



PUBLIC SCHOOL
CARBON-FREE
ASSESSMENT PROGRAM

Public School Carbon-Free Assessment Program

The PSCFA is a FREE service provided by Ameren Illinois to its K-12 School electric customers

Agenda



- 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 Illinois **Climate and Equitable Jobs Act** states that Ameren Illinois shall implement a program providing complimentary assessment reports for K-12 public school electric customers. 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 will work closely with school staff to gather information about District facilities and coordinate on-site assessments of eligible buildings
- A comprehensive, final report will be delivered to the School District outlining the findings and relaying next steps in implementing recommendations
- A redacted version of the report is also required to be made available on the Illinois Power Authority website

Assessment Report Content

The Six Required Report Task Areas

1. Opportunities for Energy Efficiency upgrades
2. Opportunities for Building Envelope and Mechanical Insulation upgrades
3. Information on potential results of strategic Solar generation installations
4. Analysis of the feasibility of electrifying space and water heating equipment
5. Information on the Infrastructure needed to install EV Chargers
6. Recommendations on pursuing WELL Health and Safety Rating

Ameren Illinois PSCFA Additional Content

- Core recommendations at the District level
- Appendices containing in-depth findings for each building assessed
- Link to up-to-date resource page outlining financial support options available to schools
- Information on applying for staff training on efficient building operations practices
- Access to the Ameren Illinois scholarship offer for diverse students pursuing energy related trade programs



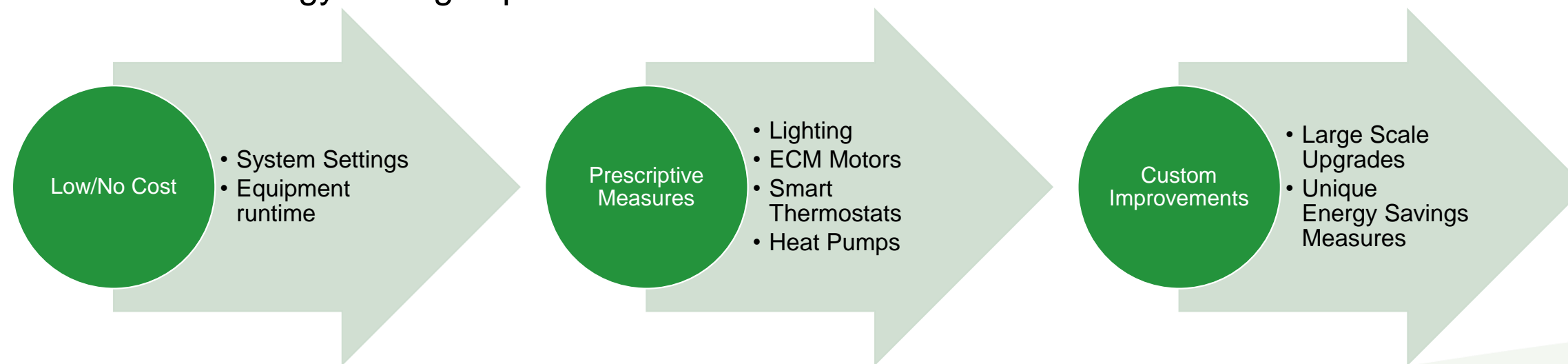
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Assessment Report Key Focus Areas

Energy Efficiency Opportunities



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



Inspection and Evaluation of Mechanical Insulation and Building Envelope



- The team will perform inspections of the Building Envelope and Mechanical Insulation of School District facilities. These inspections will 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 will conduct enhanced modeling for solar arrays, both ground-mounted and/or rooftop
- Study reports will be produced that detail potential locations for solar arrays and how much energy these potential locations could generate.

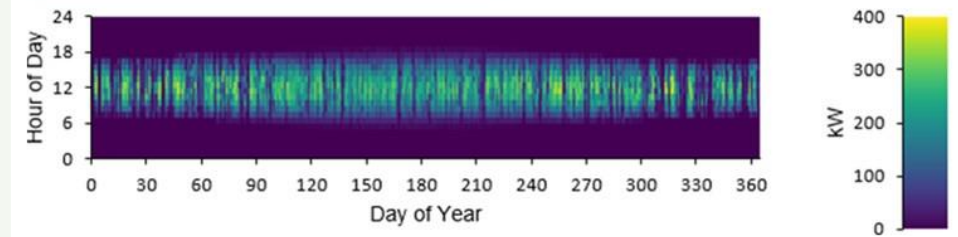


The total estimated solar capacity for the School is 366 kW and would save the school \$73,666 annually on their existing electric bill.

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

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

The Program will model the energy consumption of space and water heating systems in school district buildings and 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 the school district on what is needed to achieve the WELL Health and Safety Rating (HSR).

The WELL Health-Safety Rating 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 will be partnering with a number of subject matter expert organizations for the Public School Carbon-Free Assessment Program to ensure the highest-level analysis and information are provided to each School District. All of these partners will work closely with the School Districts throughout the process.



Energy Efficiency
Assessment



Energy Efficiency
Assessment



Mechanical
Insulation and
Building Envelope



WELL Certification
Feasibility

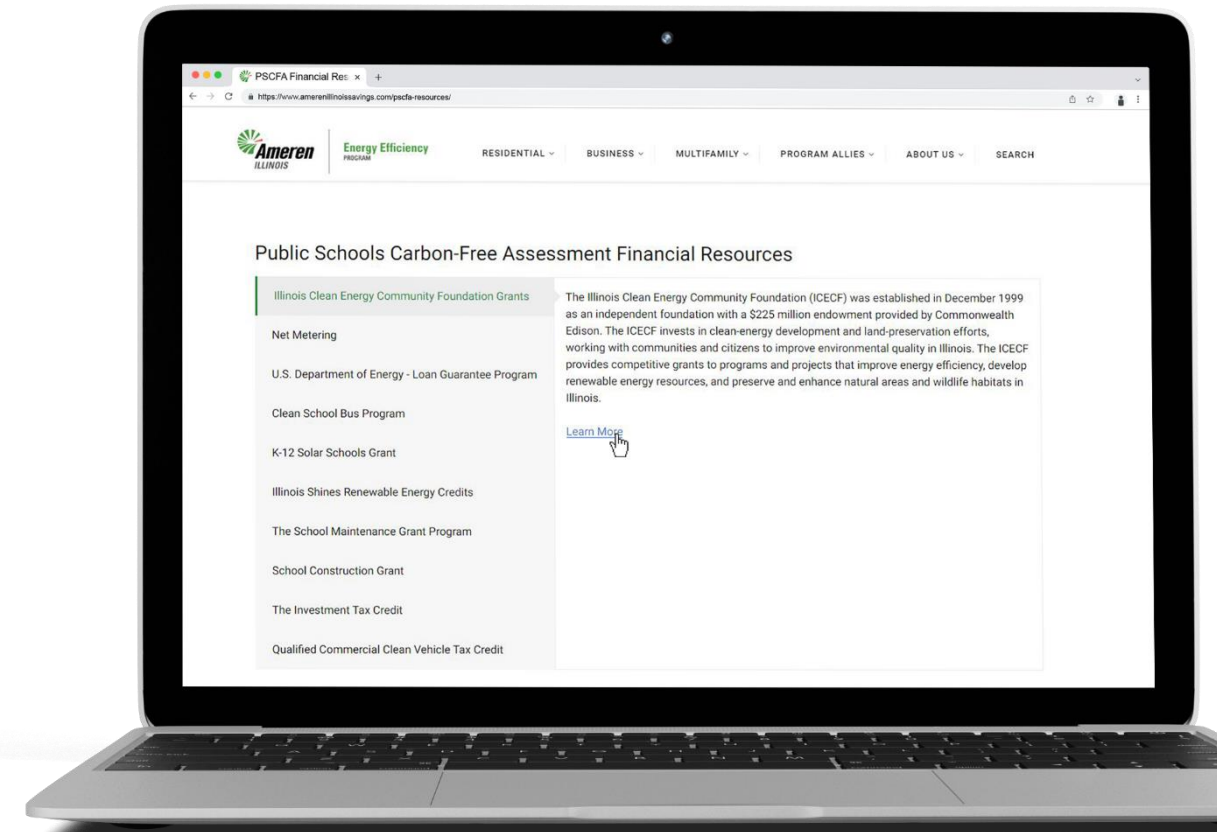


Solar Study, EV
Infrastructure, Heat
Electrification

Funding Opportunities to Implement Recommendations



- Recognizing that the cost of improvements will be a substantial barrier for School Districts, the PSCFA Program will ensure that Districts are armed with the knowledge 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



- Following delivery of final district assessment report, an Energy Advisor from Ameren Illinois Energy Efficiency Program will connect with the school district.
- The Energy Advisors will work with school districts on how to execute implementation of recommended energy efficiency measures and provide information of all financial incentives available to school districts 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.



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East St. Louis 2022 Pilot Assessment



East St. Louis School District #189 Pilot Assessment



- Ameren Illinois completed pilot Public School Carbon-Free Assessment with East St. Louis in 2022 which evaluated 15 district buildings on all six aspects of the assessment.

Assessment Highlights

- › 4,400 Metric tons in carbon reduction from all proposed measures
 - › Potential to achieve net zero energy usage if all solar installations are completed
 - › All district vehicles can be electrified through central EV charging depot
 - › Greater than \$500,000 in annual energy savings from identified energy efficiency opportunities
 - › ~\$22,000 in annual energy savings from building envelope and mechanical insulation improvements
 - › 19 Measures identified to improve the health and safety of students and staff across the district
- In 2023, The East St. Louis School District completed 14 building weatherization projects using Ameren Illinois incentives based on the findings from their PSCFA Report

Link to the [East St. Louis School District #189 PSCFA Report](#)



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Questions?

For more information about this FREE service provided by Ameren Illinois visit
www.amerenillinoissavings.com/PSCFA