The OptiCx™ Platform from Optimum Energy delivers scalable, data-driven energy optimization and performance management through operational modules, machine learning, web and mobile apps, and world-class support. Yielding significant, system-wide energy and cost savings up to 50%, the OptiCx Platform provides a variety of customizable options for customers to take a modular, pay-as-you-go approach to implementation.

Customers access the ongoing benefits of the platform through two subscription levels. The Expert level provides data-driven energy optimization for HVAC systems, and the Essentials level is an optional intermediate step that provides performance and energy management for these systems. Customers have the option to start with the Essentials plan and build an energy usage baseline in preparation for upgrading to full optimization when the timing is right for them.

Benefits to the modular approach

- Quicker time to initial implementation
- Flexibility to draw from OpEx rather than CapEx budget
- Reduce first costs: spread costs out over time
- Wide range of customization options tailored to individual needs and budget constraints

Pay as you go Deployment Model

The Essentials plan builds the foundation for optimization with real-time performance & energy management.

The Expert plan provides full energy optimization for HVAC systems on a closed-loop basis, without requiring operator intervention.

- Options accommodate a variety of needs and budgets
- Pay-as-you-go approach Central Plant Optimization
- Build a baseline with an Essentials plan to prepare for upgrading to Expert
- Option to move from partial to full implementation over time
Expert Level Implementation Options with OptimumLOOP™

OptimumLOOP — one of the operational modules available through the OptiCx Platform — provides continuous, system-level optimization for chilled water plants. For Expert level subscribers who have installed OptimumLOOP, optimization includes four implementation options. You have the option of implementing all of these at once (as an integrated whole), or as individual modules. Implemented together, the components work synergistically to yield system-wide optimization of your chilled water plant. A building block approach, beginning with one or a combination of the four OptimumLOOP components, can be an ideal way to get started realizing significant cost and energy savings—even if your plant is not yet ready for full optimization. A wide range of choices provides a way to grow into full optimization, and any relevant system upgrades, over time.

The following four OptimumLOOP components are available “a-la-carte.” Start with one, two or more components and build on these based on your organizational goals. The Optimum Energy team will work with you every step of the way to clarify your options and customize an implementation plan that best meets your specific needs and goals.

OptimumLOOP CT

OptimumLOOP CT optimizes the cooling towers serving the chilled water plant, using patented staging and speed-control methodology based on mathematical relationships between chiller and tower fan power (kW). As with all OptimumLOOP modules, it takes into consideration a wide range of real-time chilled water plant parameters to achieve optimization without compromising reliability. OptimumLOOP CT yields total chilled water plant savings of 10-15%.

OptimumLOOP CDWP

OptimumLOOP CDWP optimizes variable-speed condenser water pumps, and like all OptimumLOOP modules, it uses mathematical power relationships among chilled water plant sub-systems to achieve system optimization. OptimumLOOP CDWP employs patented speed-control methodology for condenser pumps based on chiller power (kW), and provides total chilled water plant savings of 5-10%.

OptimumLOOP CHWP

OptimumLOOP CHWP optimizes variable speed chilled water pumps. It employs a network-based method of distribution pump control that is particularly effective in large distribution circuits that have different critical flow segments under variable conditions. Efficiency-based pump staging along with real-time valve positions are used in an iterative control algorithm called the valve orifice method. OptimumLOOP CHWP provides total chilled water plant savings of 5-10%.

OptimumLOOP CH

OptimumLOOP CH optimizes chiller staging and chilled water set point. It sequences chillers based on their “natural curve”; that is, always keeping the chillers and auxiliary equipment at their peak efficiencies. The algorithm can be extended to Thermal Energy Storage and large campus chilled water systems, providing Optimum Energy’s patented “sweet spot” optimization—both for individual plant components and for two or more central utility plants on a common loop. OptimumLOOP CH yields savings of 10-20%.

Implementation Options: Which Approach is Right for You?

Since there are fewer prerequisites with a modular approach optimization, there are also lower barriers to entry. For example: to optimize cooling towers (OptimumLOOP CT), at a minimum, your control system must automatically control the cooling towers and cooling tower fans. By contrast, to optimize pumps (OptimumLOOP CDWP and/or OptimumLOOP CDWP), the control system must automatically control the relevant pumps. A building block approach, beginning with one or a combination of the four OptimumLOOP components, can be an ideal way to get started realizing significant cost and energy savings—even if your plant is not yet ready for full optimization. A wide range of choices provides a way to grow into full optimization, and any relevant system upgrades, over time.