



Sustainability in Action: New Construction & Renovations

Saint Paul Public Schools is committed to environmental stewardship by fostering healthy and sustainable schools that positively impact our students' learning experience and prepare them to be environmentally literate leaders of tomorrow.

Working hard to make saving energy a priority within operations and maintenance, the SPPS Facilities Department benchmarks building energy and water use, applies for utility rebates, funds projects with the Revolving Energy Efficiency Fund (REEF), and finds efficiency opportunities in new construction and school addition projects.

Integrating Efficiency into New Construction and Major Renovations

Larger renovation and addition projects provide a great opportunity to update not only individual equipment but also entire systems. SPPS enrolls all large projects in Xcel Energy's Energy Design Assistance program, which is a free integrated design service that predicts energy use of the building, suggests energy-saving strategies to incorporate into the design, and estimates energy cost savings and construction rebates available for the project. Post-project site assessments help to verify rebate eligible strategies were implemented.

This free service ensures that all new buildings are using energy efficient equipment, and SPPS reinvests the rebates and cost savings earned from equipment upgrades into REEF, using those funds to pay for other energy efficient projects.

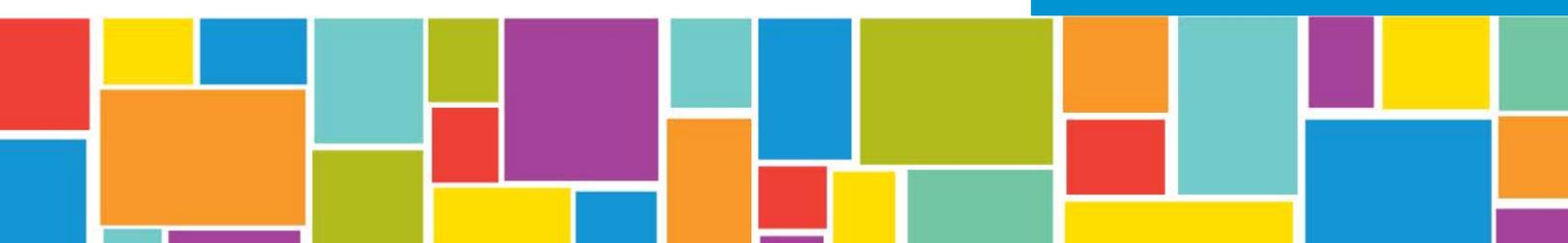
Revolving Energy Efficiency Fund

Established in 2016, the Revolving Energy Efficiency Fund pays for the implementation of energy efficiency projects. Energy cost savings from those projects are put back into the fund, thus establishing a sustainable funding cycle for energy efficiency. Previous projects have included interior and exterior lighting retrofits, installation of a dedicated heat pump, and boiler plant upgrades.

Impact Data

Total incentives earned	\$512,500
Total electricity saving	2,372,900 kWh
Total natural gas savings	263,700 therms
Estimated average payback period	6.1 years
Estimated average annual energy cost savings	\$37,000

Source: Energy Design Assistance Verification Reports for Humboldt High School, Adams Spanish Immersion, Como Senior High School, Highland Park Elementary, Horace Mann School, Linwood Monroe Lower, Linwood Monroe Upper, River East Elementary, and St. Anthony Park Elementary



Project Highlight: Horace Mann School

Xcel Energy Incentive Paid	\$25,300
Annual Energy Cost Savings	\$22,300
Estimated Payback Period, with Incentive	5.2 years

Horace Mann participated in Energy Design Assistance in 2018 when a new addition was added. Major strategies included efficient roof and wall assembly, daylighting and occupancy sensor controls for lighting, a new condensing gas boiler, and new CO2 controls of outside air for the cafeteria and multiuse room.

Project Highlight: Humboldt High School

Xcel Energy Incentive Paid	\$120,900
Annual Energy Cost Savings	\$71,400
Estimated Payback Period, with Incentive	3.2 years

Humboldt High School participated in Energy Design Assistance in 2020. Major strategies included increasing air chiller efficiency, upgrading CO2 controls for outside air, installing daylighting controls, and increasing efficiency of lighting power.

Angela Selb-Sak, senior project manager at SPPS, said the EDA process was particularly helpful on the Humboldt Project. “The EDA team helped expand our knowledge on energy savings in the design by seeing all the information in one place. We could align the options that best fit our budget and design, allowing us to move forward on improvements that resulted in more savings for the project,” said Angela.

Continuing Our Commitment to Sustainability

In 2020, Saint Paul Public Schools created an energy action plan, a comprehensive living document outlining all the ongoing District-wide strategies for increased energy efficiency and conservation. With the energy action plan, our goal is to reduce greenhouse gas emissions 45% by 2030, engaging all 73 buildings to reduce their carbon footprint through energy efficient improvements and behavior changes — positively impacting SPPS students, teachers, staff, and community members.

Learn more about the energy action plan and our efforts to be sustainable at spps.org/Sustainability.



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