



## Aurora Public Schools

### Energy Information System

### Energy Management Goals

Aurora Public Schools (APS) has served students from Aurora, CO for over 120 years. APS currently has over 40,000 students enrolled in 63 different schools. Managing energy use in a district that size is no simple task. In 2014, the District's Maintenance and Operations team started an initiative to focus on saving energy at schools. The District also joined the U.S. Dept. of Energy's Better Buildings Challenge with the goal of reducing energy use by 20% over a 10-year period ending in 2023. Although the District has been reducing energy usage, Craig Wright, Natural and Renewable Resource Manager for APS, knew the team would have to step up their efforts to achieve their full 20% reduction goal.

### Energy Information Systems & ATS Rocky Mountain

To achieve APS' energy efficiency goals, Wright began discussing implementing an Energy Information System (EIS) with the local utility, Xcel Energy. The utility developed an incentive program that provides consultative services to identify energy saving actions and covers up to 30% of the cost of an EIS installation. Working with the utility, the District issued an RFP to install an EIS. ATS Rocky Mountain was ultimately chosen to install the system due to their experience with HVAC controls at APS, as well as their expertise in EIS and facility analytics.

APS utilizes various manufacturer's control products throughout their schools, therefore they needed an EIS vendor that could integrate into any of the different systems. ATS previously upgraded APS' building automation system (BAS) to Tridium Niagara N4. This allowed point data from any of the schools to be collected regardless of controls type.

### Highlights



- Energy Information System (EIS) installed at 4 schools



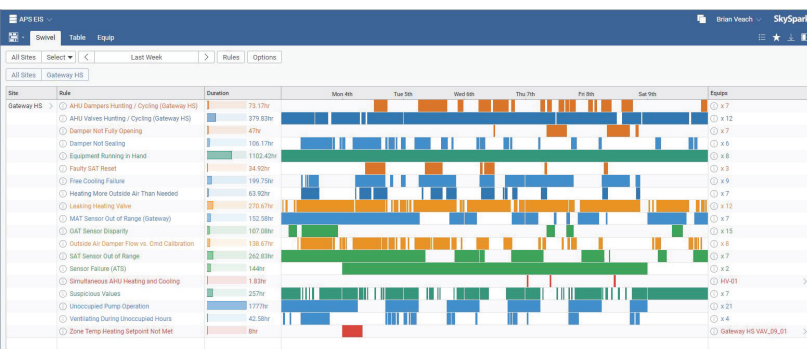
- 30% utility incentive from Xcel Energy



- Over 900K sqft covered
- Expandable EIS backbone
- 12% energy use reduction since 2014

### What is an Energy Information System?

An EIS provides facilities a tool to visualize energy usage and identify energy wasting activities. An EIS typically includes facility benchmarking, equipment fault detection, metering, and automated optimization tools.

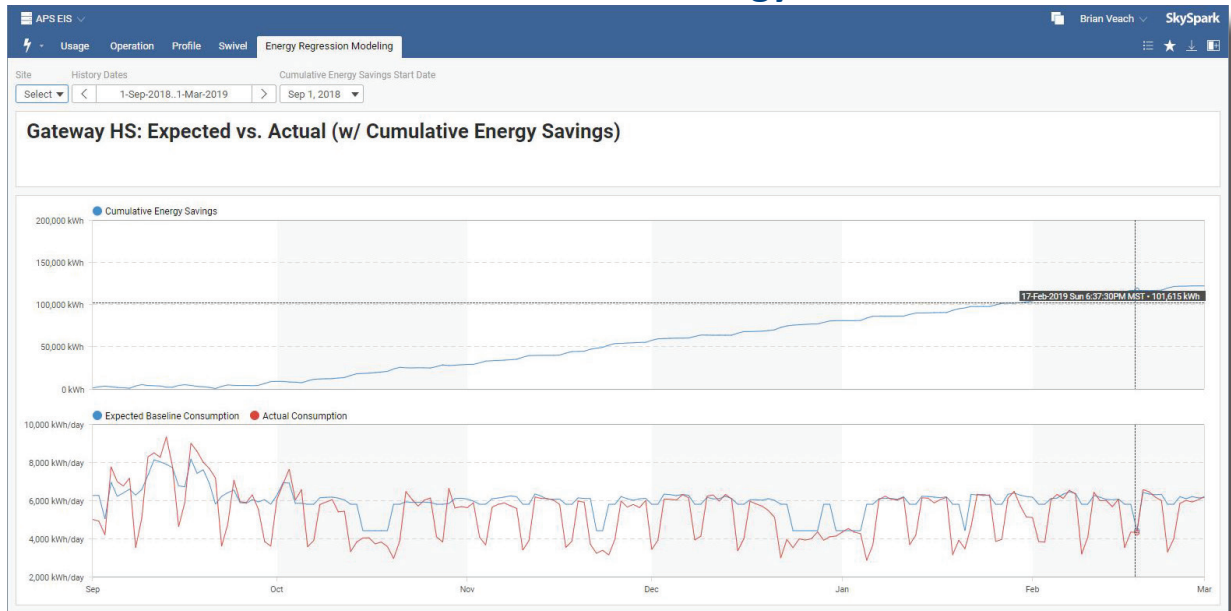


Gateway High School First-to-fix Issue Log Tracking

ATS provided the District with a meter infrastructure for electric, gas and water utilities, along with an EIS implementation across three high schools and a technical college — covering a total of 951,309 sqft. ATS utilized SkySpark by SkyFoundry for the EIS and integrated it with the existing BAS. Working with Xcel Energy's consultant, MichaelsEnergy, ATS programmed analytic rules to highlight energy wasting equipment and sequences, as well as an

electrical usage model that allows the consultant to visualize predicted energy usage against actual use, allowing further fine tuning of the schools' energy using equipment and earning APS more rebates in the process.

## Actual Vs Predicted Energy Model



## Operational Changes & EIS Expansion

The EIS implementation changed the way APS maintenance and operations staff interact. Wright is now utilizing the EIS regularly and holding weekly meetings with staff to prioritize work orders. This was a process that didn't exist before and has been a learning experience for the staff as they see how their facilities can perform. Now work can be prioritized in regard to its impact on energy usage. Each school tracks open issues in a "First to Fix" report that is generated in the EIS. In the near future the District plans to extend their EIS platform into 9 additional schools. Not only is APS on their way to achieving their 20% energy reduction goal, they were able to implement the needed EIS while offsetting the installation cost using Xcel Energy's incentive program. As of 2019, APS has reached a 12% reduction in energy usage at the District and expects to achieve the additional 8% savings by utilizing and expanding upon their EIS system.

**"This EIS implementation was a win for Aurora Public Schools, a win for Xcel Energy and a win for ATS. Win, win, win."**

Craig Wright  
Natural and Renewable Resource  
Manager  
Aurora Public Schools

## About ATS Rocky Mountain

ATS, established in 1986, specializes in custom engineered and installed Building Automation Systems control solutions for buildings' mechanical and electrical systems, allowing owners to reduce energy consumption and maximize effectiveness of facilities management personnel. ATS has offices and provides services in Colorado, Wyoming, Washington, Idaho, Montana, and Alaska. Contact your local ATS representative to find out how you can start running your building more efficiently and economically. Visit [www.atsrockymtn.com](http://www.atsrockymtn.com) to find the location near you.

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3/2019

