Reduce Cooling Operating Costs by up to 20% with Real-Time Automated System Optimization

The Loop™ platform delivers best-in-class cooling system optimization for water-cooled chiller installations.

BAC has been a global leader in innovation in the commercial cooling space for over eight decades. In partnership with Tagup™, a proven leader in AI for industrial systems, BAC is bringing customers its latest innovation: the Loop™ platform, a patented AI-powered technology designed to optimize the condenser water loop for HVAC systems. ***The Loop platform is a cloud-based machine-learning system that collects and analyzes environmental and cooling system inputs – then makes real-time adjustments.*** This results in a quick, impactful solution lowering a building's operational costs and carbon impact.

BENEFITS

Reduce cooling system operating costs by up to 20%
Controls the condenser water setpoints (CWS) in real-time in response to changes in weather or cooling loads

Achieve significant energy and water savings, and reduced carbon emissions
With cooling system optimization

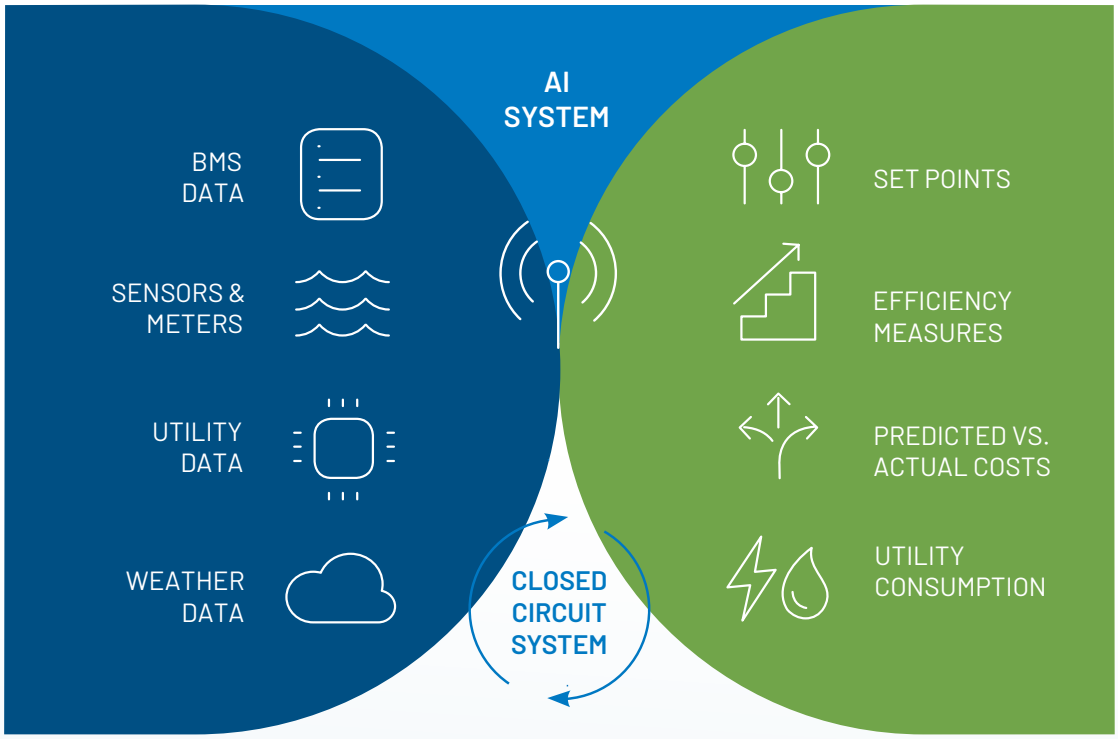
Deploy in as little as one day if using existing equipment
Minimal hardware required, often integrates directly with the existing building management system (BMS)

Low upfront financial commitment
The plug-and-play system requires no mechanical changes to the water system, does not negatively affect chiller system operations, and can be deployed on a wide variety of cooling manufacturers' equipment

See real-time and historic metrics
Including energy, water, and cost savings with an online tool

HOW IT WORKS

INPUTS >> ANALYSIS >> ADJUSTMENTS >> **SAVINGS**



Water-cooled chiller systems are typically sized to meet maximum cooling needs on design day requirements (i.e. peak loads). Historically, this has resulted in an excess of cooling capacity up to 98% of the time. ***The Loop™ platform takes advantage of this extra capacity by responding in real-time to changes in cooling load, outdoor temperatures, utility costs and other inputs, and automatically* shifting the load to the least costly component in the cooling system.***

The Loop platform showcases the capability of machine-learning algorithms by modeling the thermodynamic and hydraulic behaviors of chiller systems and ***making continuous and rapid improvements to system controls to predict and optimize performance.*** With as little as two weeks of learning, this predictive modeling can yield savings by automatically updating the system's operating parameters to ensure the lowest operational costs and highest system efficiency.

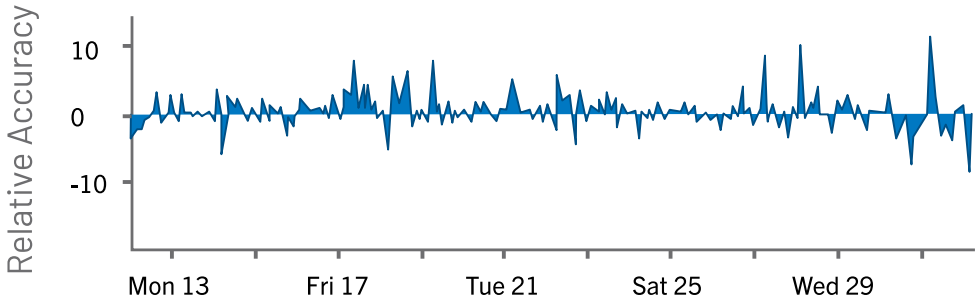
*There is also an option for facility management to implement the suggested adjustments.

CASE STUDY

Constitutional Health Plaza, PA

This project involved a 420,000 sq. ft. building operating with two chillers and a cooling tower. The facility's Automated Logic WebCTRL BAS BMS control system enabled ***deployment of the Loop platform within a single day using existing BMS data points. Using cloud-to-cloud deployment, no hardware was required and there were no upfront installation costs.***

The Loop platform collected data from existing sensors and began to track real-time system costs. The AI system quickly developed a predictive model to within ±5% of actual costs and ***implemented a control strategy that resulted in a 16% reduction in system operating costs over the first three months.***



These results validated the accuracy of Loop platform predictions and resulted in a significant annualized reduction in cooling system costs.

LOOP™

The Loop™ platform is an easy-to-install AI solution that can quickly and effectively reduce cooling system operational costs. Additionally, it offers a valuable tool to address corporate sustainability metrics, including greenhouse gas emission reduction targets.

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