Transforming Energy Projects: Leveraging Direct Pay Tax Credits Under the IRA

A climate-conscious and innovative approach to create resiliency in schools

Yolo County OFFICE OF EDUCATION

We want you to walk away with -

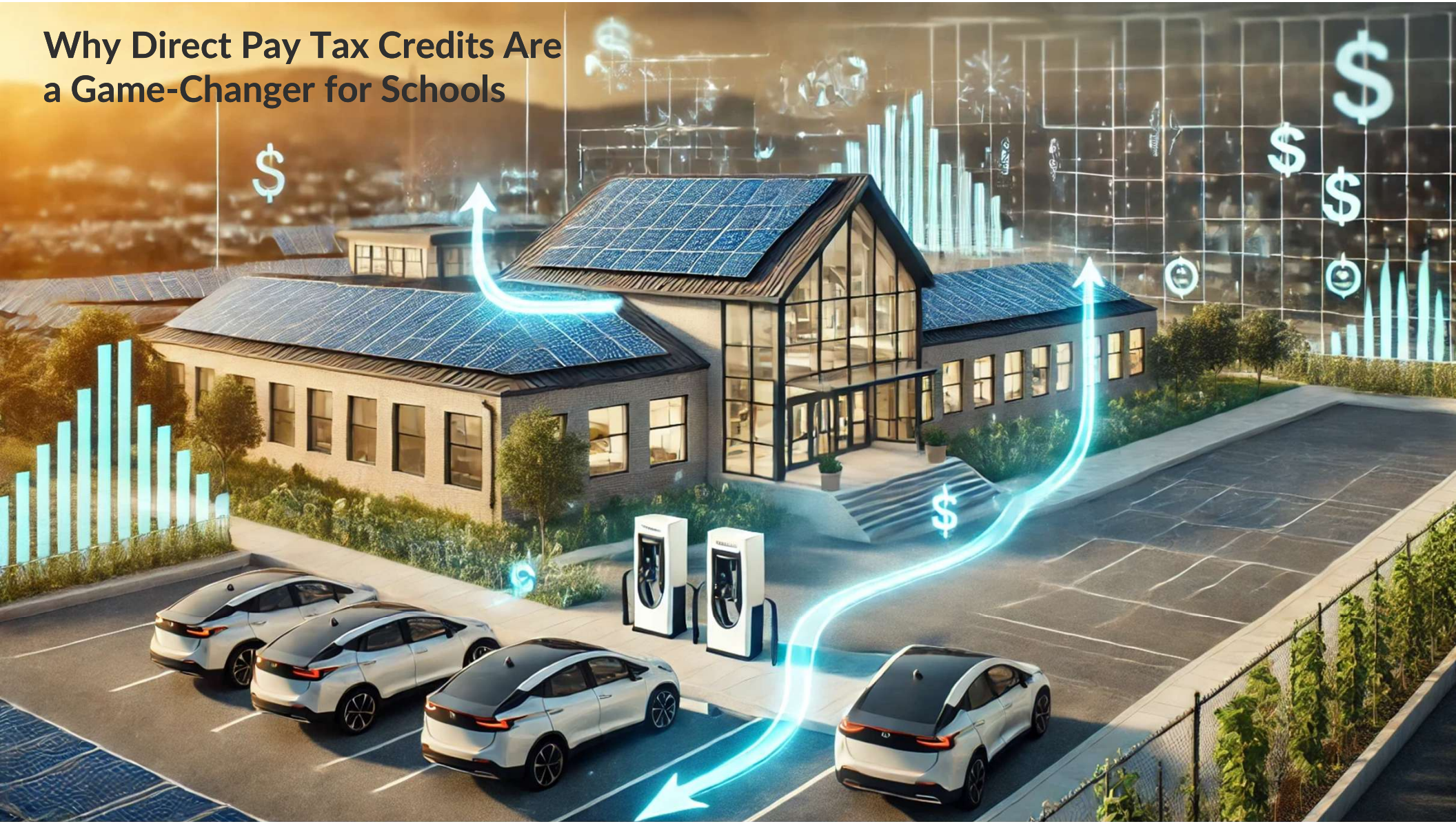
- You get to hear about a cool project
- Learn a snippet about project finances
- AND TAXES - IRS CHECKS!!! $$$$
- Realize how to leverage your resources
- Take away some effective communication tactics
  - There is a full-circle purpose-driven reason behind every singular item in this presentation
- Tactics on serving regional needs
- How to approach a new concept or idea

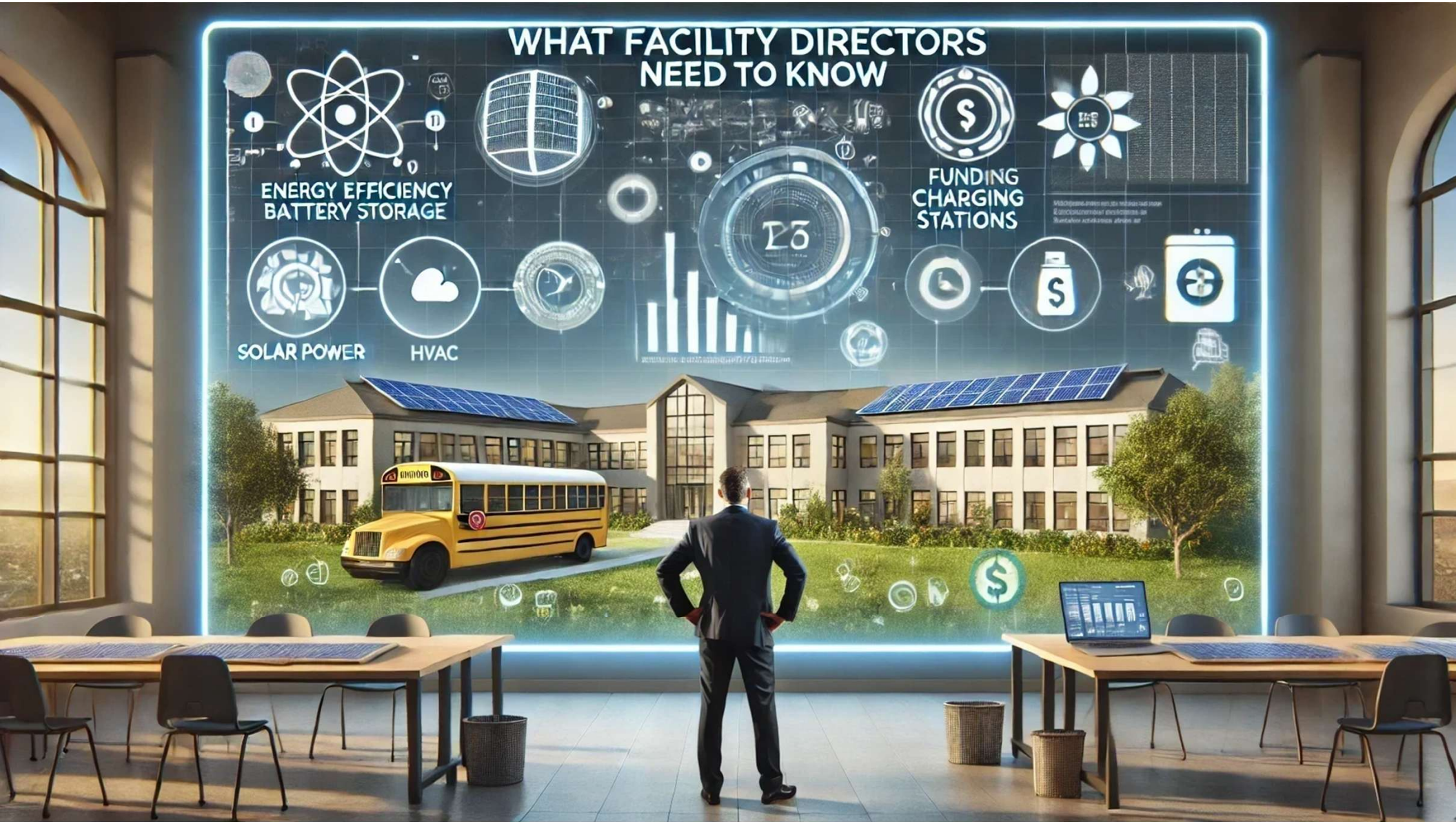

Our project


Tax credit and finances


Let's inspire change

Why Direct Pay Tax Credits Are a Game-Changer for Schools




WHAT FACILITY DIRECTORS NEED TO KNOW
ENERGY EFFICIENCY
BATTERY STORAGE
SOLAR POWER
HVAC
FUNDING
CHARGING
STATIONS

Simplifying Federal Incentives for Tax-Exempt Entities

- Schools are eligible for Direct Pay tax credits
- Through the Direct Pay, you can obtain up to 30% of eligible clean energy projects!
- This is already codified under Section 6417 of the IRS code
- Get this direct benefit!

A Step-by-Step Guide for Schools

1. **Identify Eligible Projects**:
   i. Determine which clean energy initiatives qualify for tax credits under the Inflation Reduction Act.
2. **Establish Tax Year**:
   i. Confirm your organization's tax year to ascertain the appropriate filing deadlines.
3. **Place Property in Service**:
   i. Ensure the clean energy property is operational before seeking a registration number from the IRS.
4. **Complete Pre-Filing Registration**:
   i. Register with the IRS by providing necessary details about your organization and the specific projects.
   ii. Upon successful registration, you'll receive a unique number for each project, which must be included in your tax return.
5. **Meet Eligibility Criteria**:
   i. Fulfill all requirements for the desired tax credit and any additional bonus credits.
   ii. Maintain thorough documentation to support your eligibility and the credit amounts claimed:
6. **File Annual Tax Return**:
   i. Submit the appropriate tax return (e.g., Form 990-T) by the designated due date, including the elective payment election and all relevant forms.

For a comprehensive understanding, please refer to the full document: IRS Publication 5817.

Eligible Projects

1. **Renewable Energy Systems**
   Solar Power Installations: Photovoltaic (PV) systems on rooftops or ground-mounted arrays.
   Geothermal Systems: Ground-source heat pumps or other geothermal energy systems for heating and cooling.
2. **Energy Storage Systems**
   Battery Storage Projects: Standalone or paired with renewable energy systems to store and manage electricity.
   GEO Thermal Energy Storage: Systems that store thermal energy for later use in heating or cooling.
3. **Electric Vehicle (EV) Infrastructure**
   EV Charging Stations: Installation of EV chargers for staff, students, and visitors.
   Electric School Buses: Transitioning to EVs for school transportation fleets.
4. **Microgrid and Resiliency Projects**
   Microgrids: Small-scale power grids that can operate independently or in conjunction with the main grid.
   Backup Power Systems: Renewable energy systems with storage for maintaining power during outages.
5. **Energy Equity and Community-Focused Projects**
   Projects in **low-income or underserved communities** that provide additional tax credit bonuses.
6. **Carbon Oxide Sequestration**

Everything starts with a vision

Key Concept: Micro Grid

Buildings are powered by the main grid (left). Our micro grid (below) can operate in conjunction with the main grid to lower consumption and peak demands costs to save $, or entirely separately from the grid.

Buildings

What are the driving factors of this project?

- Resolution on Climate Change
  - On June 22, 2021, resolution #21/22-43 was adopted to address climate change
    - Approximately 93% of YCOE's electricity will be provided by clean solar energy and generated on-site.
    - This project will offset approximately 100% of YCOE's electricity usage.

Our Approach

- 5 years in the making – the vision began on a whiteboard
- 6 Locations
- 12 Energy Conservation Measures
- Approximately $4.8 million project cost
- Partnering up to vet the vision

Scope of Work – The Blueprint for Change

Building	CalSHAPE (AB841)	BAS/ Controls	CO2 Sensors	PM 2.5 (Suite 190)	HVAC Rejuvenation	HVAC Replacement	Plug Load	Window Film	Building Envelope	Solar	Battery Storage	EV Chargers
Santa Anita		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Greengate	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓
Chavez	✓	✓	✓		✓		✓	✓	✓	✓		x
Plainfield		✓	✓			x			✓			x
Esparto		✓	✓			x						
Lemen		✓	✓			x						

Examples of Deferred Maintenance & Aged Energy Infrastructure

Controls are **NOT** Standardized

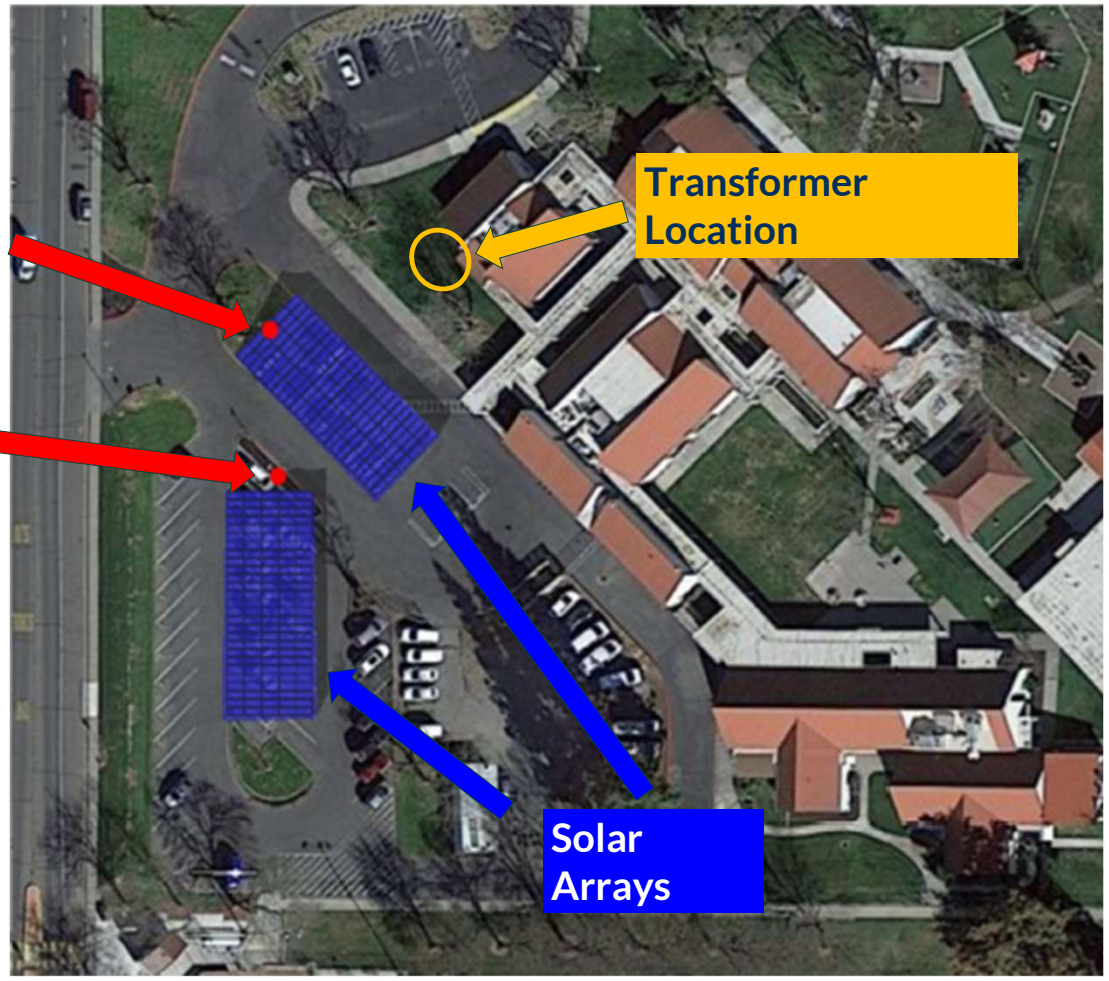
Building Envelope Gaps

Plug Load

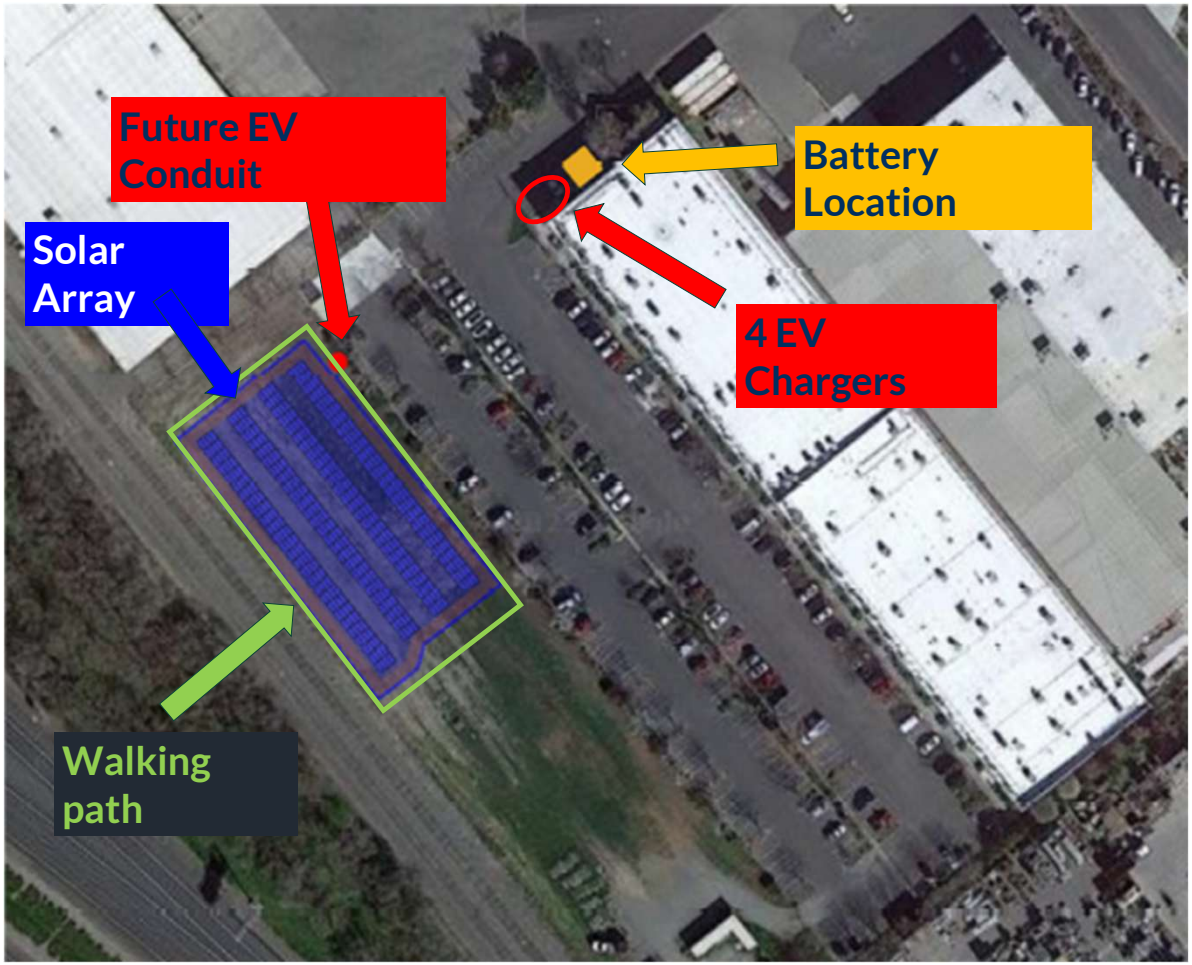
Aging Infrastructure and Electrification

- Replacement of equipment beyond its useful life.
- Eliminating reliance on fossil fuels through electrification.

Harnessing the Power of the Sun– Greengate and Chavez



Solar & Battery – Creating a Micro-Grid - Santa Anita



Project timeline

- Timeline pressures
  - Interconnection requirements – Must have PTO by April 15, 2026
  - Administrative updates due April 22, 2024 for Greengate and May 7, 2024 for Santa Anita
  - General timeline of construction
    - Approval at April 9, 2024 board date will meet administrative update deadlines and provide a two-year construction timeline to meet the NEM (Net Energy Metering) 2.0 deadline
      - Geotech/Alta/GPRS/Engineering
      - DSA
      - Procurement
      - Construction
      - PGE Permission To Operate (PTO) – due to heavy PTO requests, expect timelines to be longer than usual near the April 15, 2026 NEM2.0 deadline

Project Outcomes: Operational Resiliency at the Forefront

- Resilient operations at Santa Anita
  - Provide one click shut off of all HVAC units except data center to prepare for extended power outages
  - Flexibility to run Santa Anita Suite 100 facility for 6 hours at max capacity during any power outage or 12 hours if the power outage is during the day. Or, run the data center (~9kW) for 48 hour+ pending weather.
  - Creating network resiliency for Yolo County Schools and physical plant resiliency

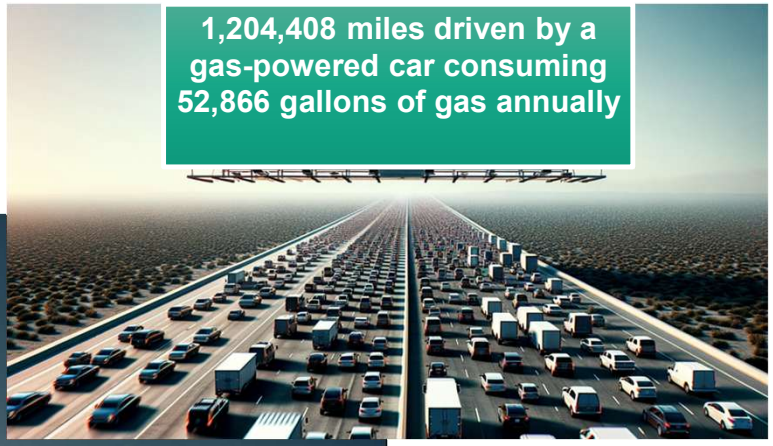
Project Outcomes: A Commitment to Operational Excellence

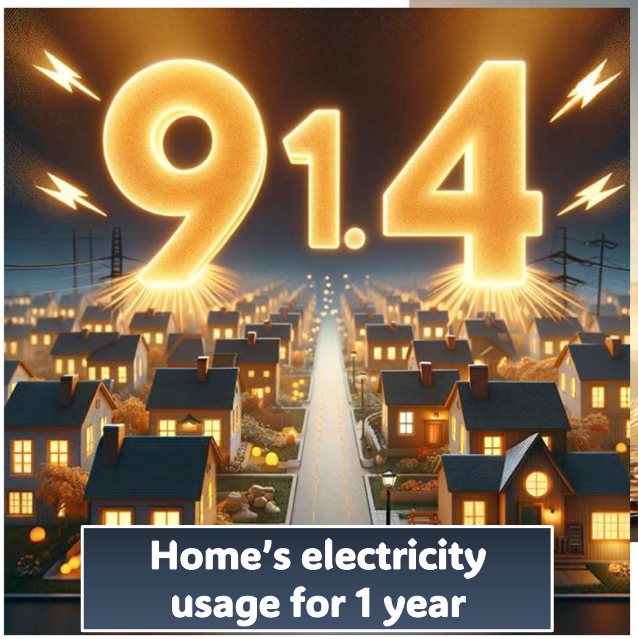
- Operational benefits:
  - Extend life of HVAC equipment at Santa Anita, Greengate, and Chavez
  - Help meet and prepare for future mandated electric vehicle (EV) requirements
    - 4 chargers at Santa Anita
    - Conduit at Santa Anita and Greengate for future electric vehicle chargers
    - Electric vehicle fleet requirements
  - Avoiding costly emergency replacements
  - Electrification of 1 HVAC unit at Greengate

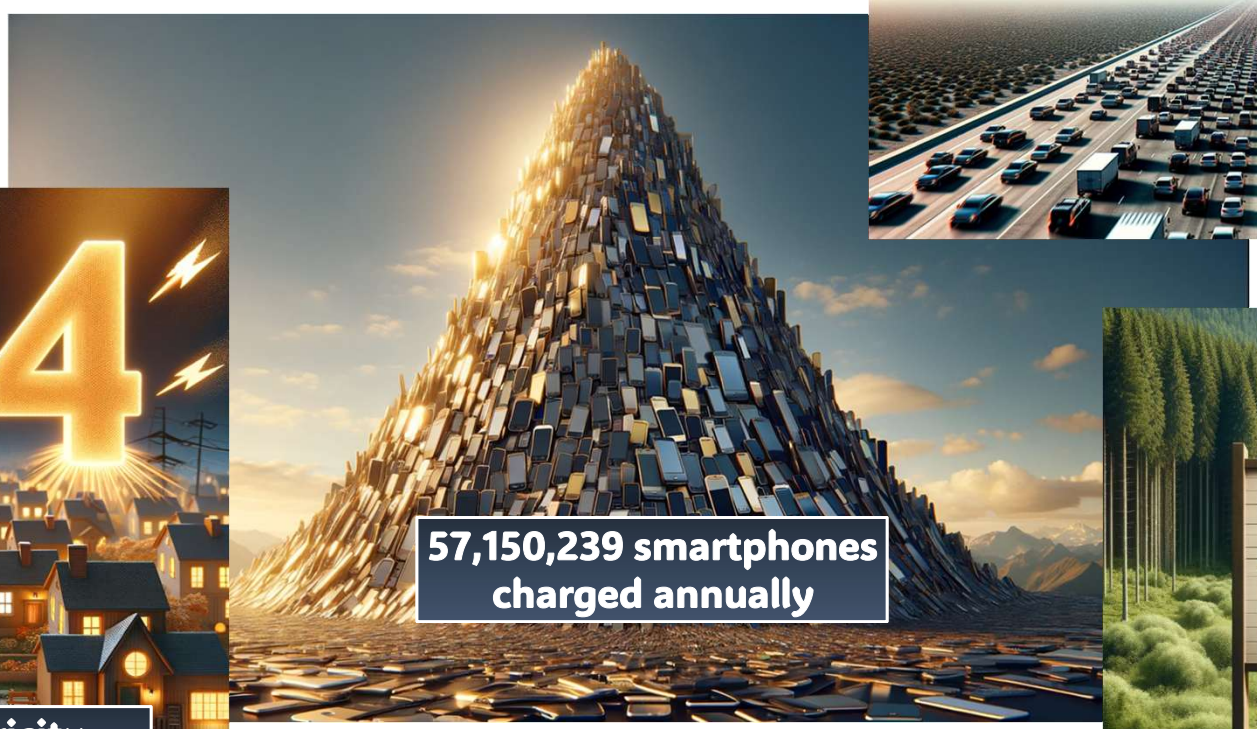
Project Outcomes: Healthy Students and Staff

- Healthier indoor environments:
  - Improve classroom air quality using CO2 sensors.
  - Full control to close air dampeners in case of external contaminant (smoke, or other)
  - Ability to fully open dampeners and purge spaces in case of internal contaminant
  - Give PM2.5 readings in suite 190
- Mental and physical well being of staff:
  - Walking track around the solar array at Santa Anita
- Solar digital display board in conference center at Santa Anita

Project annual equivalency to reduced (GHG) greenhouse gas offset statistics







Worldwide industry leaders in resilience of existing public-school buildings

- 1st County Office of Education in the United States to operate a microgrid
- 5th LEA in the state of CA to operate a micro grid
- 19th PreK-12 school-centric location in the continental United States to operate a microgrid

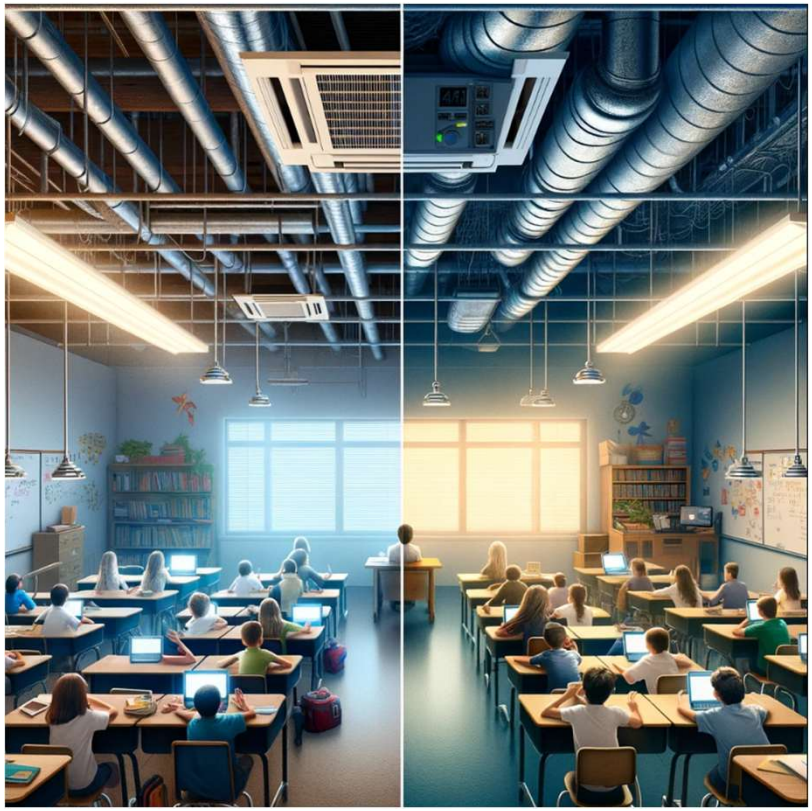
- Source (as of 3/2/2024): U.S. Department of Energy Combined Heat and Power and Microgrid Installation Databases | Search (icfwebservices.com)

How does this effect student achievement?

- Avoided cost of increasing utilities
  - This projects effectively avoids passing on increased utility costs to the classroom
- Upgrading school facilities facilitates student achievement
  - In Los Angeles, for example, upgrading school facilities produced up to 10% gains in student achievement.
    - Source: The Impact of School Facility Investments on Students and Homeowners: Evidence from Los Angeles - American Economic Association (aeaweb.org)
- "Both children and teachers perform better with increased fresh air ventilation" (Myhrvold, Olsen, & Lauridsen, 1996)
  - Source: How crumbling school facilities perpetuate inequality - kappanonline.org

Key Takeaways

- If this approach is not approved
  - Electricity increases will impact costs to program budget
  - California Public Utilities Commission unanimously approved another PG&E rate increase (NOT included in the upcoming presentation)
  - We will still be required to meet electric vehicle requirements and develop alternate plans to achieve this
  - Major facility needs will remain unaddressed
    - The HVAC controls portion of this project is roughly $600,000 in needs.
    - The County office does not qualify for G-O bonds and cannot received state assistance for our administration office
- It is essential for YCOE to prioritize investment in the development of its facility infrastructure for the benefit of staff and students for years to come.



The Broader Impact

Cultivating a culture of sustainability and innovation within our educational community

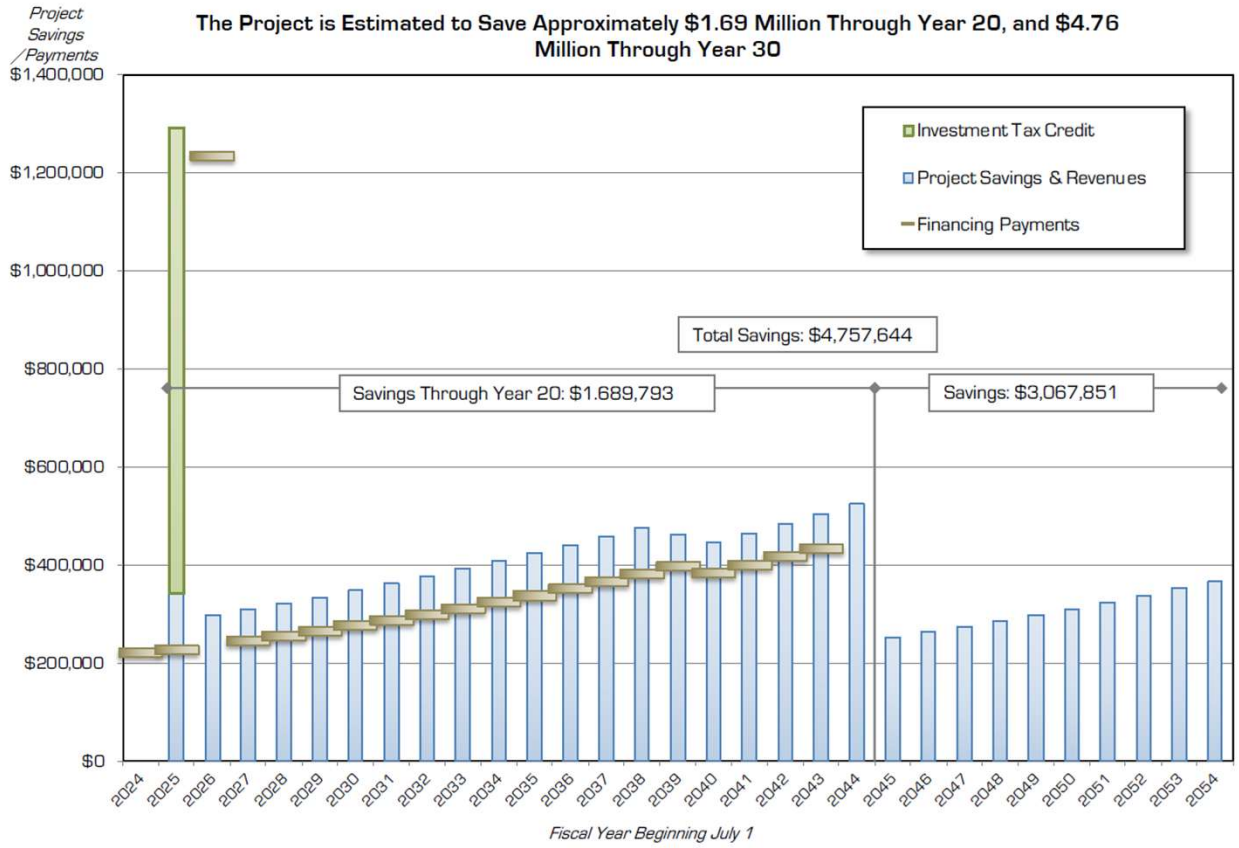
Yolo County OFFICE OF EDUCATION

Let's talk finances and how the tax credit makes a difference

(you are getting the quick version)

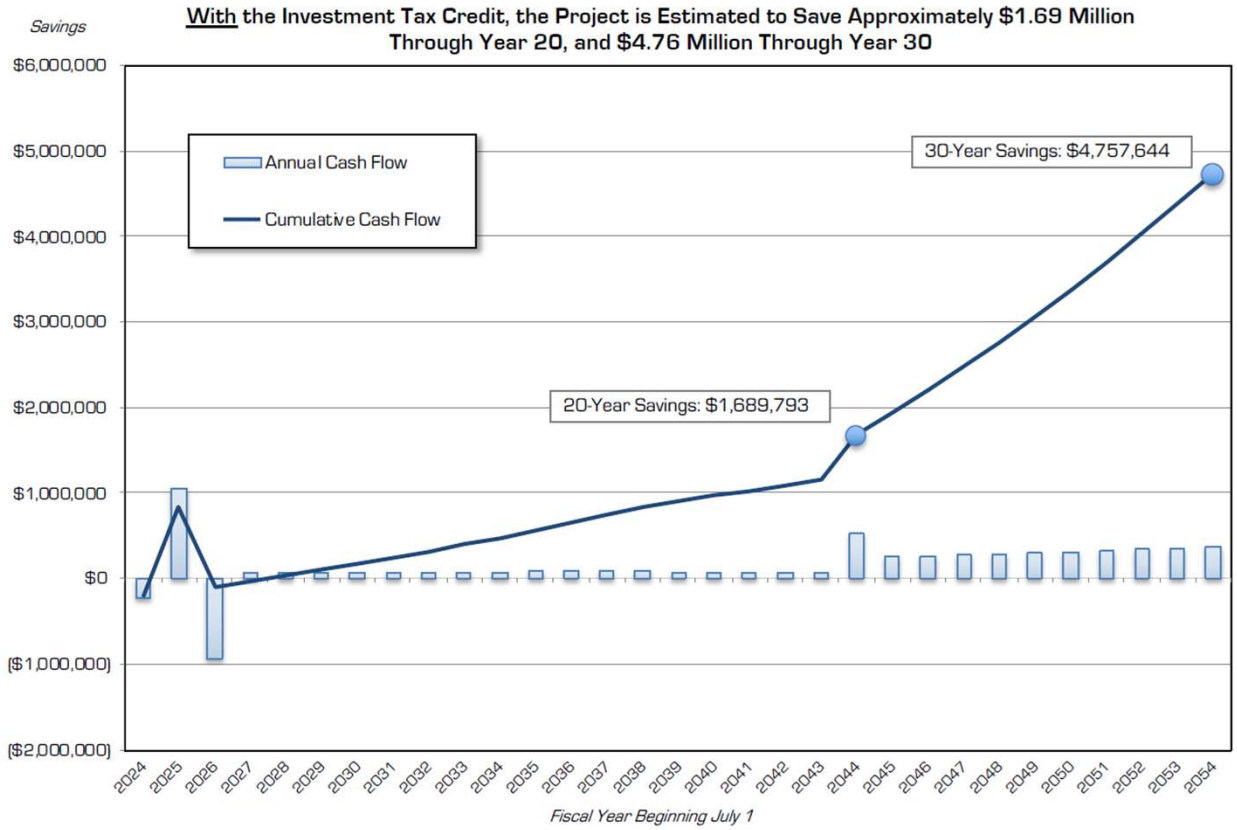
Yolo County OFFICE OF EDUCATION

Projected Savings + Revenues vs. Financing Payments



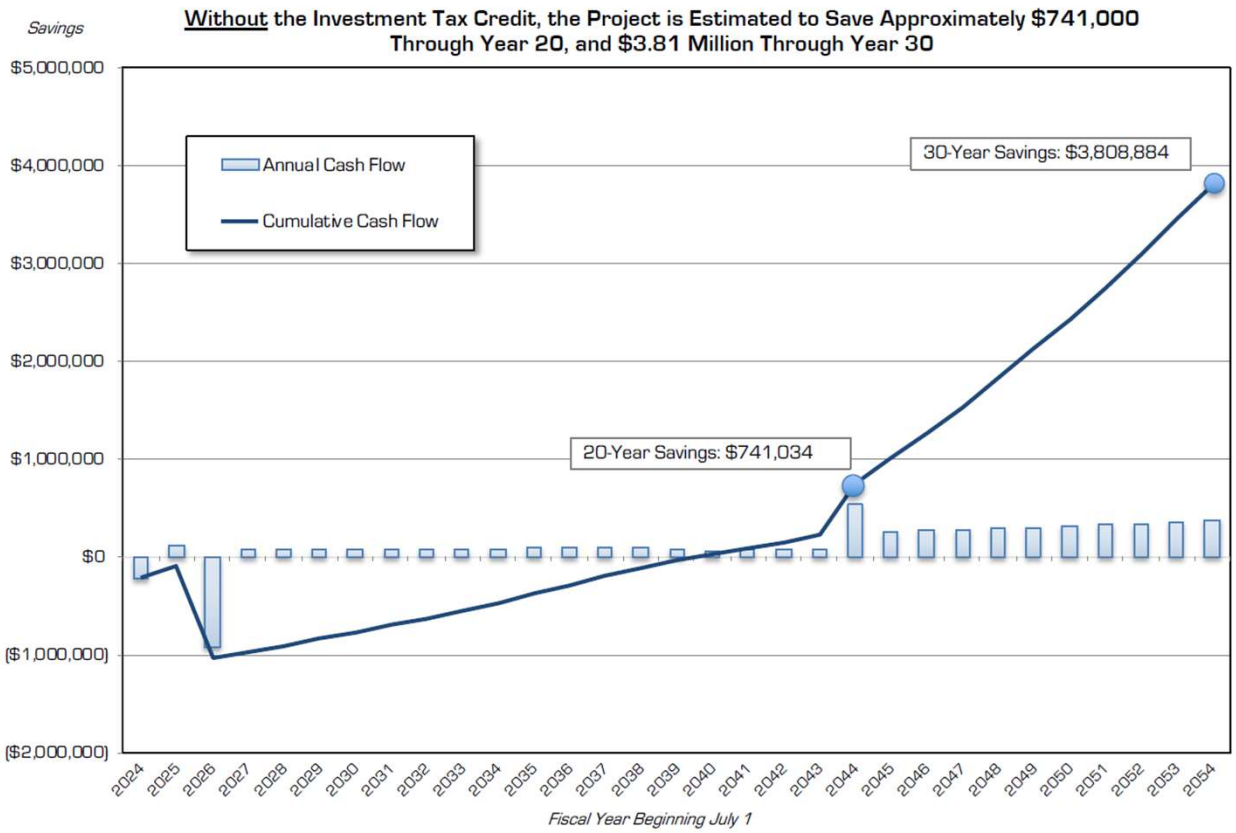
Notes: Project savings based on information provided by Syserco. Includes energy savings, O&M Savings, and O&M costs. Assumed issuance costs are $50,000; current market interest rate is 4.60% based on Bank of America proposal dated February 22, 2024.

Projected Annual and Cumulative Cash Flows - With Investment Tax Credit



Notes: Project savings based on information provided by Syserco. Includes energy savings, O&M Savings, and O&M costs. Assumed issuance costs are $50,000; current market interest rate is 4.60% based on Bank of America proposal dated February 22, 2024.

Projected Annual and Cumulative Cash Flows - Assuming No Investment Tax Credit



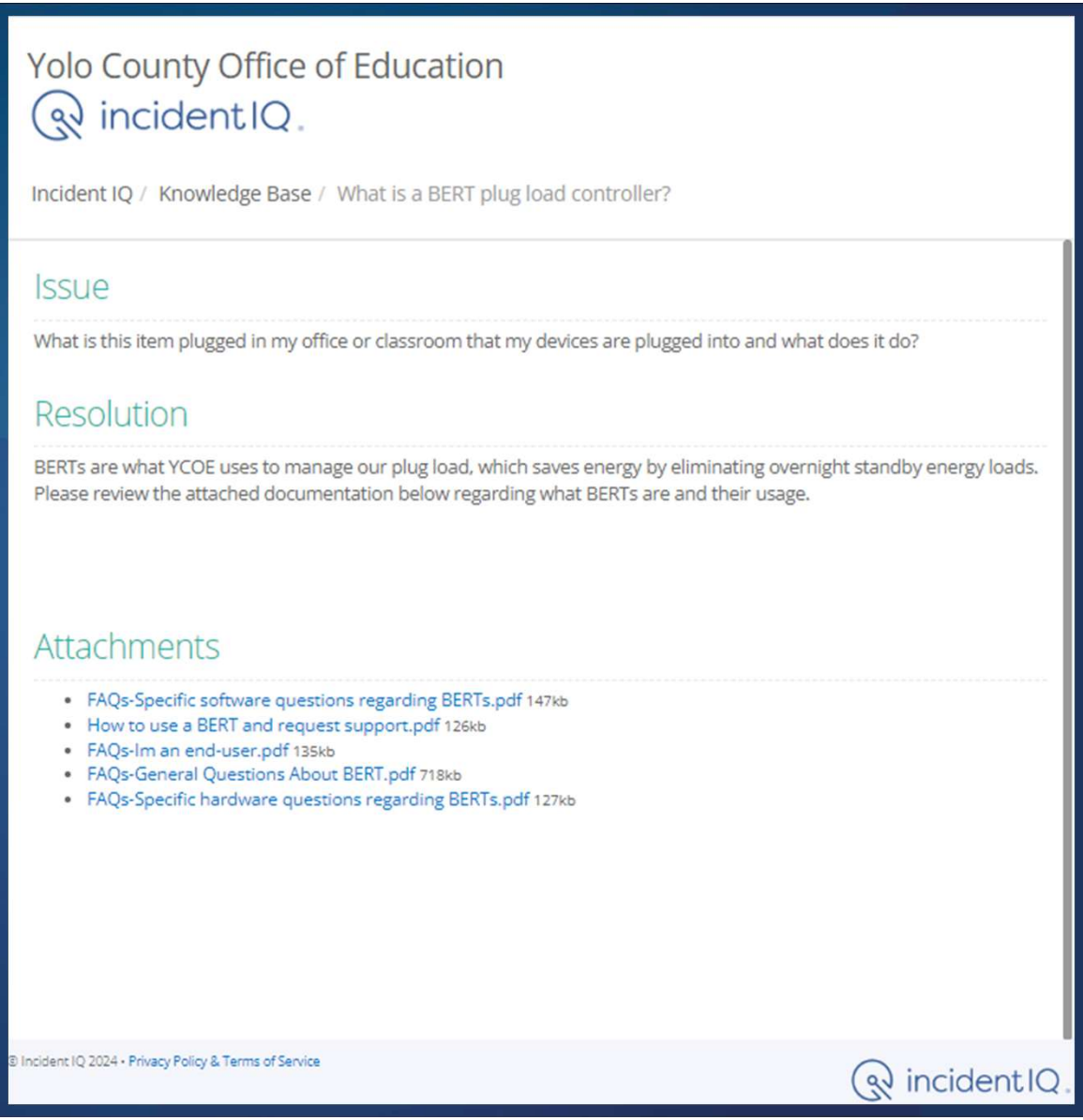
Notes: Project savings based on information provided by Syserco. Includes energy savings, O&M Savings, and O&M costs. Assumed issuance costs are $50,000; current market interest rate is 4.60% based on Bank of America proposal dated February 22, 2024.

Rolling this technology out

Tailor your roll-out to your agency

Use a knowledge base

Manage by walking around



Tip # 1

Sometimes you need a little grit, resilience, and the willingness to not take "No" as a one-word answer.

Tip # 2

Leverage your partners and resources

A visionary

Financial Advisors

General Counsel

Special Financial Counsel

Facilites/M+O Staff

Contractor/Partner

Project Manager

Escrow Agent

3rd Party Engineer

Board of Education

Building Occupants

Superintendent

“The Bank”

Tax Specialists

Tip # 3

Capture interest
- -Captivating imagery
- -360-degree video
- -Explain your vision
- -Tie in positive educational outcomes
- -Prioritize health of occupants
- -Prioritize environmental needs
- -Time lapse camera
- -Solve real-world problems

Yolo County OFFICE OF EDUCATION

Make Change Happen

Yolo County OFFICE OF EDUCATION

matt.juch@gmail.com

Matthew Juchniewicz

Director, Support Operation Services
@ Yolo County Office of Education | ...

Now About the Funding...

What is the direct pay mechanism?

The **Clean Energy Tax Credits** are received by a process of submitting a tax return to claim the credit

What qualifies?

Eligible equipment put into service after **January 1, 2023**

(The IRS uses the term ”elective pay” for the same concept)

https://www.whitehouse.gov/cleanenergy/directpay/

This link now shows "404 page not found" and refers you to the White House page!

What's so special about the Direct Pay clean energy tax credits?

Non-competitive

Cash reimbursement

Available until 2032+*

Uncapped funding

How do I calculate the size of my Investment Tax Credit?

- ✓ All locations qualify for base credit
- ✓ New construction and renovations qualify

What was the cost of the equipment?

Cost basis

For what base and bonus credits does your system qualify?

Credits

How did you pay for the project?

Adjustments

Calculating the Tax Credit

Sec 48: Investment Tax Credit

For Ground Source Heat Pumps, Solar Energy, and Energy Storage

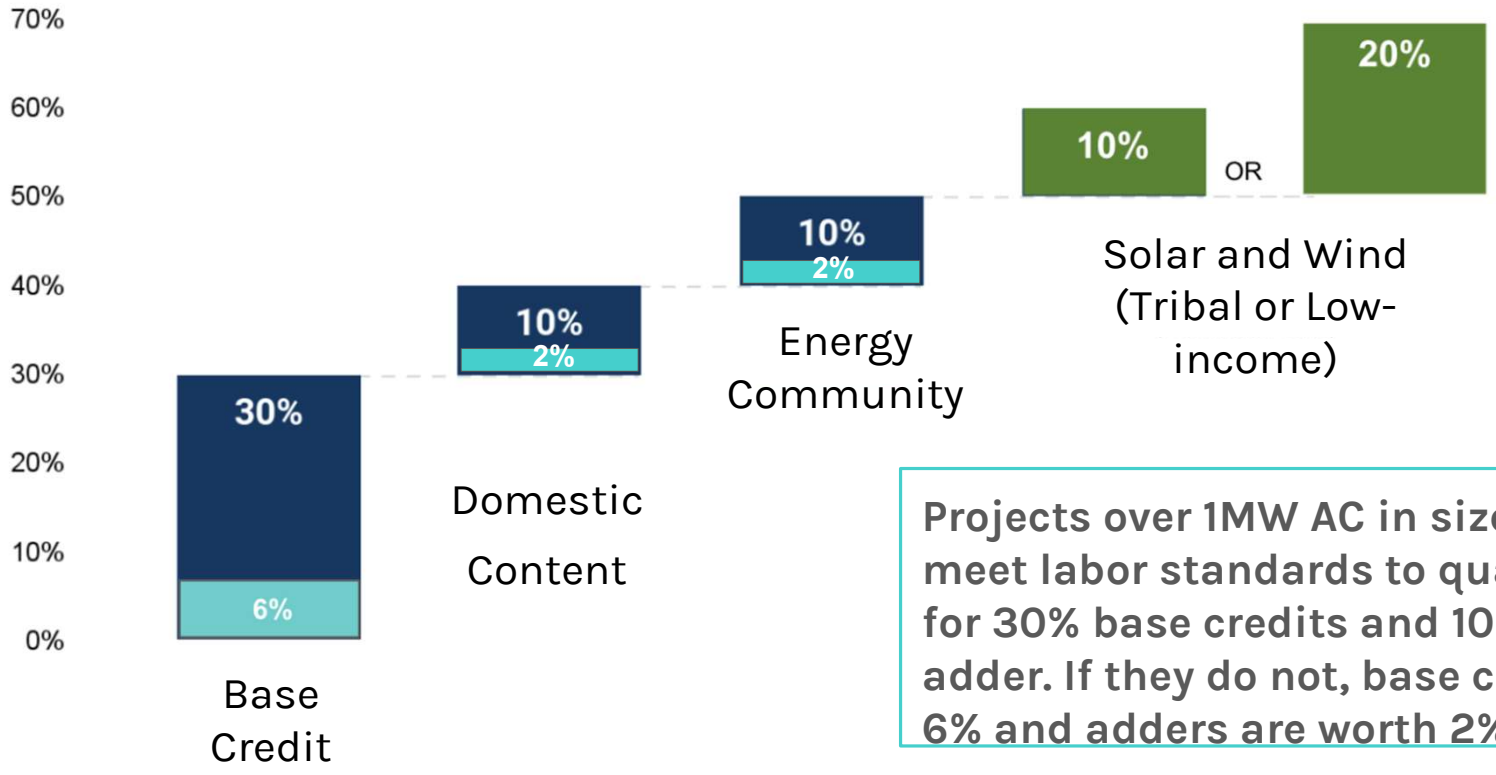
Sec 45W: Commercial Clean Vehicle Tax Credit

For Electric Vehicles

Sec 30C: Alternative Fuel Refueling PropertyC

For EV Charging

Base and bonus credits for Sec 48 ITC

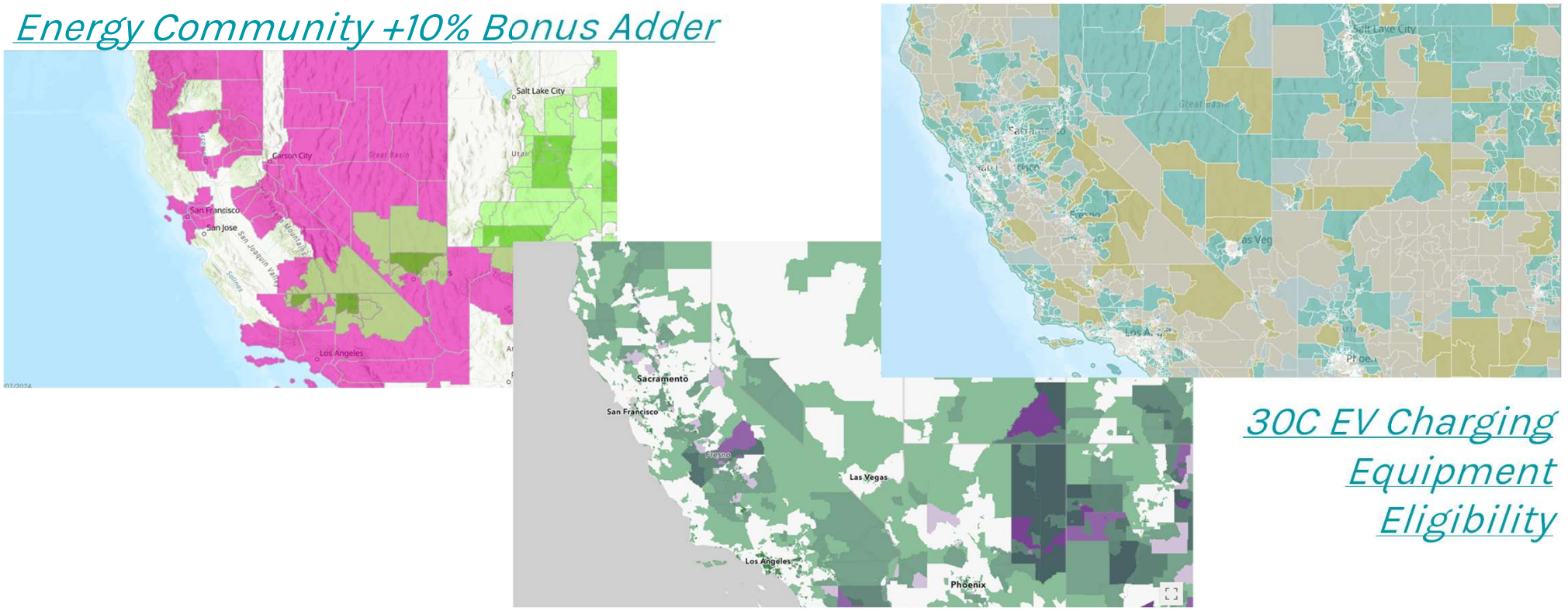


Projects over 1MW AC in size must meet labor standards to qualify for 30% base credits and 10% adder. If they do not, base credit is 6% and adders are worth 2%.

Graphic Credit to K12 Undaunted

Where the project is located matters

Energy Community +10% Bonus Adder



30C EV Charging Equipment Eligibility

Low-income Community Bonus +10-20%

(competitive for solar & wind projects only)

Graphic Credit to K12 Undaunted

Sec. 45W: Commercial Clean Vehicle Tax Credit

✓ Must be from a qualified manufacturer. List available here.

Lesser test

15% of cost OR incremental cost *if hybrid*

30% of cost OR incremental cost *if electric*

Maximum

$7,500 per vehicle *if < 14,000 pounds*

$40,000 per vehicle *if > 14,000 pounds*

Other $?

Tax credits will be reduced so that grants + tax credits do not exceed the cost of the equipment.

Sec. 30C: Alternative Fuel Refueling Property

❗ Must be located in qualifying areas. Check site address here.

Cost basis	Rate	Maximum
Cost of installing each charging station	6% *if labor standards are not met* 30% *if labor standards are met*	$100,000 limit per charger (not per site)

Expect the curveballs


Interacting with the IRS is new for most school districts


Bonus credit maps will change over time


Reimbursement means districts are on the hook for the upfront costs


Using tax-exempt financing reduces the ITC credit by up to 15%


Grants + tax credits can't add up to more than 100% of the project cost


Uncertainty and risk with the change of administration !!!

Graphic Credit to K12 Undaunted

What is the process for receiving Direct Pay?

* First time filers (e.g. no filings in the last 10 years) can choose to file on a calendar year or fiscal year basis. See: 89 FR 17546

Step 1: Install → **Step 2: Pre-file** → **Step 3: File** → **Step 4: Receive $**

Equipment must be "placed into service". Different determinations depending on technology.

What is the process for receiving Direct Pay?

Step 1: Install

Step 2: Pre-file

Step 3: File

Step 4: Receive $

IRS recommendation to complete this 120 days before filing deadline
e.g. If Nov 15 filing deadline then mid-July

What is the process for receiving Direct Pay?

Step 1: Install

Step 2: Pre-file

Step 3: File

Due 4.5 months after end of taxable year
e.g. End FY Jun 30 -> Nov 15

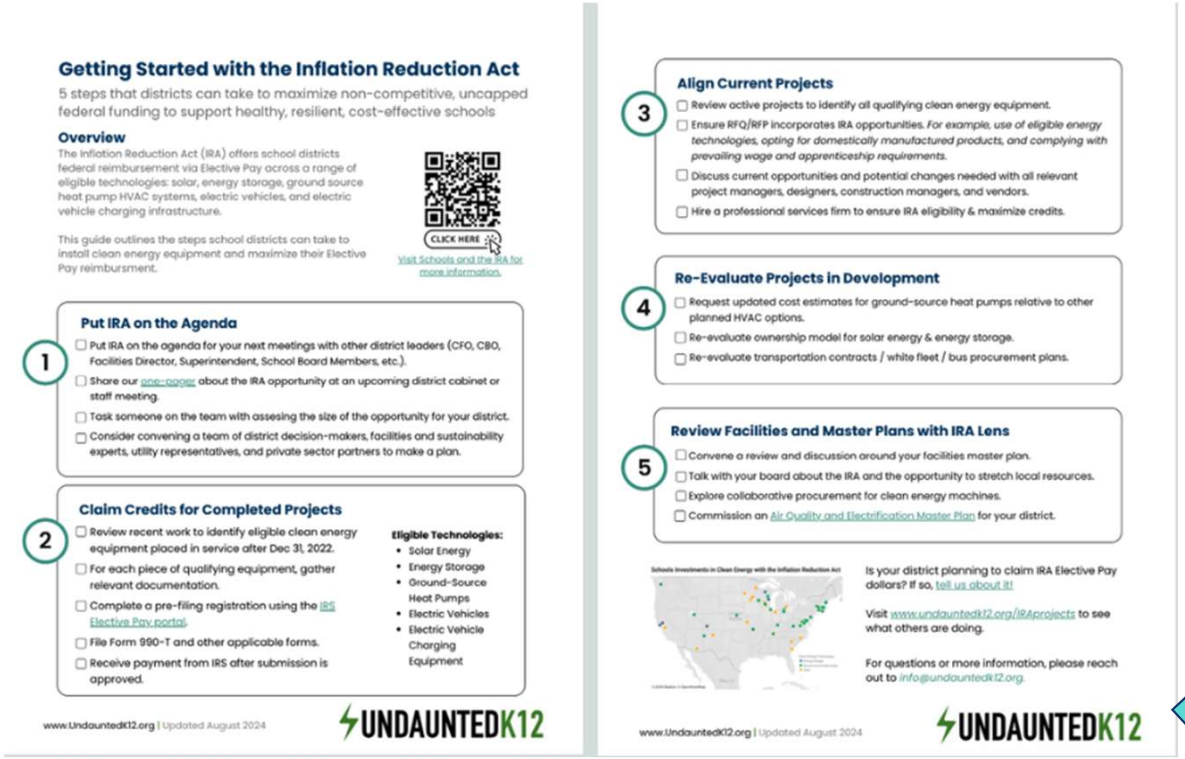
Step 4: Receive $

What is the process for receiving Direct Pay?

Step 1: Install → **Step 2: Pre-file** → **Step 3: File** → **Step 4: Receive $**

Funds expected ~45 days after filing deadline

5 Actions for School Districts to get Started



Getting Started with the Inflation Reduction Act

5 steps that districts can take to maximize non-competitive, uncapped federal funding to support healthy, resilient, cost-effective schools

Overview

The Inflation Reduction Act (IRA) offers school districts federal reimbursement via Elective Pay across a range of eligible technologies: solar, energy storage, ground source heat pump HVAC systems, electric vehicles, and electric vehicle charging infrastructure.

This guide outlines the steps school districts can take to install clean energy equipment and maximize their Elective Pay reimbursment.

CLICK HERE

Visit Schools and the IRA for more information.

1 Put IRA on the Agenda

- ☐ Put IRA on the agenda for your next meetings with other district leaders (CFO, CBO, Facilities Director, Superintendent, School Board Members, etc.).
- ☐ Share our one-pager about the IRA opportunity at an upcoming district cabinet or staff meeting.
- ☐ Task someone on the team with assesing the size of the opportunity for your district.
- ☐ Consider convening a team of district decision-makers, facilities and sustainability experts, utility representatives, and private sector partners to make a plan.

2 Claim Credits for Completed Projects

- ☐ Review recent work to identify eligible clean energy equipment placed in service after Dec 31, 2022.
- ☐ For each piece of qualifying equipment, gather relevant documentation.
- ☐ Complete a pre-filing registration using the IRS Elective Pay portal.
- ☐ File Form 990-T and other applicable forms.
- ☐ Receive payment from IRS after submission is approved.

Eligible Technologies:

- Solar Energy
- Energy Storage
- Ground-Source Heat Pumps
- Electric Vehicles
- Electric Vehicle Charging Equipment

www.UndauntedK12.org | Updated August 2024

UNDAUNTEDK12

3 Align Current Projects

- ☐ Review active projects to identify all qualifying clean energy equipment.
- ☐ Ensure RFQ/RFP incorporates IRA opportunities. *For example, use of eligible energy technologies, opting for domestically manufactured products, and complying with prevailing wage and apprenticeship requirements.*
- ☐ Discuss current opportunities and potential changes needed with all relevant project managers, designers, construction managers, and vendors.
- ☐ Hire a professional services firm to ensure IRA eligibility & maximize credits.

4 Re-Evaluate Projects in Development

- ☐ Request updated cost estimates for ground-source heat pumps relative to other planned HVAC options.
- ☐ Re-evaluate ownership model for solar energy & energy storage.
- ☐ Re-evaluate transportation contracts / white fleet / bus procurement plans.

5 Review Facilities and Master Plans with IRA Lens

- ☐ Convene a review and discussion around your facilities master plan.
- ☐ Talk with your board about the IRA and the opportunity to stretch local resources.
- ☐ Explore collaborative procurement for clean energy machines.
- ☐ Commission an Air Quality and Electrification Master Plan for your district.

Is your district planning to claim IRA Elective Pay dollars? If so, tell us about it!

Visit www.undauntedk12.org/IRAprojects to see what others are doing.

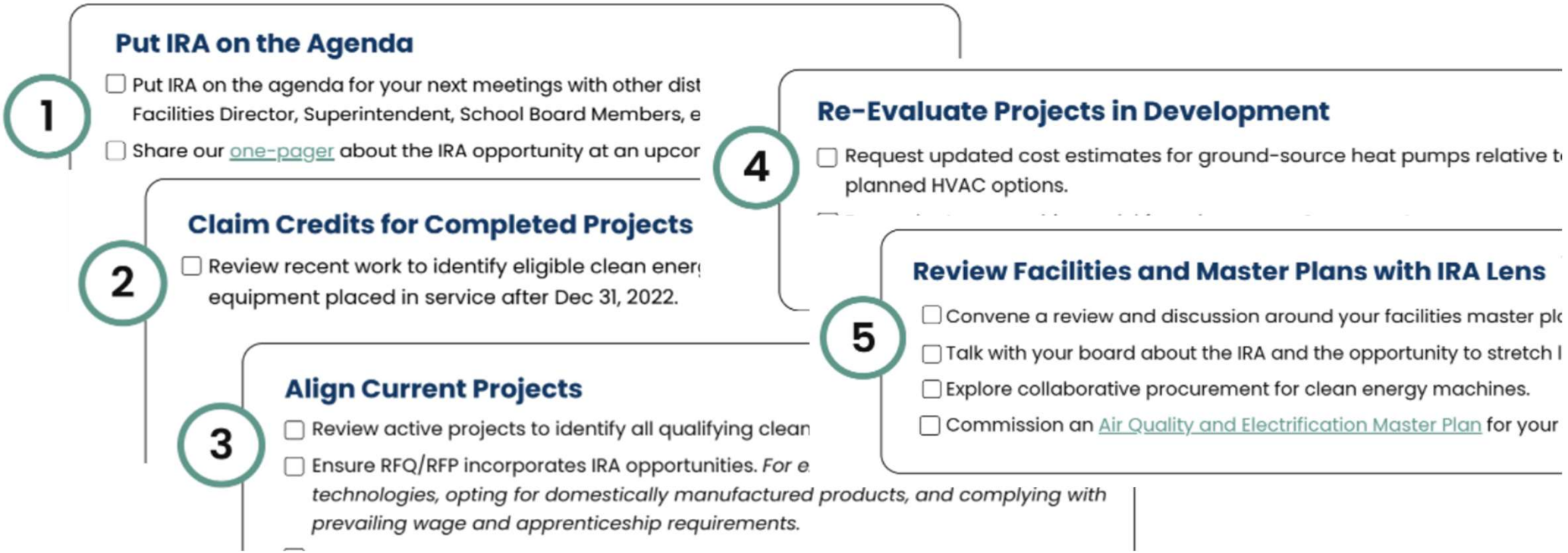
For questions or more information, please reach out to info@undauntedk12.org.

www.UndauntedK12.org | Updated August 2024

UNDAUNTEDK12

Check this Undaunted K12 link for updates and additional info

5 Actions for School Districts to get Started



A quick overview on IRA

The Inflation Reduction Act & Schools

New funding for healthy, sustainable, efficient schools

Overview

New clean energy tax credits help schools defray the cost of clean energy equipment that can promote health, sustainability and efficiency.

The Inflation Reduction Act is poised to be the largest ever federal investment in school infrastructure.

Visit Schools & the Inflation Reduction Act website for more information

Key Features

- ★ **Non-competitive:** All schools with qualifying projects are eligible to claim clean energy tax credits.
- ★ **Cash reimbursement:** Tax credits will be paid to schools in the form of a cash reimbursement.
- ★ **Available for years to come:** Funding is available by statute until at least 2032.
- ★ **Unlimited funding:** There are no caps on funding. Schools can claim multiple tax credits in a single year and over subsequent years.

Eligible Technologies

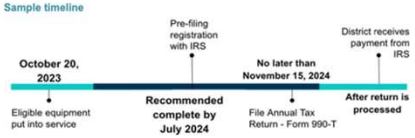
Solar Energy: Generates on-site, reliable, clean energy at a fixed price. Nationally, one in every 10 schools is already solar-powered.	**Sec 48:** Investment Tax Credit
Energy Storage: Provides back-up power. Can also contribute to a reduction of utility costs, generate revenue, and reduce carbon emissions.	
Ground-Source Heat Pumps: Provides heating and cooling with one set of equipment. Up to six times more efficient than a "high-efficiency" furnace.	
Electric School Buses: Reduces exposure to harmful air pollutants for students and communities, while saving ~$100,000 in lifetime fuel and maintenance per bus.	**Sec 45W:** Commercial Clean Vehicles Tax Credit
Electric Vehicle Charging Equipment: Facilitates charging of electric school buses and other electric vehicles.	**Sec 30C:** Alternative Fuel Refueling Property

UNDAUNTEDK12

How does this process work?

- ☐ Place eligible clean energy equipment into service
- ☐ Complete a pre-filing registration using the IRS' Elective Pay portal to receive a registration number for the eligible equipment
- ☐ File Form 990-T using the registration number provided
- ☐ Receive payment from the IRS after submission is approved

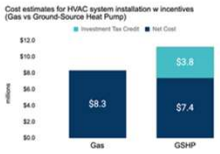
Sample timeline



Example for equipment placed into service by a school with a fiscal year from July 1, 2023 to June 30, 2024.

Advantages of Investing in Clean Energy Technologies

Efficiency & Savings: Clean energy technologies are often more cost-effective to operate. Savings can be reinvested into student learning. In many cases, clean energy tax credits may make the clean choice also the most affordable choice (see figure).



Student Health & Learning: Clean energy can support healthy learning environments by keeping classrooms comfortable. And clean energy projects at schools can provide hands-on learning about climate solutions and green jobs.

Resilient Schools & Communities: Adopting clean energy can enhance the resilience of school facilities allowing buildings, for example, to serve as shelters for students and communities through extreme weather and power disruptions.

Sustainability & Social Responsibility: School buildings, transportation fleets, and land assets will play a critical role in reaching climate goals. Students are looking to adult decisionmakers to ensure that schools are embracing their responsibility to address air pollution and reduce greenhouse gas emissions.

UNDAUNTEDK12

A special thank you to UNDAUNTED K12 for assistance with this presentation!

This presentation is available at

https://www.colbitech.com/insight

For more information or for assistance,
please feel free to call or email:

COLBI
Lettie Boggs, CEO

714-412-2216
leboggs@colbitech.com