

CASE STUDY:

Efficient Schools Pay Off in Proctor

By Kari Rudd, the Minnesota Project



Since the beginning of their performance contract with Johnson Controls, Proctor

Public Schools has avoided over \$414,000 in energy costs- almost \$150,000 more than the amount guaranteed in their contract. This impressive amount of savings has been the result of numerous energy efficiency improvements in a variety of areas.



Initially, Proctor Schools’ biggest focus was on lighting. They converted all of their old T-12 lighting to efficient T-8 lighting. District Facilities Manager, Jack Johnson, explains that this switch brought about “incredible savings” with a three to five year payback.

Existing exit lights were replaced with LED exit lights, and district gymnasiums are being equipped with fluorescent fixtures that save 50% more energy than mercury vapor or metal halite lighting.

Project Snapshot	
Technology:	<ul style="list-style-type: none"> • Efficient lighting: T-8, electronic ballasts, fluorescent fixtures • Automatic pool cover • Boiler and water heater improvements • Variable Speed Drives for Air Handling System • Motion Sensors for lighting • Digital Control Facility Management System • Automatic temperature controls • Indoor air quality improvements
Brands:	Johnson Controls Metasys Facility Management System
Contractor:	Johnson Controls, among others
Benefits:	<ul style="list-style-type: none"> • \$414,610 total avoided costs since 1997 • Avoided problems with discomfort and overheating • Staff training

Lights are also being equipped with motion sensors- especially in bathrooms and gyms- so that they aren’t left on when a room is unoccupied.

A new digitally controlled Facility Management System (Metasys by Johnson Controls) streamlines the process of temperature regulation in each building throughout the district.

Staff received additional technical training on the proper use of this system, and buildings have been more comfortable.

Variable speed drives were installed on air handling units so that the motor can be adjusted to meet changing needs, rather than either running at full speed or being turned off.

Automatic pool covers were added to district swimming pools to save energy keeping the water warm, while also cutting down on evaporation.

In addition to installing new equipment, Proctor Public Schools repaired their existing infrastructure to maximize efficiency. Boilers were upgraded by installing new burners, steam traps and temperature control valves were repaired or replaced, and hot water piping has been insulated.

The suite of improvements and practices implemented by Proctor Public Schools is one that could easily be implemented elsewhere- and it has. Many districts have taken similar steps and have enjoyed similar results, but there is still a lot of energy savings to be gained statewide.

Because of their initiative in pursuing energy efficiency, as well as renewable energy (the district also owns a wind turbine), Proctor Public Schools demonstrates first hand that there is so much to be gained by investing in our energy future.

For more information on Energy Efficiency in Proctor Public Schools, contact Jack Johnson at jjohnson@proctor.k12.mn.us