

# Case study

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## Financial Statement Services, Inc.

*Upgrades result in energy savings of nearly \$72,000/yr, with a payback of less than one year; utility rebate of nearly \$53,000 • Santa Ana, California*

*Founded in 1980, Financial Statement Services, Inc. (FSSI) is a nationwide, full-service print and mail leader, specializing in the secure, outsourced design, production and delivery of time-critical customer communications, such as statements, letters, bills and mandated compliance documents. Industries served by FSSI include financial services, insurance, public utilities, healthcare, government and others. Nearly 150 employees work in the company's 168,000 sq ft corporate headquarters, a two-floor office building with security-access doors throughout and a glass-enclosed front lobby.*

### Challenge

When FSSI's business growth demanded a larger building, increasing energy efficiency to drive down operating costs was its priority. With quality control and security crucial due to the critical nature of its business, FSSI also sought to improve the reliability of support systems in order to maintain customer confidence, enhance employee comfort, increase productivity and further optimize its operation.

### Solution

Based on a trusted relationship that spanned more than twenty years, FSSI looked to Trane® in the very early stages of design to develop an energy-efficient solution for a completely new building. Sharing FSSI's passion for service, Trane made plans to implement the upgrades while working around the company's nonstop schedule. Trane began by performing an audit to identify potential energy conservation measures (ECMs), analyze energy savings and calculate potential utility company incentives to offset project cost.

#### Improving efficiency and comfort

Reliable, energy-efficient Trane HVAC systems were selected to handle the comfort needs of employees and the sustainability objectives of FSSI. A 400-ton CenTraVac™ centrifugal water-cooled chiller, capable of sustaining operating temperatures down to 34°F without using anti-freeze, was installed. The CenTraVac chiller offers



*Committed to growth, innovation, energy efficiency and sustainability, FSSI is guided by its values: Extraordinary Effort, Passion for Service, Unwavering Integrity, Open-Ended Creativity and Customer Care.*

full-load efficiencies down to 0.45 kW/ton, and uses low-pressure refrigerant, producing a refrigerant leak rate of less than 0.5 percent annually. Working with the centrifugal chiller is a 100-ton Series R™ Helical Rotary (RTAC) water-cooled chiller. The direct-drive, low speed, semi-hermetic compressor design of the RTAC chiller exceeds the ASHRAE 90.1 standard at both full- and part-load operation. Twenty-one Voyager™ package rooftop units, with direct-drive, variable speed plenum fans, provide quiet operation and work along with ten Performance Climate Changer™ air-handling units to deliver high efficiency filtration to improve indoor air quality and humidity levels.

### Reducing energy consumption, enhancing productivity

Fixtures throughout the building were replaced with high efficiency lighting, significantly reducing energy consumption, while improving the working environment and enhancing productivity. Occupancy sensors in the warehouse and hallways reduce electricity waste, with lights remaining off during the day unless activated by motion, such as a moving forklift.

### Ensuring optimum system performance

FSSI uses a Trane® Tracer Summit™ Building Automation System (BAS) to control climate, lighting and energy consumption, accessing building systems to perform scheduling, change set points, and view reports. Using advanced technology and analytics, Trane Active Monitoring provides continuous monitoring of FSSI systems, collecting and interpreting system data. If operating anomalies or alarms are detected, Trane professionals quickly respond, notifying FSSI and making recommendations to maintain building performance parameters. Building Performance reports are reviewed quarterly to address issues that could impact system performance and energy use, enabling the team to make adjustments before problems arise.

### Maintaining reliable electricity supply

Trane assisted FSSI in initiating California's automatic demand response program. During peak demand, production room set points are reset by three degrees, a series of lights turned off, fan speeds reduced and chilled water systems unloaded, all automatically. The program helps FSSI reduce energy use, achieve greater efficiency and lower greenhouse gas emissions. Participation in the program is intended to help the state maintain a reliable electricity supply, reduce power outages and decrease the need to build new power plants.



*With high-efficiency fixtures installed, the FSSI mailroom lighting was increased 38 percent, while energy demand fell 40 percent.*

## Results

Trane worked closely with FSSI to implement ECMs to increase energy and operational efficiency, reduce operating costs and maximize system reliability at the company's headquarters. The upgrades enhance FSSI's ability to meet service agreements and maintain customer confidence, while reflecting the company's strong commitment to sustainability. The improvements are expected to provide an annual energy savings of nearly \$72,000, with a payback of less than one year. Additional savings include a one-time rebate from Southern California Edison of nearly \$53,000.

Reinvesting the energy savings in its operations and equipment is allowing FSSI to grow its business and be more competitive in the marketplace. The upgrades also have improved employee comfort and productivity.

"The operational efficiencies come from the lighting, equipment and controls that we put in place," said Jon Dietz, FSSI, founder and CEO. "We're providing a more efficient and safe workplace and using less energy. That's huge to us!"



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