



SUCCESS STORY

AERONAUT BREWING CO.

WHAT THEY NEEDED:

Aeronaut Brewing Co. was on the hunt for a product or service that would allow them to monitor the temperatures of their various cold rooms, as well as provide them alerts if any of the spaces fell out of range. In their facility, they had four of these spaces: a keg cooler, a hops cooler, a foods freezer, and a packaged-product cooler. Each had their own temperature requirements, and the staff became overwhelmed constantly checking to ensure all of the cold rooms were cooled to where they needed to be on top of their normal, daily work obligations. For their varied range of beers, precise temperatures were critical because a change in temperature affected the brewing cycles and thus affected what they can sell and when.

As for the alerts, Aeronaut Brewing Co. needed a means of avoiding a catastrophic failure in their equipment. They'd lost a compressor before, and the disruption to their brewing cycles wasn't something they could afford to suffer through again.

WHAT NRM PROVIDED:

NRM was able to provide a custom solution that went above and beyond what Aeronaut Brewing Co. had originally sought. All of the cold rooms were retrofitted with on-site controls, and connected to the Remote Site Manager monitoring platform, which both automated temperature logging and provided real-time alerts for a range of factors that could affect their temps: things like doors being left open, iced up evaporator coils, and compressor short cycling. Remote Site Manager allowed the staff to track and compare temperature performances from anywhere, anytime, through the platform's online dashboard. On top of the four cold rooms, Aeronaut Brewing Co. was able to monitor the performance of their chiller and their glycol.

The optimizations NRM performed also made each cooling system more energy efficient. By automating temperature settings, defrost cycles, and bringing to light issues that waste energy, Aeronaut Brewing Co. will see a projected annual savings of 17,400 kWh. NRM was also able to procure a 50% energy efficiency incentive through their local utility.



SOLUTION SNAPSHOT

Industry:

Brewery & Tap Room

Number of Cold Rooms: 4

Keg Cooler

Hops Cooler

Foods Freezer

Packaged Product Cooler

Implemented Measures:

Remote Site Manager

CoolTrol (on-site smart controls)

EC Motor Upgrades

Smart Defrost Kit

Glycol Monitoring

Utility Incentive:

50% of upfront cost

Incentive Amount:

\$10,100

Annual Energy Savings:

17,400 kWh

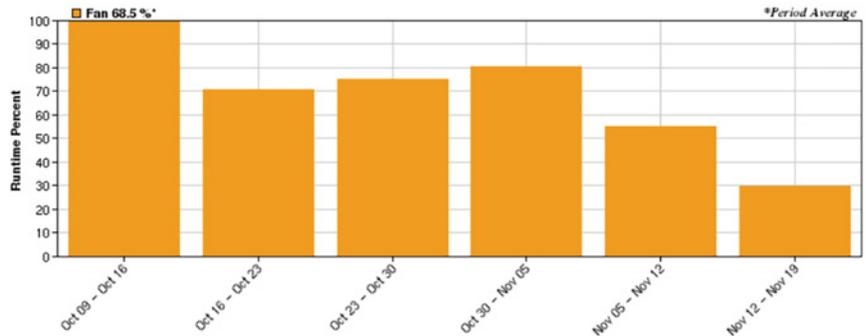




The monitoring and the alarm system were why we decided to buy. In our environment, even going one day with an issue that no one notices can throw off entire brewing cycles. This can directly affect what we can sell and when, which impacts our bottom line. We also wanted to avoid a catastrophic failure; we've lost a compressor before. The energy savings were an added bonus.”

CONTINUOUS ENHANCEMENTS

As you can see in the runtime chart to the right (this chart is for the hops cooler), when the solution was first installed, Aeronaut Brewing Co.'s refrigeration system was running at 100% full capacity. When the smart controls optimized performance, the runtimes began to drop. Near the beginning of November, performance data was analyzed and it was discovered that the temperature in this cooler could be raised a few degrees without jeopardizing the integrity of the stored hops. After consulting with the owners, the adjustment was made, and the system runtime plummeted from 80% to around 30% of capacity while still satisfying temperature requirements.



NRM CoolTrol Series 1			Temperature °F				Status				Starts 24 Hr.		% Run 24 Hr.		% Run 7 Days								
Description	Notes	Status	Space	Evap	Dif	SP	24hr	Byp	Mode	Dfrst	Sol	Fan	Door	Amps	Sol	Comp	Fan	Sol	Comp	Fan	Sol	Comp	Fan
Aeronaut Brewery Hops Cooler A	-		38	38	3	39	39.7	Run	Off	Off	Off	Closed	0.6	25	25	182	17.6	17.5	30.3	16.6	16.5	29.9	

OPTIMIZATION BENEFITS



SMART CONTROLS



24/7 MONITORING PLATFORM



PREDICTIVE DIAGNOSTICS



IMPROVED EFFICIENCY



ENERGY SAVINGS



EQUIPMENT ALARMS

40K

COOLERS & FREEZERS OPTIMIZED

1.5B

KWH IN ENERGY SAVED

20+

YEARS PROVIDING SOLUTIONS

40%

AVERAGE REDUCTION IN ENERGY USE

WHAT SETS NRM APART? Our small-business approach to big-business problems. Each of our sales, support, and installation teams are comprised of in-house, licensed NRM employees. Our hardware and software are designed, tested, manufactured in, and shipped from our Canton, MA-based facility.

The implementation of NRM's solution is a true turnkey process and requires "zero finger lift" from you. With transparency and courteousness, we manage the project from idea to install. First, an Energy Advisor comes on-site to identify the areas to benefit from optimization, and then our team of engineers develops a custom outcome for your business. We also look for any utility-sponsored incentives to reduce the upfront cost of the project. The physical installation can be performed without interrupting your normal business operations, and all of our installers are factory-trained technicians. NRM is always here for training and support, with a 24/7 technical help line.