



PUBLIC SCHOOL  
**CARBON-FREE**  
ASSESSMENT PROGRAM

# Public School Carbon-Free Assessment Program

A complimentary service provided to K-12 public schools who are Ameren Illinois customers

# Contents



- Public School Carbon-Free Assessment Program (PSCFA) Overview
- What's included in the Report?
- Assessment Report Focus Areas
- Program Partners
- Energy Efficiency and Financial Support
- 2022 East St. Louis Pilot Assessment Results
- Questions

# About the Public School Carbon-Free Assessment Program



The Ameren Illinois Public School Carbon-Free Assessment Program was created out of the Climate and Equitable Jobs Act (CEJA). The PSCFA reports will provide information on ways for schools to manage their energy usage and move towards the state goal of carbon-free schools by 2030.



Ameren Illinois and a team of subject matter expert partners work with school staff to gather information about District facilities and coordinated on-site assessments



A comprehensive, final report is delivered to the School District outlining the findings and relaying next steps in implementing recommendations



A copy of this assessment report is provided to the Illinois Power Agency and Capital Development board as directed by CEJA



# The Full Assessment Report Includes



**Energy efficiency  
savings opportunities**



**Mechanical insulation  
and building envelope  
opportunities**



**Solar energy  
generation potential**



**Feasibility for electrification  
of space/water heating**



**Infrastructure needed to  
support electrified school  
transportation**



**How to pursue  
WELL Health-Safety Rating**

# PSCFA Additional Resources



- Core recommendations at the district level
- Appendices containing in-depth findings for each building assessed
- Resources for financial support options available for schools
- Information on applying for staff training on efficient building operations
- Access to Ameren Illinois scholarship opportunities for high school students pursuing energy-related trade programs
- **[AmerenIllinoisSavings.com/PSCFA-Resources](https://AmerenIllinoisSavings.com/PSCFA-Resources)**

# Assessment Report

## Key Focus Areas

# Energy Efficiency Opportunities



## Low/No Cost

- System settings
- Equipment runtime

## Prescriptive Measures

- Lighting
- ECM motors
- Smart thermostats
- Heat pumps

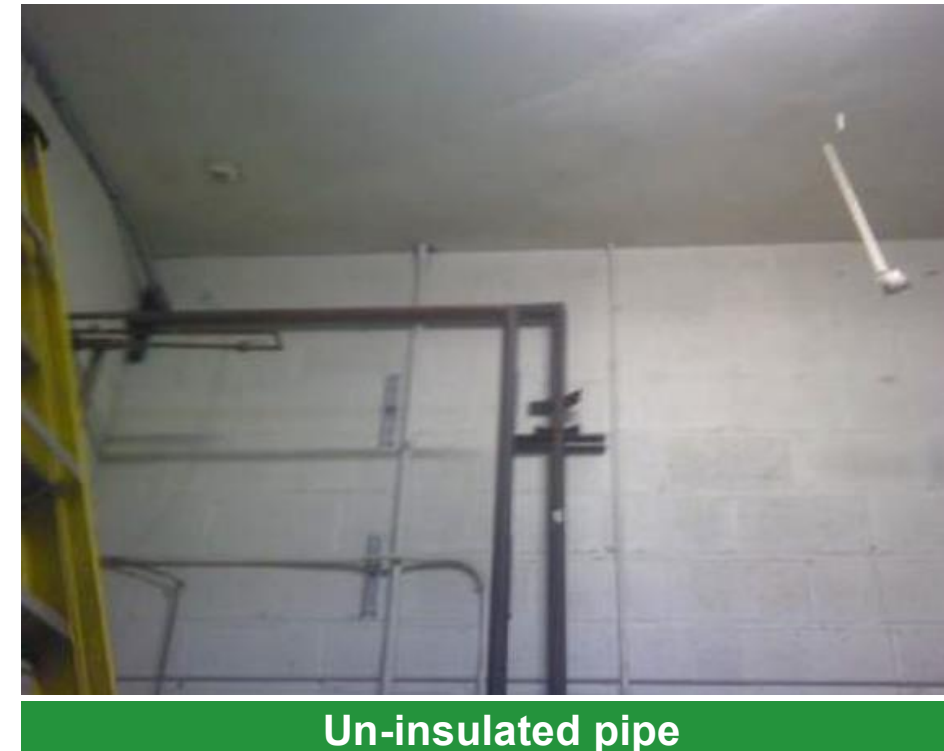
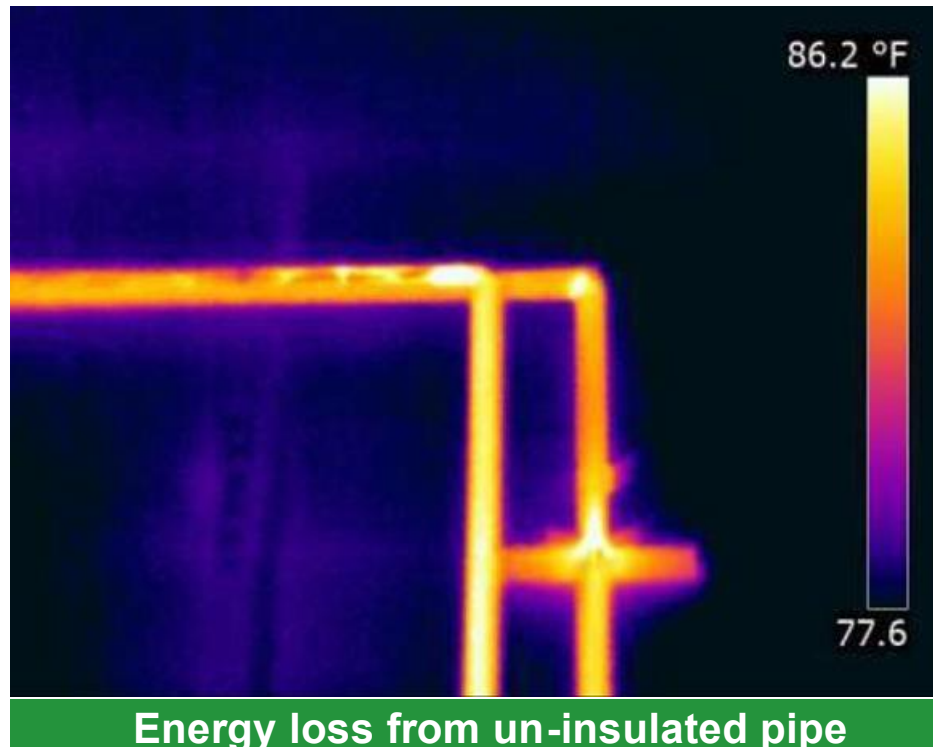
## Custom Improvements

- Large scale upgrades
- Unique energy savings measures

- Program staff will perform an on-site assessment of current equipment efficiency and system configurations throughout each facility. The final report will include all recommended energy efficiency measures to lower the energy demand and reduce the energy costs for the School District.
- Upon report completion, the Ameren Illinois Energy Efficiency Program will follow up with the school to walk through proposed measures and identify where financial incentives can be applied to help offset the cost of the energy saving upgrades.

# Inspection and Evaluation of Mechanical Insulation and Building Envelope

- Inspections to identify ways to reduce energy waste, lessen corrosion under insulation, help mitigate fire risks, reduce maintenance costs, and improve system performance.



# Total Solar Potential

- Program staff conduct enhanced modeling for solar arrays, both ground-mounted and/or rooftop.
- Assessment reports produce detailed potential locations for solar arrays and how much energy these potential locations could generate.

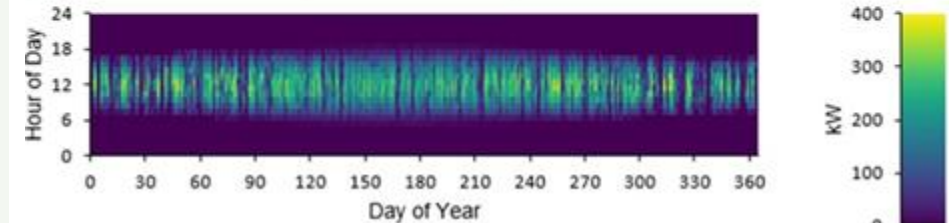


**The total estimated solar capacity for the School is 366 kW and would save the school \$73,666 annually on their existing electric bill.**

- |   |            |
|---|------------|
| 1. Estimated Roof Area Capacity PV (kW) | <b>233</b> |
| 2. Estimated Parking Lot One PV (kW)    | <b>86</b>  |
| 3. Estimated Parking Lot Two PV (kW)    | <b>47</b>  |

The Generic PV system has a nominal capacity of 366 kW. The annual production is 523,971 kWh/yr.

Rated Capacity	366 kW	Total Production	523,971 kWh
Capital Cost	\$785,152	Maintenance Cost	655 \$/yr.
Specific Yield	1,432 kWh/kW		



# Infrastructure to Electrify Space Heating and Water Heating

Modeling of the energy consumption of space and water heating systems in school district buildings to indicate how the adoption of electric technologies will impact electricity consumption and GHG emissions. Our team will analyze the upstream electrical distribution capacity to support heating equipment electrification.



**Less Efficient Boiler Systems**



**More Efficient Electric Heat Pump Systems**

# Infrastructure to Electrify Transportation Needs

- Program staff will model the electric load of the proposed EV infrastructure at each school district site.
- Our team will provide recommendations for the on-site infrastructure upgrades necessary to charge the district's fleet and employee electric vehicles (EV).
- The school district will be asked about current EV fleet size and future EV plans.
- We will analyze the electrical distribution capacity feeding the school district and determine what is necessary to support the proposed EV charging infrastructure.



# Investment Required for WELL Health-Safety Rating



The Program will work closely with the school district to gather a wide array of information. The final report will advise on what is needed to achieve the WELL Health-Safety Rating (HSR).

The WELL HSR for Facility Operations and Management is an evidence-based, third-party verified pathway for addressing acute health threats.

**The WELL Health-Safety Rating includes strategies to help:**

- Keep spaces clean and sanitized
- Provide essential health benefits and services
- Communicate health and safety efforts
- Prepare for an emergency
- Assess air and water quality



# Program Partners



Ameren Illinois partners with numerous subject matter expert organizations for the PSCFA Program to ensure the highest-level analysis and information are provided. All partners will work closely with the school district throughout the process.



Energy Efficiency  
Assessment



Energy Efficiency  
Assessment



Mechanical  
Insulation and  
Building Envelope



WELL Certification  
Feasibility

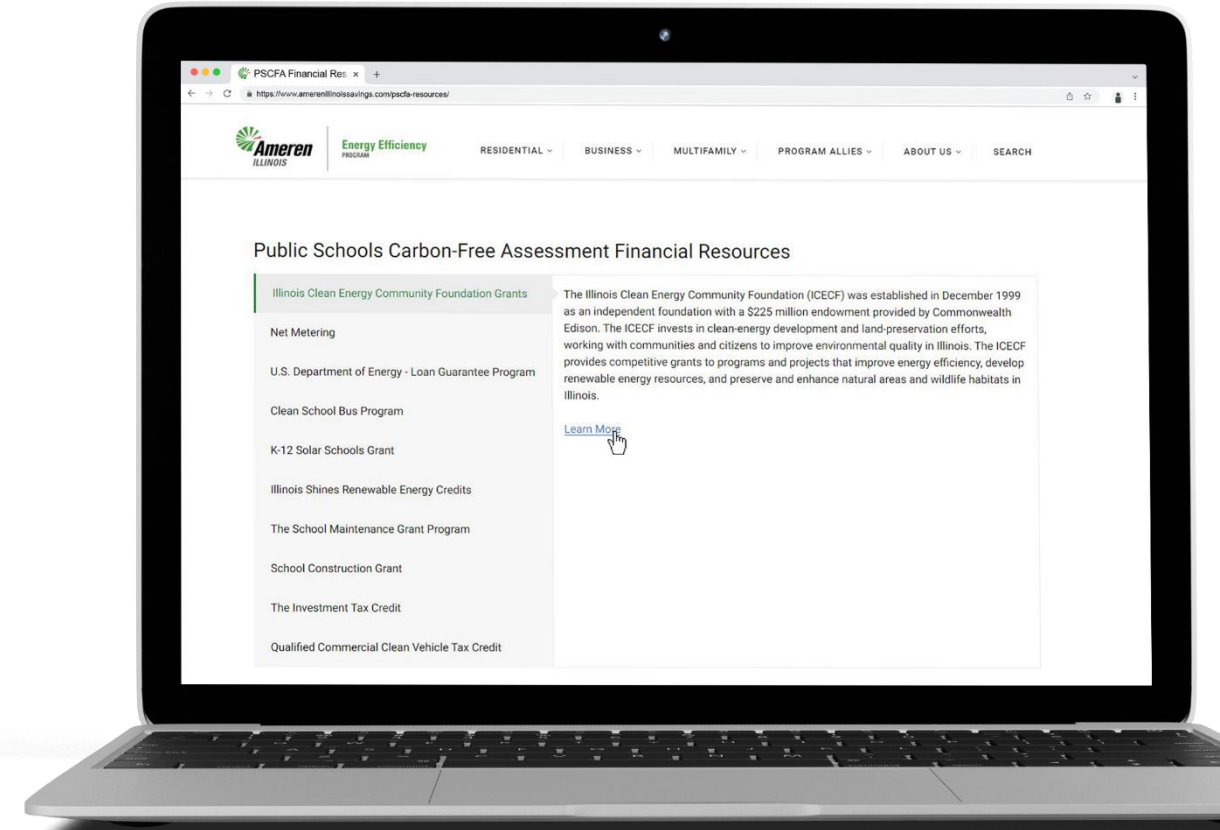


Solar Study, EV  
Infrastructure, Heat  
Electrification

# Funding Opportunities to Implement Recommendations



- To help address project costs, the PSCFA Program will ensure that districts are made aware of financial support opportunities to help them move forward in their carbon-free transition.
- Each assessment will include access to a wide array of up-to-date financial resources available from Ameren Illinois, as well as those at the Federal, State, and local levels.
- The resource list will include brief program descriptions of current offers that align with the report's recommendations and information on how to pursue them.



# Energy Efficiency Follow-Up

- After the report is delivered, an Energy Advisor from Ameren Illinois Energy Efficiency Program will connect with the school district.
- The Energy Advisors will help school districts implement recommended energy efficiency measures and secure financial incentives available through the Ameren Illinois Energy Efficiency Program.
- The assessment reports will provide information on zero-cost Building Operation Certification (BOC) training opportunities to equip school district facility managers with the knowledge of ongoing best practices in creating and maintaining more energy efficient buildings.



---

**ENERGY EFFICIENCY  
PROGRAM**



PUBLIC SCHOOL  
**CARBON-FREE**  
ASSESSMENT PROGRAM

# Real Results

## CUSD #3 Fulton County



# CUSD #3 Fulton County



- PSCFA report uncovered an energy-saving HVAC scheduling project
- School district is estimated to save over \$23,000 annually after project completion
- Updates cost the school \$0 to implement

"The first month after implementing the building schedule at the high school, our electric bill was lowered by \$1,700. It is incredible!"

- Jodee Mathis, District Bookkeeper



*Cuba Middle-Senior High School*



PUBLIC SCHOOL  
**CARBON-FREE**  
ASSESSMENT PROGRAM

# Questions?

For more information about this FREE service provided by Ameren Illinois visit  
[www.amerenillinoisavings.com/PSCFA](http://www.amerenillinoisavings.com/PSCFA)