

CHARLESTON SURGERY CENTER ACHIEVES ENERGY OPTIMIZATION WITH FDD

PROJECT AT A GLANCE

Established in 1988, Charleston Surgery Center operates a state-of-the-art medical facility featuring four operating rooms, one procedure room, and one Endoscopy suite. Their 90-physician team delivers specialized surgical care across multiple disciplines in Charleston, South Carolina.

46%

REDUCTION IN ELECTRIC
REHEAT ENERGY
CONSUMPTION

22,700

SQ FT FLOOR AREA

6

OPERATING ROOMS

BUILDING PERFORMANCE PARTNER:



CHALLENGE

The facility's building automation system struggled to maintain the precise environmental conditions required for surgical operations. This resulted in:

- Excessive energy consumption from simultaneous heating and cooling
- Critical temperature and humidity control issues
- Operational inefficiencies affecting patient care schedules

SOLUTION: CLOCKWORKS ANALYTICS IMPLEMENTATION

Led by the building automation expertise of **Total Comfort Solutions**, Clockworks Analytics' fault detection and diagnostics (FDD) platform was deployed to optimize the facility's HVAC operations while maintaining compliance with ASHRAE, ASHE, and ANSI healthcare ventilation standards.

KEY FEATURES UTILIZED:

- Automated fault detection to identify energy waste from simultaneous heating and cooling
- Advanced analytics dashboard for real-time system performance visualization
- Custom sequence optimization tools for unoccupied hours
- Automated measurement and verification capabilities

TECHNICAL IMPLEMENTATION

Total Comfort Solutions used Clockworks Analytics' platform, which integrated directly with Charleston Surgery Center's Niagara-based building automation system (BAS), to:

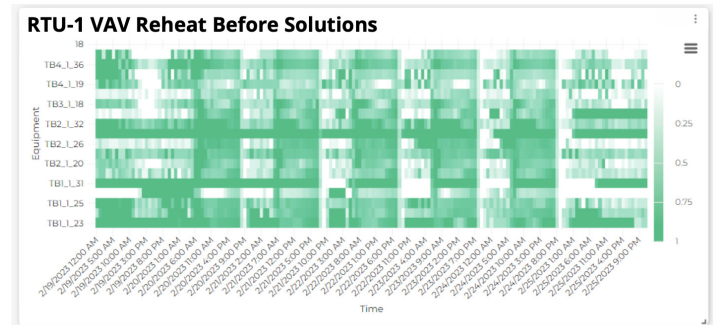
- Monitor HVAC sequence performance
- Identify opportunities for nighttime setback optimization
- Eliminate unnecessary electric reheat during unoccupied periods
- Verify energy savings through automated measurement and verification

RESULTS

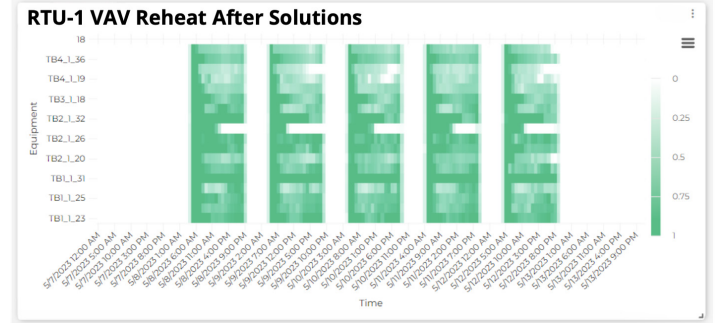
The implementation of Clockworks Analytics' FDD platform achieved:

- 46% reduction in electric reheat energy consumption
- Improved temperature and humidity control
- Enhanced operational efficiency through automated system monitoring
- Maintained compliance with healthcare facility standards

The successful deployment at Charleston Surgery Center demonstrates Clockworks Analytics' ability to deliver substantial energy savings while maintaining critical environmental conditions in healthcare facilities. This implementation, led by the building performance expertise of Total Comfort Solutions, serves as a model for other surgical centers seeking to optimize their HVAC operations through advanced analytics and automated fault detection. The platform's continuous monitoring capabilities ensure sustained performance improvements and energy savings, positioning Charleston Surgery Center for long-term operational excellence and environmental stewardship.



Screenshots from our advanced fault detection and diagnostics. Green indicates the activation of the reheat system.



ABOUT CLOCKWORKS ANALYTICS

Clockworks Analytics provides state-of-the-art building performance management software for facility managers, engineers, and service providers. Clockworks Analytics flagship software, Clockworks™, provides automated diagnostics that reveal prioritized and actionable insights to improve facility performance and reduce costs, allowing teams to focus their time and resources on achieving the most impact. Using rich data and analytics, we help top-notch facilities teams stay on top by providing instant visibility into the highest-priority issues impacting their facilities every day.