



Chiller Replacement Report



Device Information

Chiller Number	5111Q21335
Location Name	Research Foundation of SUNY Albany Nanotech
Location City	Albany
Postal Code	12203
Site Address	257 Fuller Rd, Albany, NY
Time-zone	America/New_York
Year of Manufacturing (Age)	2011(13 Years)
Model Number	19XRV56574TELEH64S
Report Duration	2022-09-27 ~ 2023-12-24
Chiller Run Hours	53,113



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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 **5111Q21335** was evaluated for Chiller Replacement Analysis. Further Analysis is performed from the real time data from **2022-09-27 to 2023-12-24**. The design efficiency of current chiller is **0 kW/T**. The overall efficiency of this chiller is **0.6 kW/T**. Replacing this with a Carrier Aqua Series Water Cooled Chillers can improve the overall efficiency to **0.39 kW/T**. This replacement can improve the chiller efficiency by **35%**. The chiller is running at low loads (<60% RLA) for **54%** during the analysis period and this replacement can enhance design integrated part-load values (IPLV) to as low as **0.37 kW/T**.

Chiller Replacement Benefits:

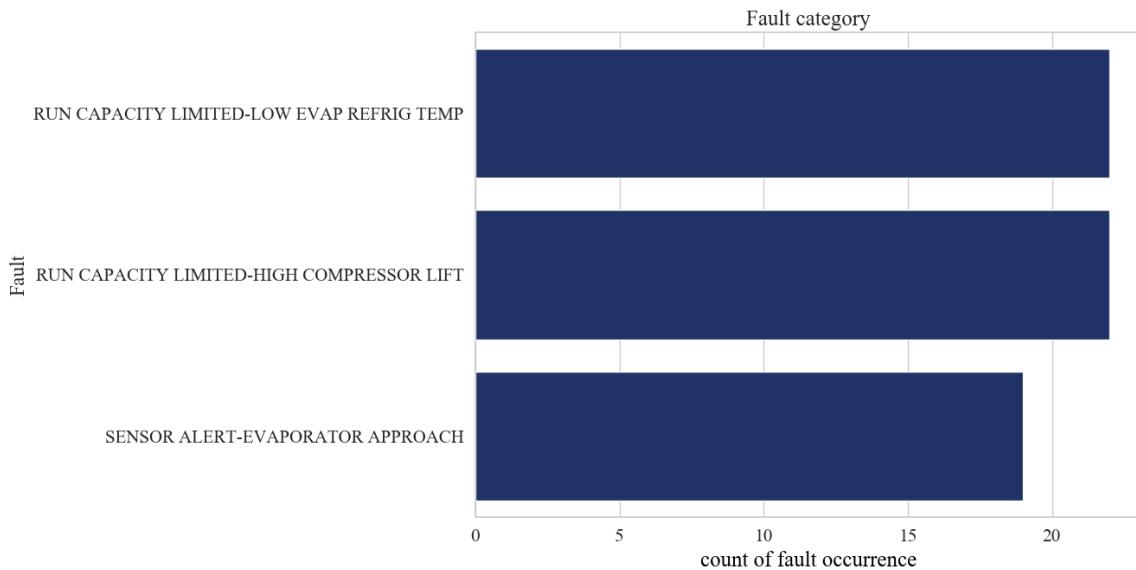
- Improved Efficiency
- Reduces operating expenses.
- Easy to maintain.
- Quiet operation
- Reliable operation
- Environmentally sustainable refrigerant
- ASHRAE 90.1 compliant
- High-efficiency optimization
- Diagnostic controls

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.



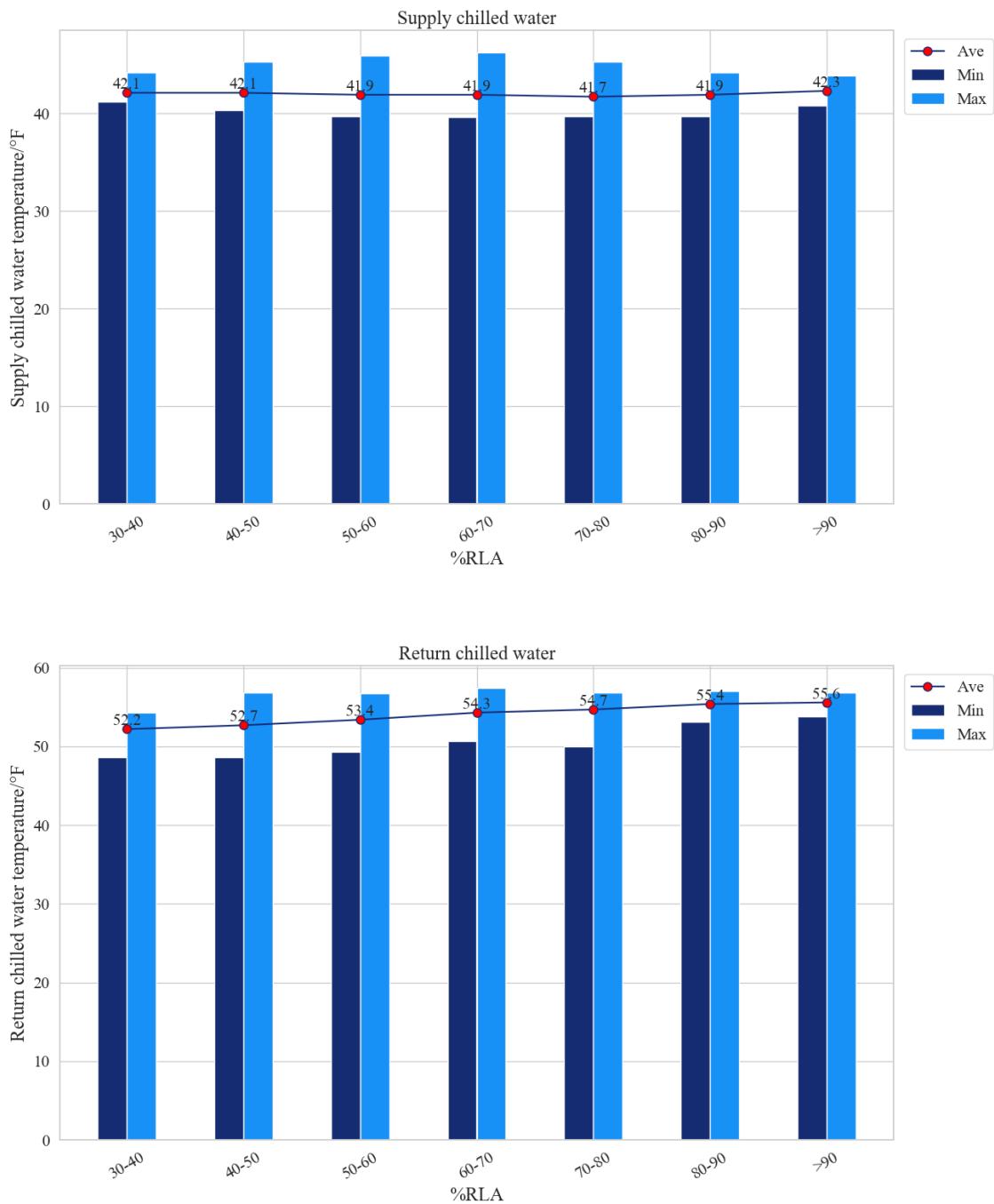
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Alarm/Setpoint Analysis

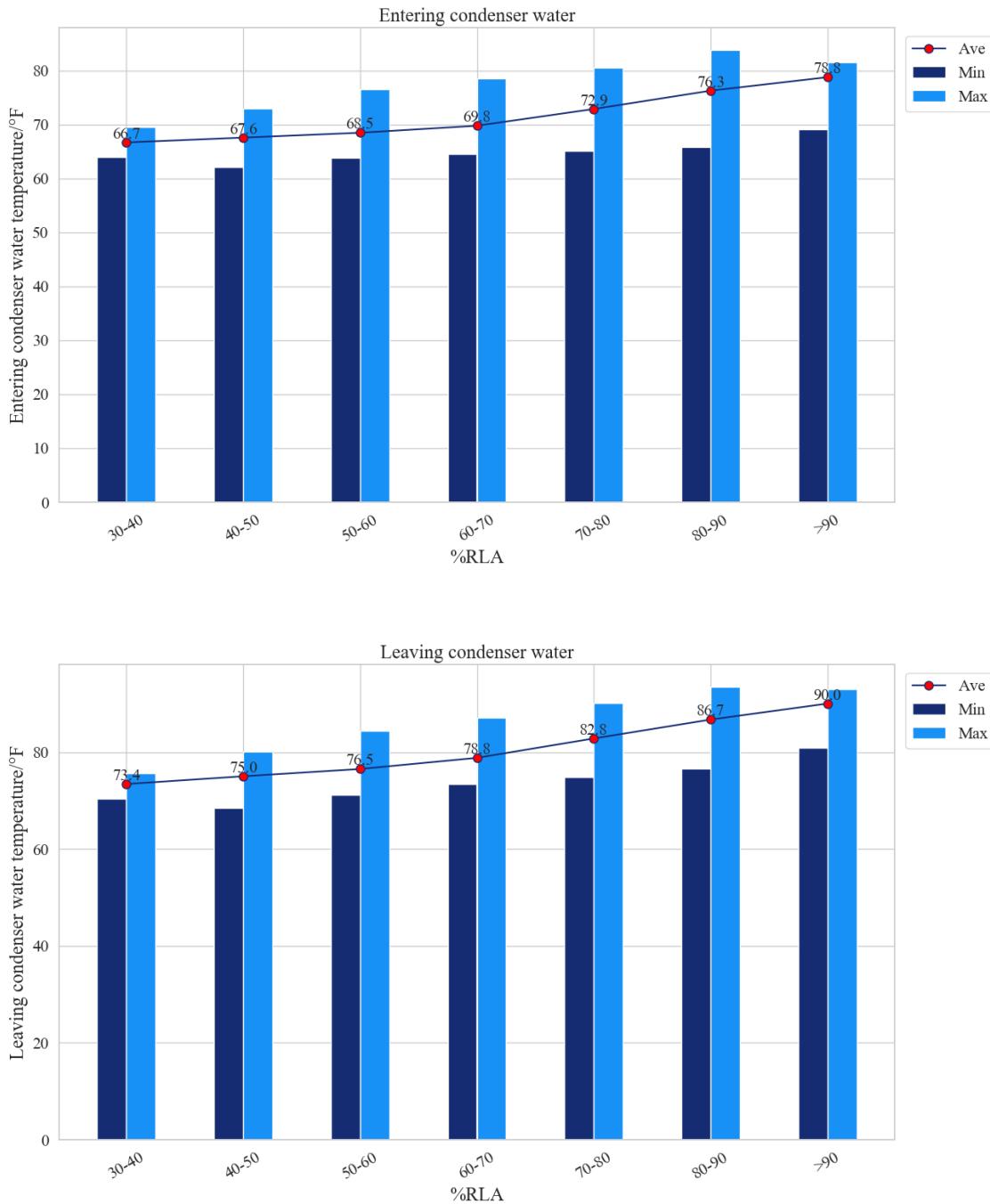


The analysis result show that setpoint not meeting **0%** of time.

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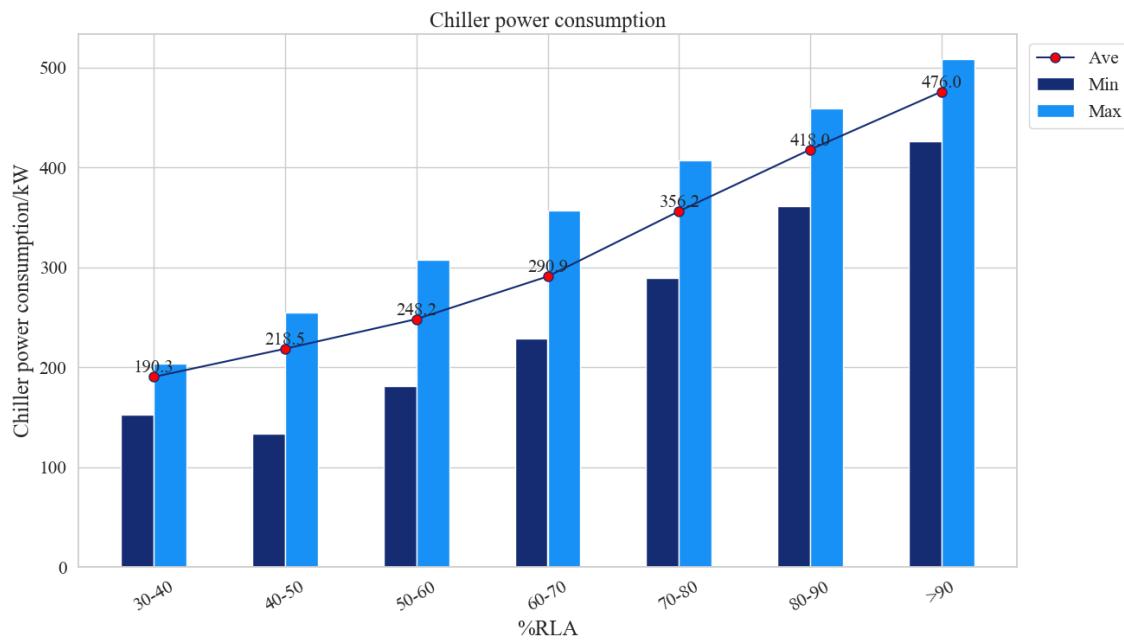
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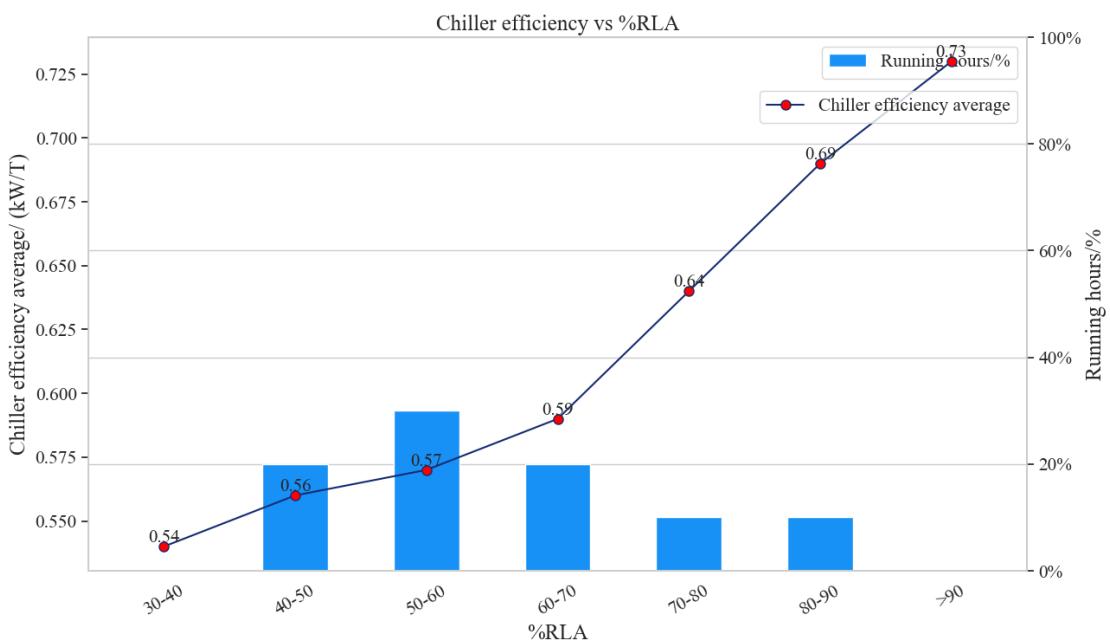
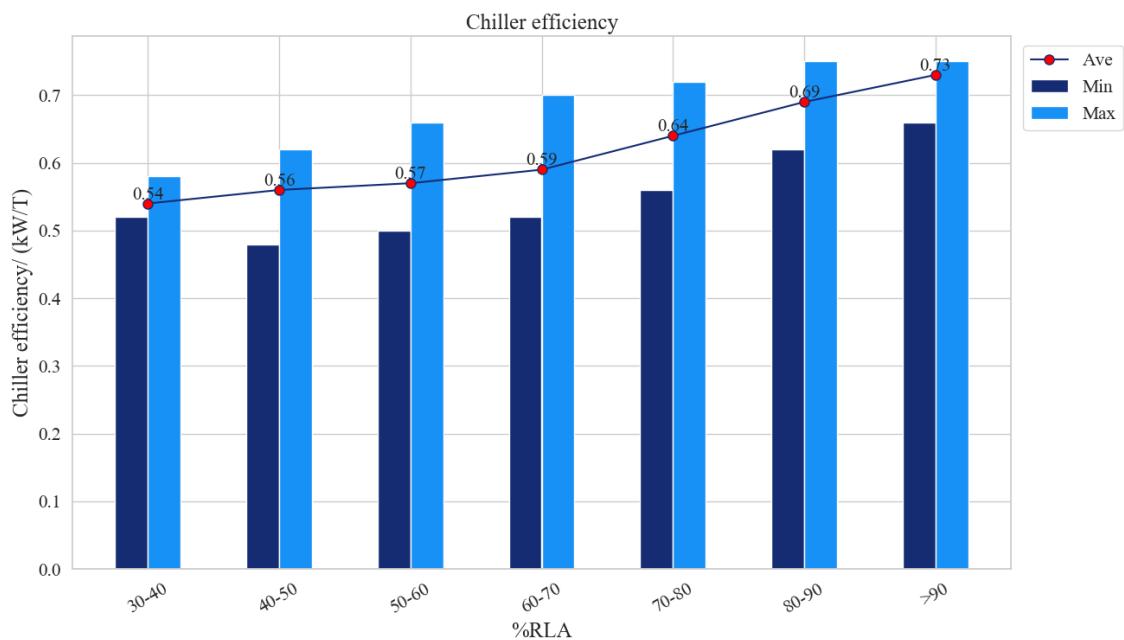
Comments

The Average Cooler supply water temperature is between 41.7 to 42.3 (°F) and the average Condenser entering water temperature is between 66.7 to 78.8 (°F).

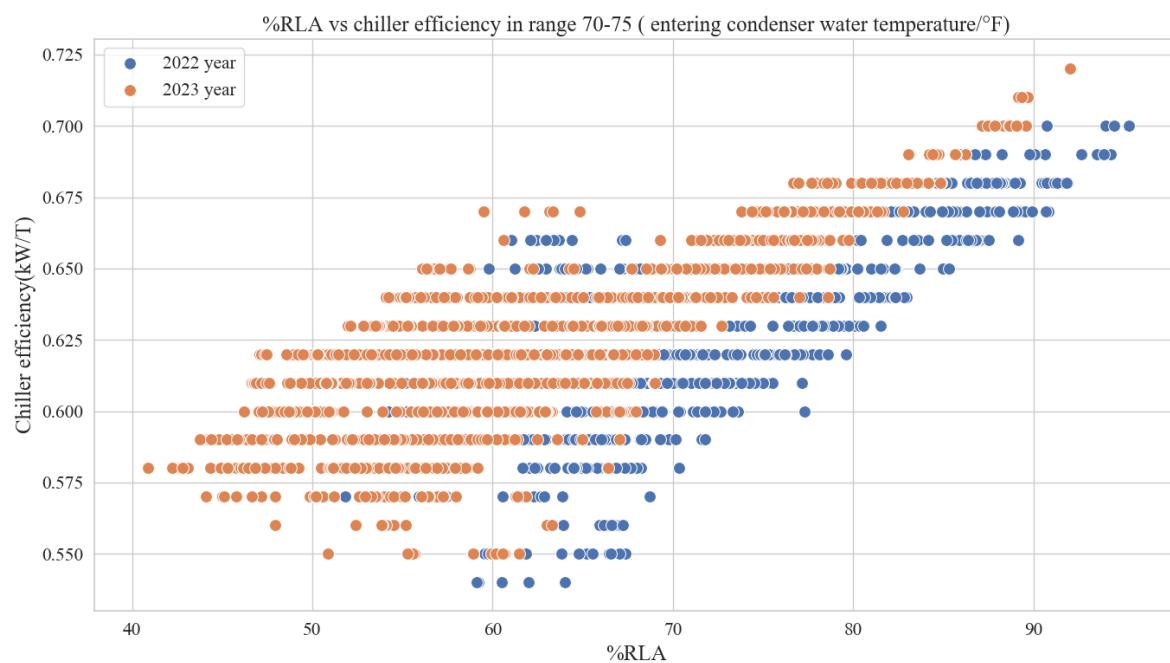
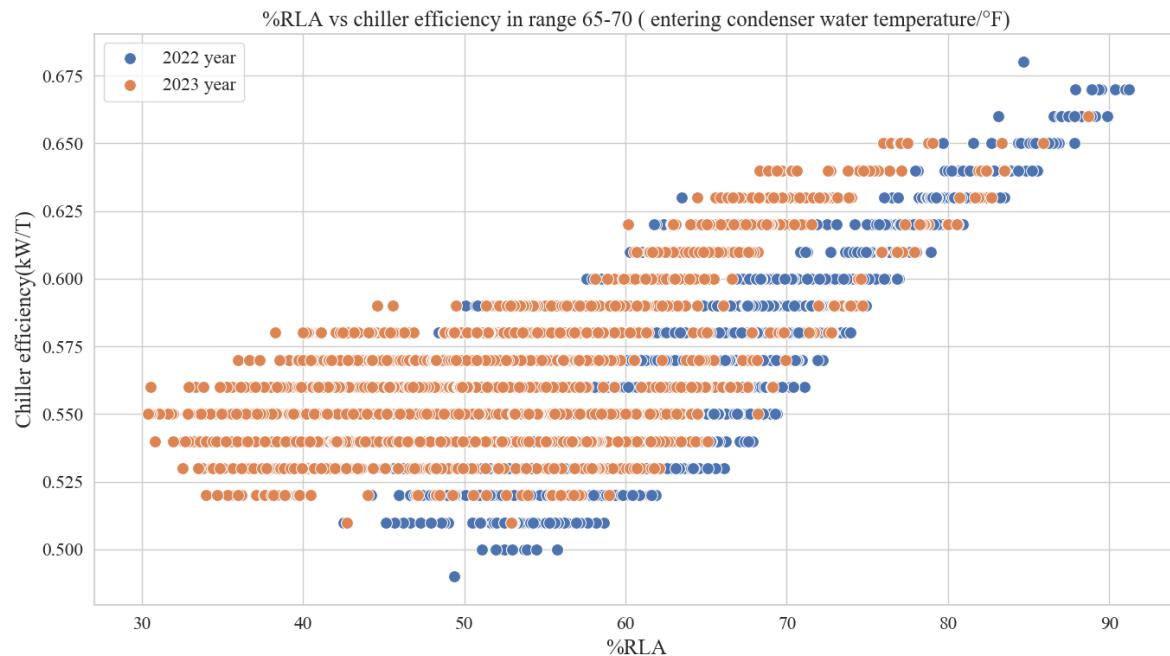
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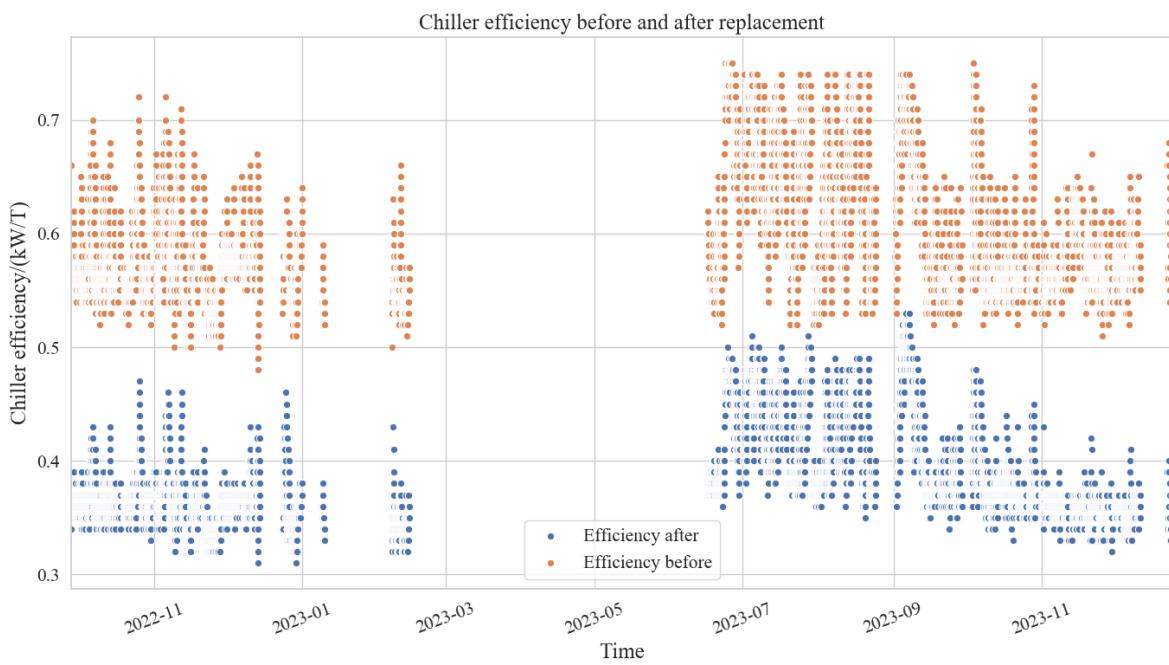
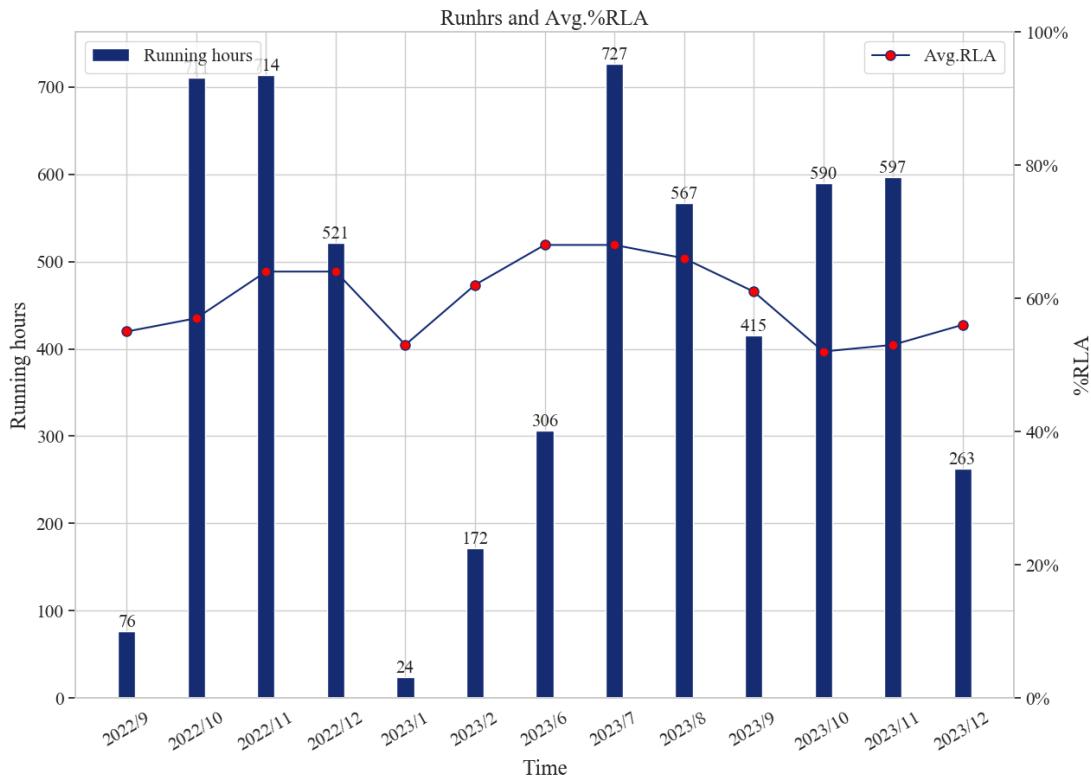
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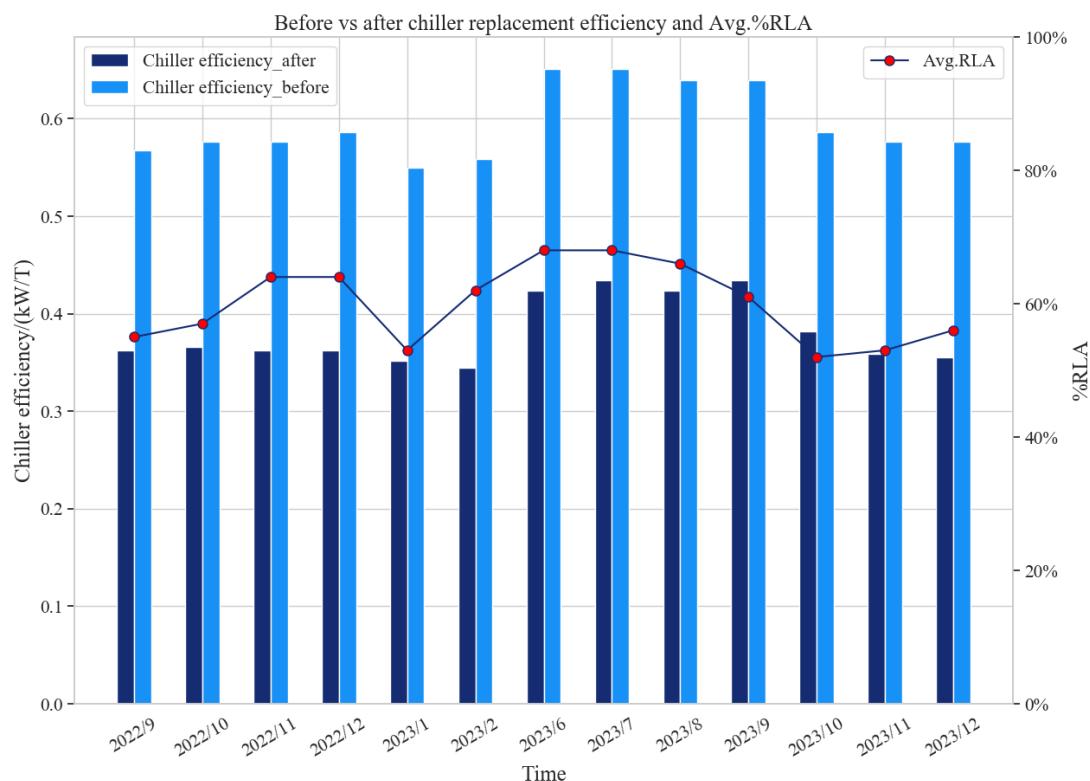
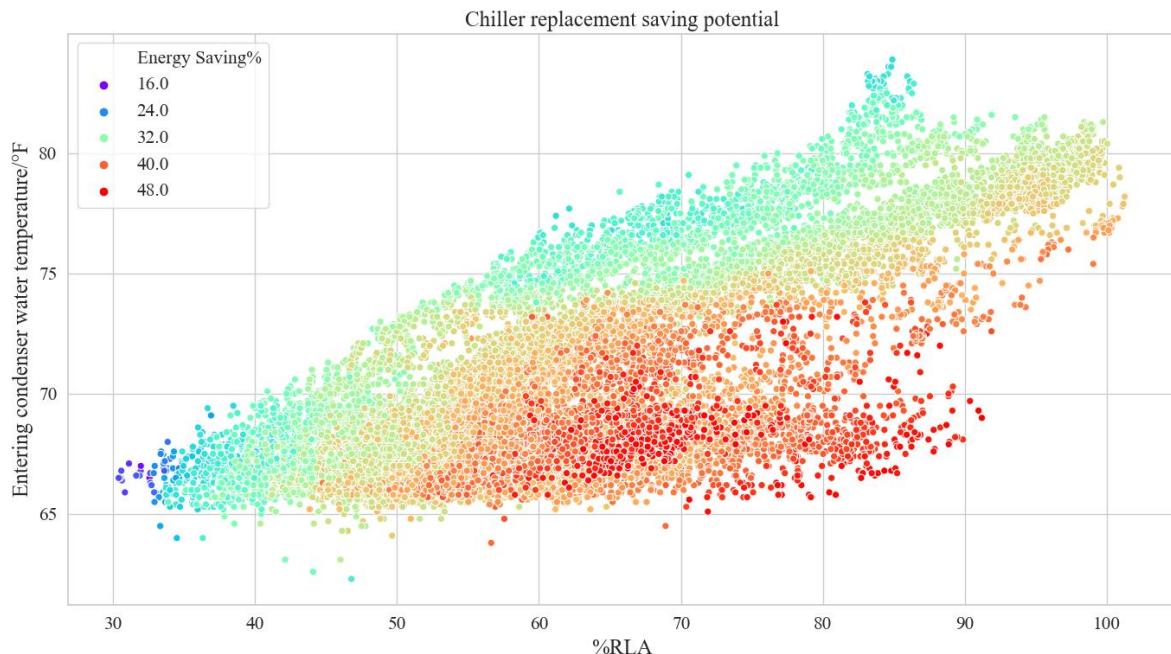
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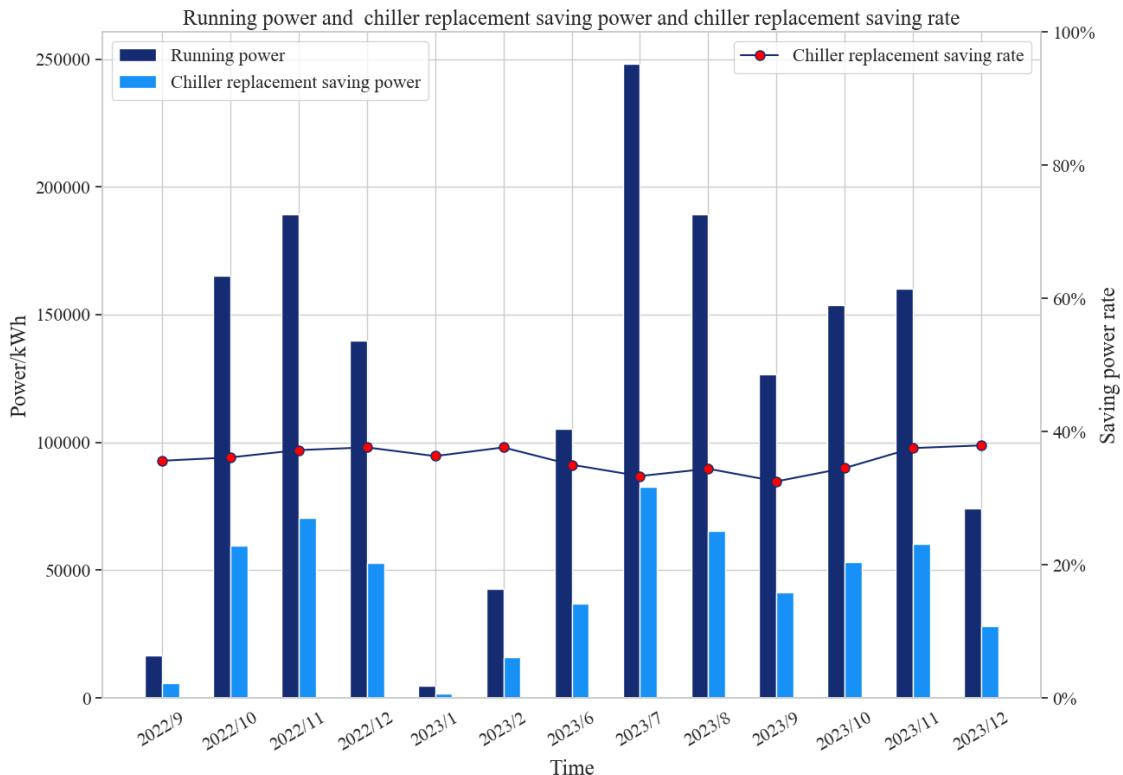
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Chiller Sub System Health

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)
5111Q21335						

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

Summary

Energy Efficiency Improve **35%**

Energy Savings **573,357 kWh**

Energy Savings/per year **461,976 kWh**

Investment pay-back period **4.4 Years**