and the average Condenser entering water temperature is between 72.5 to 80.4 (°F).

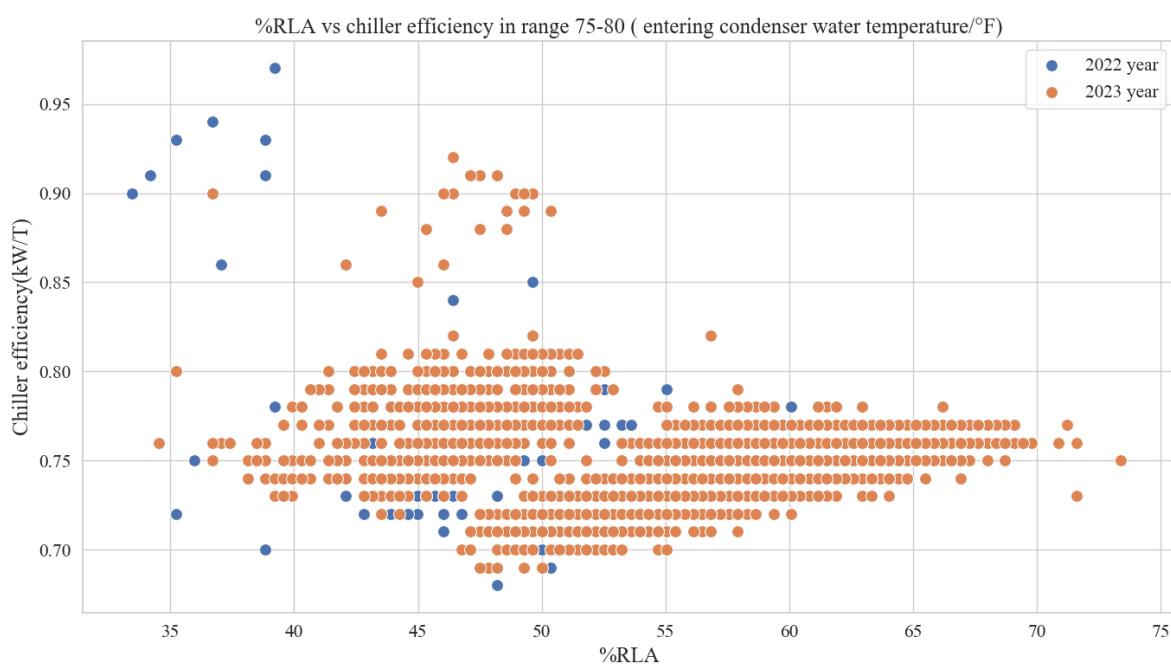
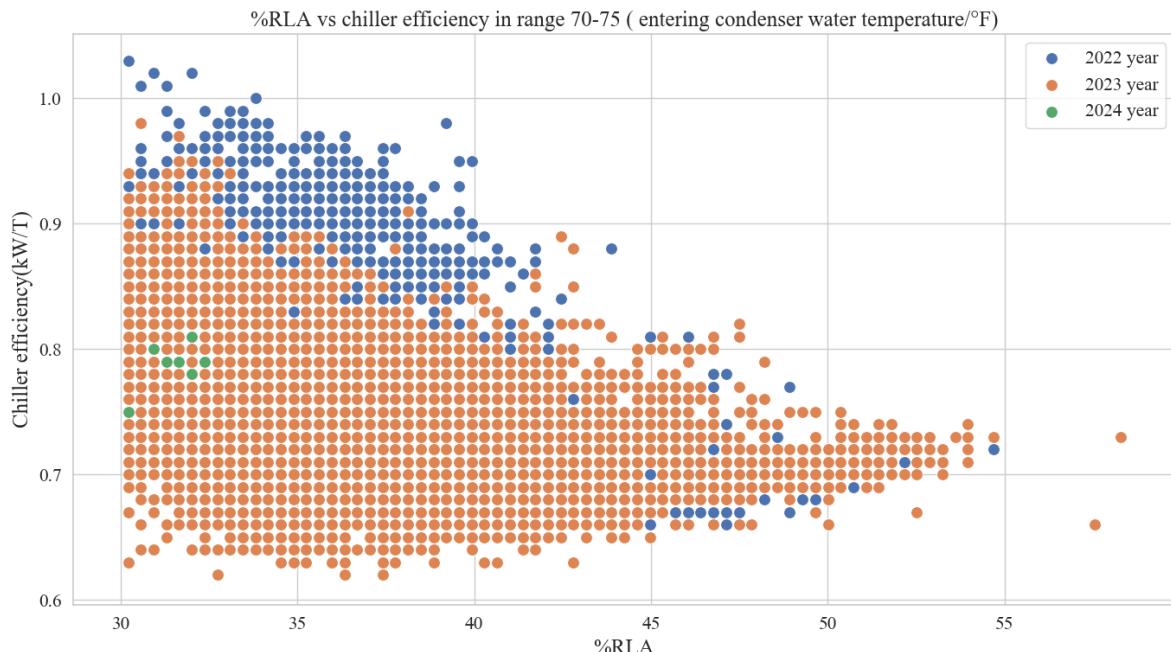
Chiller Replacement Report



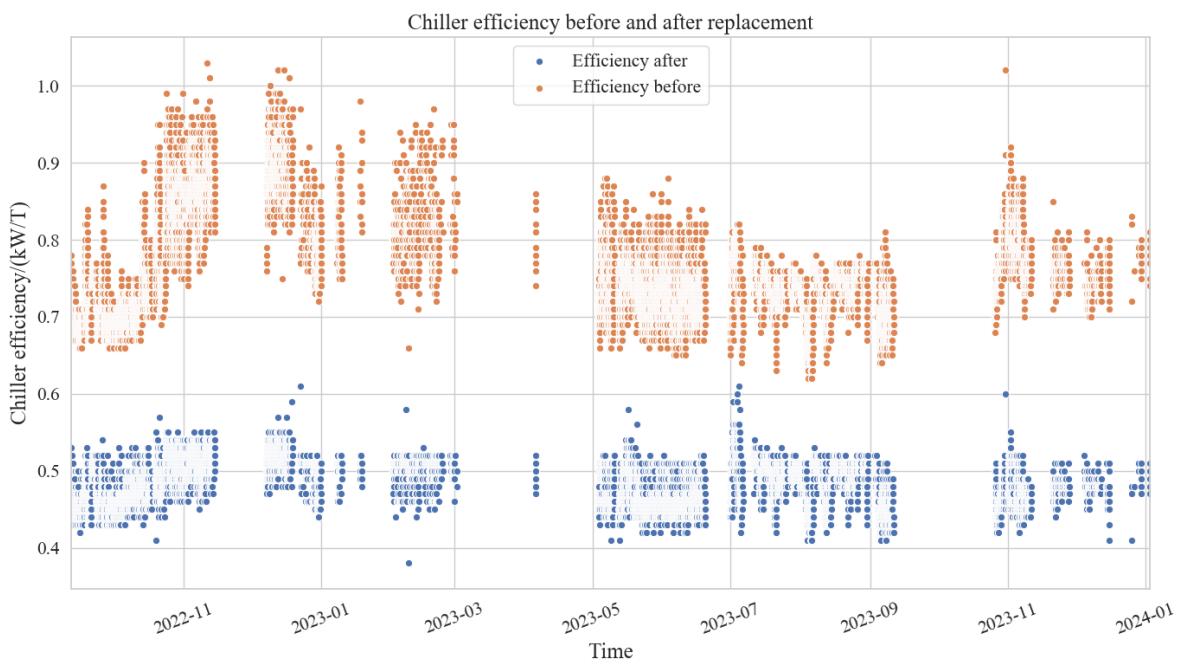
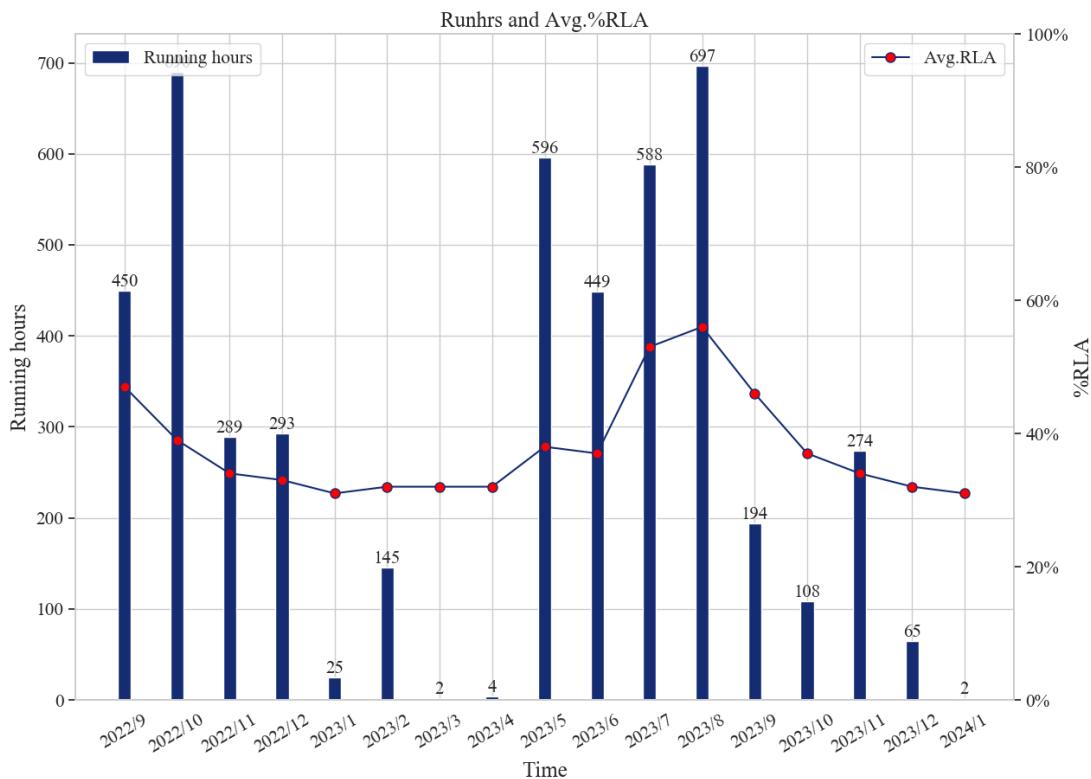
Chiller Replacement Report



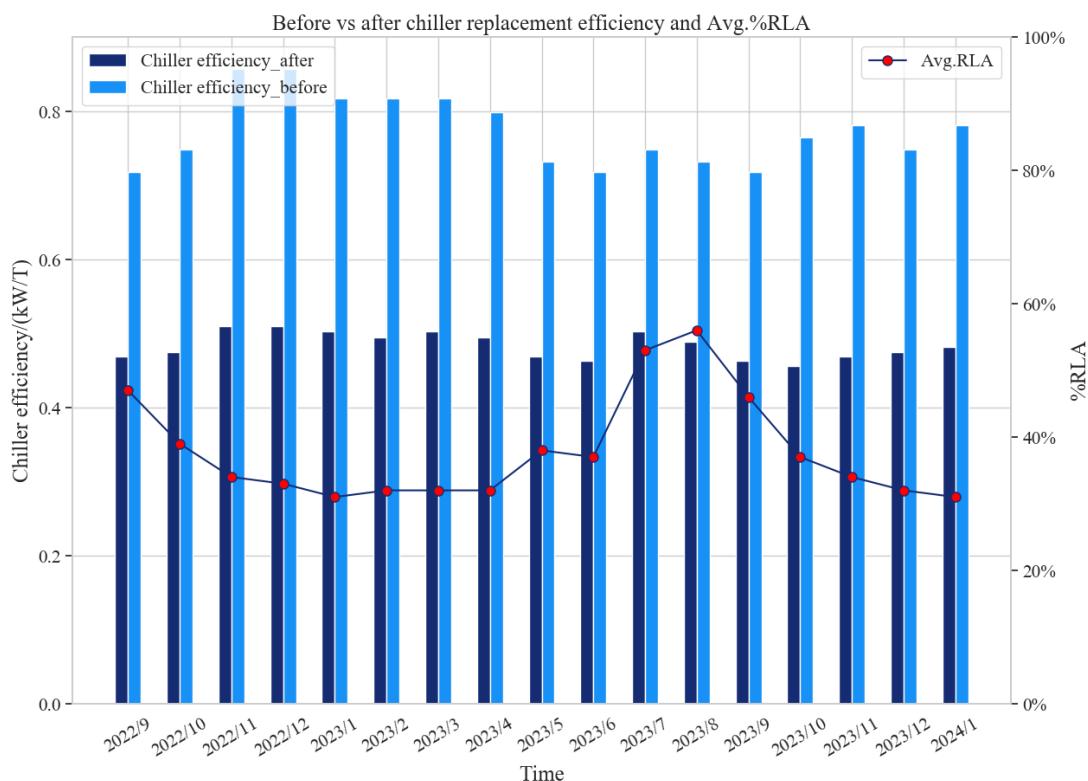
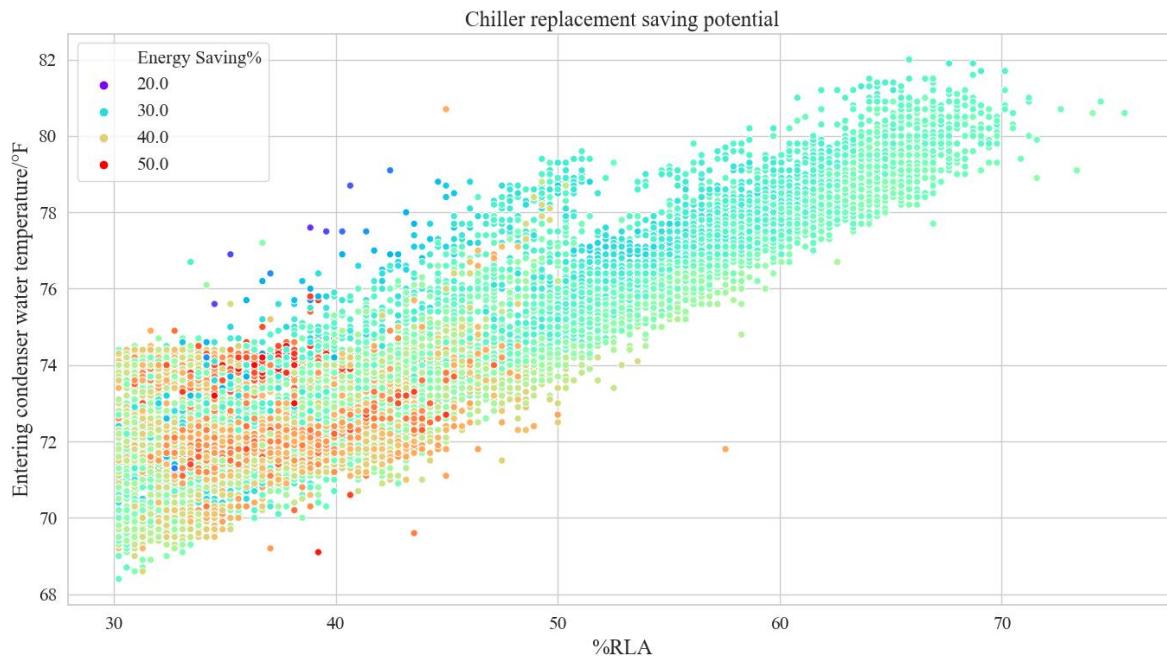
Chiller Replacement Report



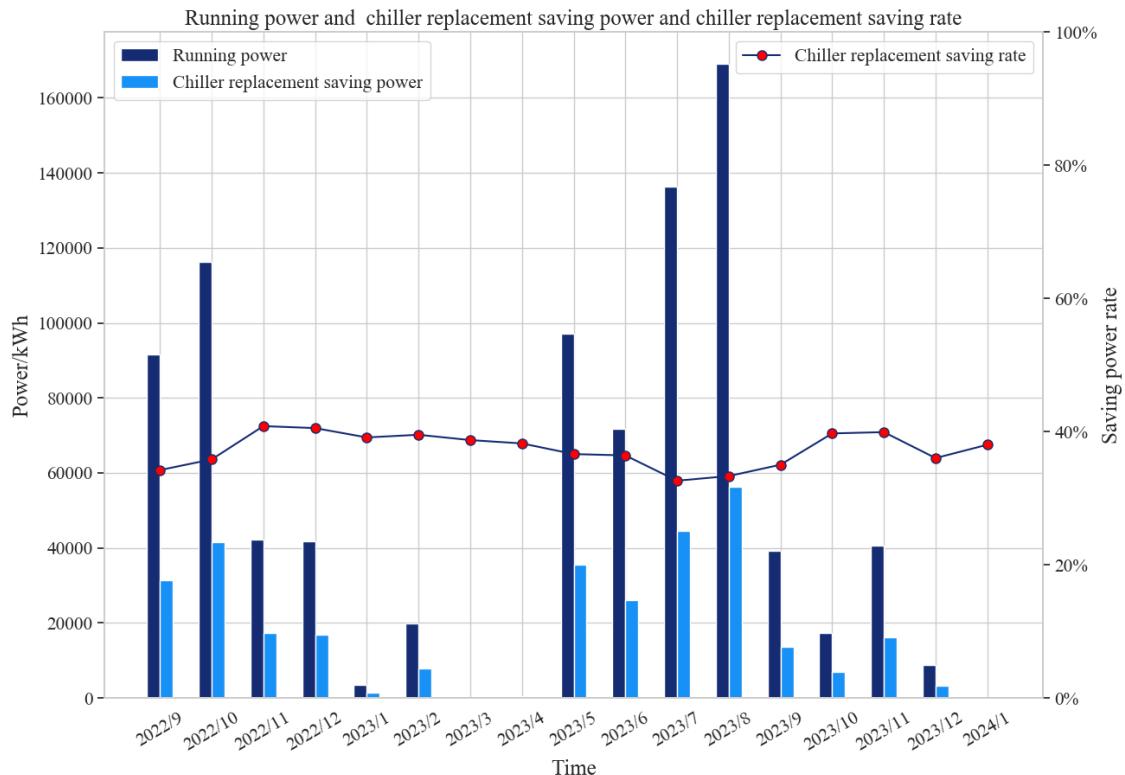
Chiller Replacement Report



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Chiller Sub System Health

Chiller #	Condenser Health (Good/Stage of Degradation)	Evaporator Health (Good/Stage of Degradation)	Compressor Performance (Good/Stage of Degradation)	Ref leak (Good/Stage of Degradation)	Condenser Water Flow Issue (Yes/No)	Evaporator Water Flow Issue (Yes/No)
5200Q64908						

S1	No action required
S2	Plan to clean/fix
S3	Clean/Fix immediately
S4	-

Summary

Energy Efficiency Improve **36%**

Energy Savings **319,070 kWh**

Energy Savings/per year **244,152 kWh**

Investment pay-back period **6.7 Years**