



# LEADING THE WAY TO CENTRAL PLANT OPTIMIZATION

*SitelogIQ's Central Plant Solutions optimize the efficiency of central utility systems, including chillers and boilers, through advanced algorithms and machine learning. By integrating seamlessly with existing building management systems, our solutions adjust in real-time to building loads and environmental changes, reducing energy consumption and operational costs.*

***This approach not only enhances system longevity and performance but also significantly lowers environmental impact, offering a sustainable and cost-effective solution for facility management.***

- External information such as current and forecasted weather, utility tariff structures, grid emission factors, and occupant density (if available) is fed to our AI engine.
- Predictive AI simulates the future state of your building with 99.6% accuracy to guide decision-making.
- Deploying the right set of algorithms, the AI engine autonomously writes back to individual pieces of HVAC equipment, making necessary adjustments every 5 minutes.
- The system is further optimized with Remote Terminal Unit (RTU) coordination, humidity and dew point control (when applicable), and demand control ventilation.

## ENERGY & OPERATIONAL COST SAVINGS

One of the most immediate benefits of central plant optimization is the significant reduction in energy consumption and operational costs. SitelogIQ's comprehensive approach combines state-of-the-art technology, engineering expertise, and ongoing measurement, verification, and analytics to deliver up to **50% reduction in HVAC system energy costs year after year.**

- **Intelligent Energy Management:** Our systems use both real-time data and predictive analytics to make operating decisions, reducing unnecessary energy use.
- **Holistic System-Level Optimization:** By optimizing the performance of both building HVAC systems and central plants in a comprehensive fashion, we reduce wear and tear, prolong equipment life, and cut down on maintenance costs.

## RELIABILITY & UPTIME

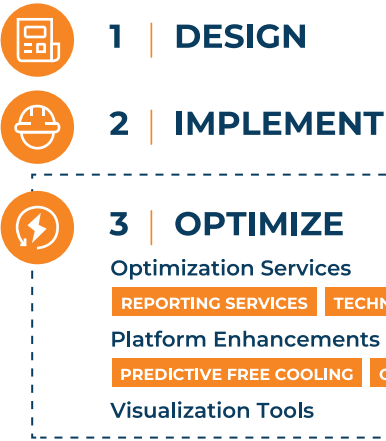
In critical facilities, reliability, uptime, and stability are non-negotiable. Our solutions are built to ensure that HVAC system operation is 100% reliable and that potential issues are identified and resolved before they cause downtime. This avoids costly disruptions and maintains smooth operations.

- **Predictive Maintenance:** Using data analytics, we predict equipment failures before they happen, allowing for planned maintenance that avoids disruptions.
- **Real-Time Fault Detection:** Our system continuously monitors equipment performance and detects faults in real-time, enabling immediate corrective actions.

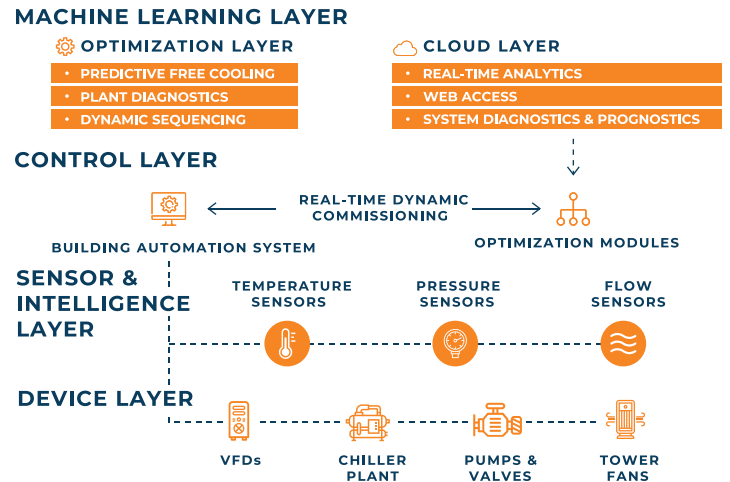
## CHILLER PLANT OPTIMIZATION BENEFITS

- Automatically, continuously optimizes chilled water systems in the most holistic, intelligent manner.
- Adapts and responds to real-time building loads and changing ambient and occupancy conditions.
- Delivers consistent savings across industries, settings, and control systems.
- Streamlines operations and lengthens equipment life.
- Increases productivity of facility support, personnel.
- Ensures maximum flexibility and control with ON, OFF, and PARTIAL optimization modes.

## THE SITELOGIQ PLATFORM



## SITELOGIQ TECHNICAL ARCHITECTURE



SiteLogIQ provides a patented, state-of-the-art configurable control software that forms one operational module of an energy optimization platform and a continuous, system-level optimization of centrifugal chilled water plants. Its patented relational control algorithms calculate the most efficient operation of an entire chilled water system and automatically and continuously optimize plant performance in real time. The technology continuously and dynamically adapts to fluctuating load, weather, and occupancy conditions to yield the lowest possible kW/ton—and the greatest energy and cost savings—while maintaining superior occupant comfort. SiteLogIQ can provide **efficiency savings of up to 50%**.

### HOLISTIC, SYSTEMS-LEVEL OPTIMIZATION VIA PATENTED, RELATIONAL CONTROL ALGORITHMS

The patented, relational control algorithms that SiteLogIQ has in place automatically optimizes all variable-speed chilled water plant components in relation to one another—in response to real-time building loads and changing ambient and occupancy conditions. Conventional optimization methodologies adjust plant operations with respect to controlled setpoints, which significantly reduces operating efficiency.

Our demand-based, relational control algorithms holistically determine the most efficient operation of the entire plant and continuously, at 30-second intervals, advise the building automation system (BAS) precisely how to tune and optimize the plant to minimize energy use across the system.

### METICULOUS MEASUREMENT AND VERIFICATION

SiteLogIQ collects data from each part of the networked system in time-stamped 5-minute intervals and uses actual kW meters to calculate energy usage. At each time stamp, the system calculates total plant cooling tons, total chilled water plant kW/ton, chiller kW/ton, and kW/ton for each set of chilled water pumps, condenser pumps, and cooling towers.

Extensive, accurate real-time measurement ensures maximum operational agility and verification of long-term performance, efficiency, and savings. Our system complies with the International Performance Measurement and Verification Protocol (IPMVP)—Option B. This method measures and verifies the full impact of the optimization project and documents savings at both component and systems levels.

### MAXIMUM OPERATIONAL FLEXIBILITY WITH ON, OFF & PARTIAL OPTIMIZATION MODES

Because SiteLogIQ's technology runs on top of your BAS, it does not change your BAS in any way. This gives you maximum operational freedom and flexibility. Uniquely, our system makes it easy to engage or disengage optimization as you see fit.

Resume operation of your pre-optimization control systems and sequences at any time and for any reason. Having full control over your optimization mode at all times—you can choose ON, OFF, and PARTIAL optimization modes—minimizes operational risk and maximizes flexibility.

### 24/7 ACCESS TO DATA VIA WEB AND MOBILE APPS

SiteLogIQ's technology, like all of our platform modules, pairs with a cloud-based performance and energy management platform—accessible anytime, anywhere via Web and mobile app (iOS and Android). Continuously monitor organizational energy, carbon, and dollar savings in real time or historically. See precisely how efficiently your plant is performing and how much energy it is using, any given moment, week, month, or year. Easily configure or customize your app or Web experience for fast access to unique trends and information you need. You can also verify performance against forecast and pre-optimization levels, ensure progress toward sustainability goals, and share status with others in just one click.