




Inflation Reduction Act & Schools: New federal funding for healthy, sustainable, cost-effective schools

February 13, 2024

Who we are

UNDAUNTEDK12

Our mission is to support America's K-12 public schools to make an equitable transition to zero carbon emissions while preparing our youth to build a sustainable future in a rapidly changing climate.

-  Healthy buildings, healthy students
-  Equity & justice
-  Jobs today & tomorrow
-  Leading by example

How we work

Awareness building

MAKING CLIMATE-SMART HVAC INVESTMENTS

Thursday, September 28
2:00 P.M.

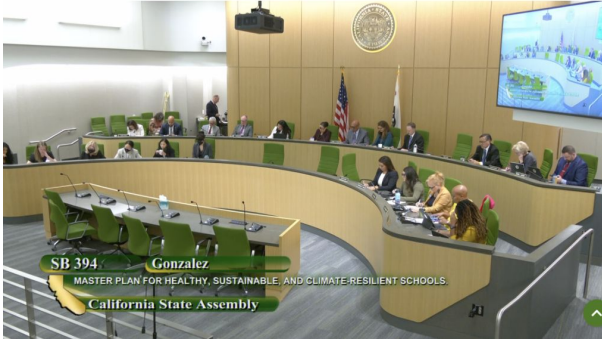
Your Panel : **Dr. Monica Goldson**
Retired Chief Executive Officer
Prince George's County Public Schools

Emma Hines
Health and Air Quality Senior Associate, RMI

Sara Ross
Co-Founder, UndauntedK12



Policy development & advocacy



Thought leadership



HVAC Choices for Student Health and Learning

What Policymakers, School Leaders, and Advocates Need to Know



Photo by Alison Shelley/The Urban Agency for Children | Report / January 2023

Coalition building



New web resources for the Inflation Reduction Act

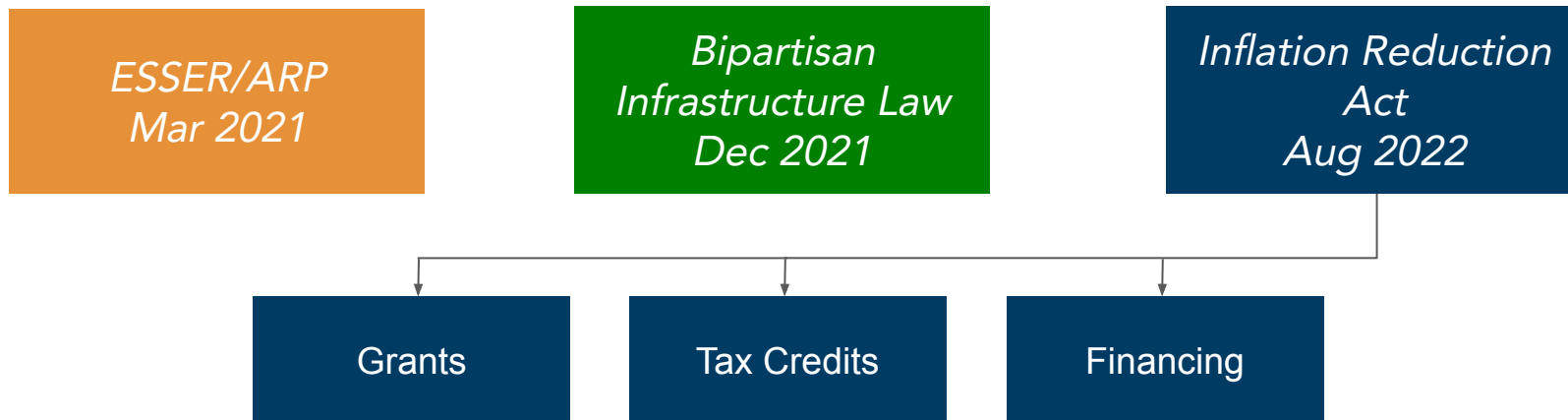


The [Inflation Reduction Act \(IRA\)](#) is the largest investment in climate and clean energy in United States history. Billions of dollars are now available to schools for going green.

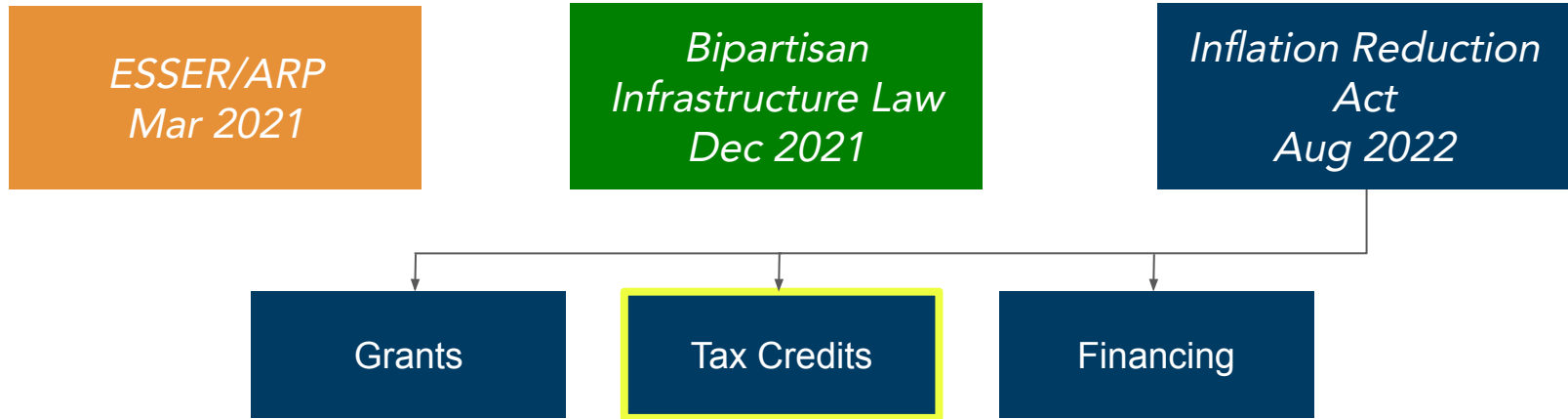
THE INFLATION REDUCTION ACT brings new federal funding to schools that embrace clean energy!	WHAT clean energy technologies does the Inflation Reduction Act support?	WHY should schools invest in clean energy technologies?	WHO benefits from the Inflation Reduction Act?	HOW do schools get reimbursed by the Federal government?
--	--	---	--	--

<https://www.undauntedk12.org/schools-and-the-ira>

The federal funding context for schools



Largest opportunity is the clean energy tax credits



....and they are available now!

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

Non-competitive

Cash
reimbursement

Available until
2032+

Unlimited funding

Tax credits support this clean energy equipment at schools

1. Solar energy

2. Energy storage

3. Ground-source heat pumps

4. Electric school buses

5. EV charging equipment



Sec 48:
Investment Tax Credit

Sec 45W:
Commercial Clean
Vehicle Tax Credit

Sec 30C:
Alternative Fuel
Refueling Property

What is Direct Pay (aka Elective Pay)?

The IRS mechanism through which non-taxable entities (like schools!) convert tax credits to cash reimbursements.



DIRECT PAY THROUGH THE INFLATION REDUCTION ACT

CLEAN ENERGY

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



Elective Pay Overview

The answers to the questions below are based on proposed and temporary guidance and are subject to final IRS guidance. These proposed and temporary regulations and the answers below may change when these regulations are finalized following a public comment period. You may also choose to consult with a tax advisor.

What is elective pay?

Elective pay allows applicable entities, including tax-exempt and governmental entities that would otherwise be unable to claim certain credits because they do not owe federal income tax, to benefit from some clean energy tax credits. By choosing this election, the amount of the credit is treated as a payment of tax and any overpayment will result in a refund.

For example, because of the Inflation Reduction Act, a local government that makes a clean energy investment that qualifies for the investment tax credit can file an annual tax return with the IRS to claim elective pay for the full value of the investment tax credit, as long as it meets all of the requirements including a pre-filing registration requirement. As the local government would not owe other federal income tax, the IRS would then make a refund payment in the amount of the credit to the local government.

Who is eligible?

Applicable entities can use elective pay. Applicable entities include non-exempt organizations, states and political subdivisions such as local governments, Indian tribal governments, Alaska Native Corporations, the Tennessee Valley Authority, coal electric cooperatives, U.S. territories and their political subdivisions, and agencies and instrumentalities of state, local, tribal and U.S. territorial governments.

What types of businesses are eligible?
Generally, only "applicable entities" are eligible for elective pay. However, there are some exceptions for the clean energy tax credits. Specifically, other taxpayers that are not "applicable entities" may make an election to be treated as an applicable entity for elective pay with respect to the applicable credit property going to the:

1. The section 45Q credit (inert carbon oxide sequestration),
2. The section 45D credit (limit for production of clean hydrogen), or
3. The section 45E credit (advanced manufacturing production credits). There are additional rules for the taxpayer as a partner or S Corporation.

How do I make the elective payment election?

Eligible entities must claim and receive an elective payment by making an elective payment election on their annual tax return along with any form required to claim the relevant tax credit. However, there are steps leading up to this, such as a required pre-filing registration process. An EIN or TIN is required to complete the pre-filing registration process.

Electronic return filing is strongly encouraged.

What will I need to do to receive a payment?

1. **Identify and pursue the qualifying project or activity.** You will need to know what applicable credit you intend to earn and use elective pay for.

2. **Determine your tax year, if not already known.** Your tax year will determine the due date for your tax return.

3. **Complete pre-filing registration with the IRS.** This will include providing information about yourself, which applicable credits you intend to earn, and each eligible project/property you will contribute to the applicable credit and other information required. Upon completing this process, the IRS will provide you with a registration number for each applicable credit property. You will need to provide that registration number on your tax return as part of making the elective pay election.

- Complete pre-filing registration as sufficient time to have a valid registration number at the time you file your tax return.
- More information about this pre-filing registration process will be available by late 2023.

4. **Safely all eligibility requirements for the tax credit and any applicable bonus credits, if applicable, for a given tax year.** For example, to claim an energy credit on a solar energy generating project, you would need to place the project in service before making an elective payment election.

- You will need the documentation necessary to properly substantiate any energy tax credit, including Form 4562.

5. **File the required annual tax return by the due date for extended due dates and make a valid elective payment election.**

What tax credits can elective pay be used for?

See Publication 5817 for a list of all credits that can be used for elective pay.

Resources

➤ Elective Pay and Taxability

➤ [irs.gov/cleanenergy](https://www.irs.gov)



Publication 5817-08-2023, Catalog Number 58133A, Department of the Treasury Internal Revenue Service, www.irs.gov

<https://www.irs.gov/pub/irs-pdf/p5817.pdf>



State & Local Governments

The answers to the questions below are based on proposed and temporary elective pay and transferability eligibility regulations and other tax guidance on IRS.gov. These proposed and temporary regulations and the answers below may change when these regulations are finalized following a public comment period. You may also choose to consult with a tax advisor.

What is elective pay?

Elective pay allows applicable entities, including tax-exempt and governmental entities that would otherwise be unable to claim certain credits because they do not owe federal income tax, to benefit from some clean energy tax credits. By choosing this election, the amount of the credit is treated as a payment of tax and any overpayment will result in a refund.

For example, because of the Inflation Reduction Act, a local government that makes a clean energy investment that qualifies for the investment tax credit can file an annual tax return with the IRS to claim elective pay for the full value of the investment tax credit, as long as it meets all of the requirements including a pre-filing registration requirement. As the local government would not owe other federal income tax, the IRS would then make a refund payment in the amount of the credit to the local government.

Are state and local governments eligible?

Yes. Some political subdivisions and their agencies and instrumentalities are all eligible for elective pay. This includes the District of Columbia. It also includes cities, counties and other political subdivisions. Water districts, school districts, economic development agencies, public universities and hospitals that are agencies and instrumentalities of states or political subdivisions are also included.

How do I make the elective payment election?

Eligible entities not normally required to file an annual tax return with the IRS should file Form 990. Along with any form required to claim the relevant tax credit, however, there are steps leading up to this, such as a required pre-filing registration process. An EIN or TIN is required to complete the pre-filing registration process.

Electronic return filing is strongly encouraged.



What tax credits can elective pay be used for?

See Publication 5817 for a list of tax credits that can be used for elective pay.

Resources

➤ Elective Pay and Taxability

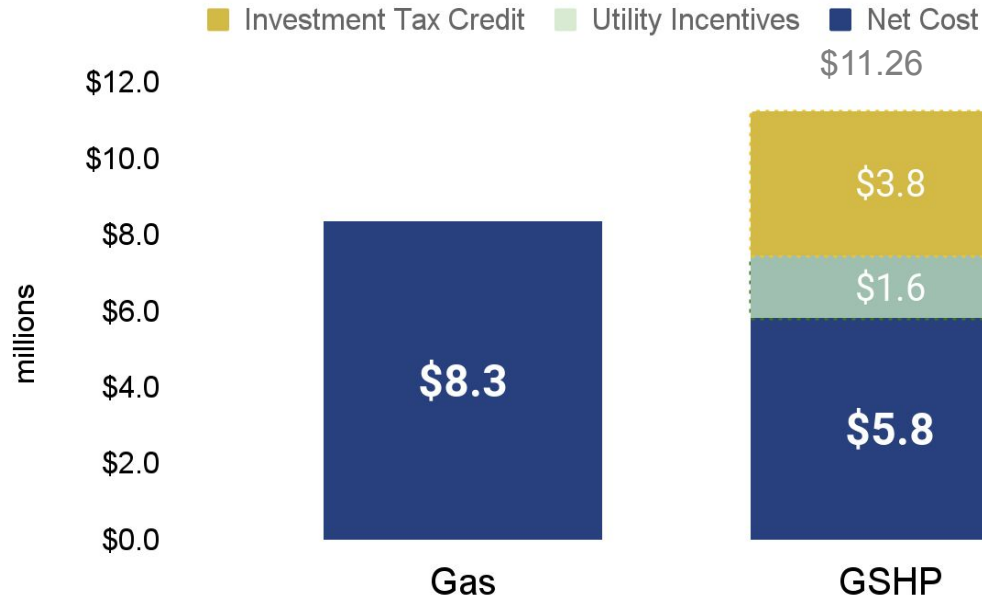
➤ [irs.gov/cleanenergy](https://www.irs.gov)

Publication 5817-08-2023, Catalog Number 58133A, Department of the Treasury Internal Revenue Service, www.irs.gov

<https://www.irs.gov/pub/irs-pdf/p5817e.pdf>

Tax credits can make clean energy the *most* affordable option

Cost estimates for HVAC system installation w incentives
(Gas vs Ground-Source Heat Pump)



Policy goals & key concepts

Labor standards

Prevailing wage and apprenticeship requirements

INFLATION REDUCTION ACT

Prevailing Wage & Registered Apprenticeship Overview

The information in this document may be subject to change as guidance is issued or finalized. For all the latest energy tax credits, please see IRS.gov/energy for further details and eligibility requirements.

Overview:
To qualify for increased credit or deduction amounts of certain clean energy tax incentives, taxpayers generally need to ensure that laborers and mechanics employed in the construction, alteration, or repair are paid no less than applicable prevailing wage rates and to employ apprentices from registered apprenticeship programs for a certain number of hours. By meeting the necessary Inflation Reduction Act (IRA) prevailing wage and apprenticeship requirements, taxpayers can increase the base amount of many clean energy tax incentives by 50%. There are several exceptions, for certain small facilities that produce clean energy under one requirement and for facilities beginning construction before January 25, 2023, where taxpayers may be eligible to claim the 50% increase without meeting the prevailing wage and apprenticeship requirements.

IRA Registered Apprenticeships:
Each taxpayer (or contractor or subcontractor who employs four or more workers to perform construction, alteration, or repair work on a facility) must employ one or more qualified apprentices when the apprenticeship requirements apply. In addition, a minimum percentage of the total labor hours of the construction, alteration, or repair work must be performed by qualified apprentices from a registered apprenticeship program. This percentage is 15.6 percent for facilities beginning construction in 2022 and 10 percent for facilities beginning construction in 2023 or after. Taxpayers in construction or subcontracting must also ensure that any application of an apprentice to project activities established by the registered apprenticeship program are met. An exception may apply when a taxpayer or contractor or subcontractor has employed qualified apprentices from a registered apprenticeship program and no apprentices are available. For more information on the rules about finding apprentices, see Inflation Reduction Act Apprenticeship Requirements.

Recordkeeping Requirements:
Taxpayers claiming an increased amount for a particular tax incentive by meeting the prevailing wage and apprenticeship requirements are paid the prevailing wage, which includes the base hourly wage rate and any fringe benefits rate, established by the Secretary of Labor when performing construction, alteration, or repair on a certain facility, contract, agreement, or on an contract.

Click [here](#).

Target Communities

Communities with coal closure, unemployment, rural area, low-income

U.S. DEPARTMENT OF ENERGY

Energy Community Tax Credit Bonus

LEGEND

- 3x Coal Closure Energy Communities
- 2x Coal Closure Energy Communities
- 1x Coal Closure Energy Communities

3x Coal Closure Energy Communities

- Communities that have lost at least 10% of their coal-generating capacity.
- Communities that have lost at least 10% of their coal-generating capacity.
- Communities that have lost at least 10% of their coal-generating capacity.

2x Coal Closure Energy Communities

- Communities that have lost at least 10% of their coal-generating capacity.
- Communities that have lost at least 10% of their coal-generating capacity.
- Communities that have lost at least 10% of their coal-generating capacity.

1x Coal Closure Energy Communities

- Communities that have lost at least 10% of their coal-generating capacity.
- Communities that have lost at least 10% of their coal-generating capacity.
- Communities that have lost at least 10% of their coal-generating capacity.

MAP LAYERS

- Coal Closure Energy Communities
- IRA Non-MQAs that are Energy Communities
- MQAs and Non-MQAs that only meet the Prevail Fair Employment Threshold

Map showing Energy Community Tax Credit Bonus areas in Wisconsin, including locations like Marshfield, Stevens Point, and Wisconsin Rapids.

Click [here](#).

Domestic Content

Use of 100% domestic steel & iron and % of manufactured products

BLUEGREEN ALLIANCE

Domestic Content Bonus for Clean Energy Tax Credits

A User Guide for Project Developers

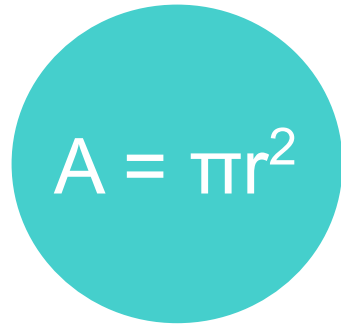
The Inflation Reduction Act of 2022 offers a historic investment in the clean energy economy, U.S. manufacturing, and family sustaining jobs. Core to the law is a set of tax credits to spur deployment of clean energy projects. The law also establishes several bonus credits that can be layered on top of these base credits for projects that meet certain requirements. This guide is focused on one particular bonus credit: the 10% domestic content bonus credit. The U.S. Treasury Department released interim guidance on this bonus credit in May 2023. To access this domestic content bonus credit, developers can rely on U.S.-made iron and steel and an array of other steel and battery components that

of color, contributing to economic and racial inequality. Black manufacturing employment, for example, has fallen by 30% since the 1990s. The outsourcing of U.S. manufacturing also exacerbated global industrial climate pollution, as energy-intensive manufacturing shifted to countries with lower environmental and labor standards and higher emissions.

This legacy of outsourcing has contributed to deep U.S. dependency on highly concentrated overseas supply chains for solar, wind, battery, and other clean technologies. As we build the growing clean energy economy, we face a clear choice. We can continue to hike our climate costs

Click [here](#).

How much are credits worth? Know your formulas.


$$A = \pi r^2$$

How do you calculate the area of a circle?

Sec. 48: Investment Tax Credit (ITC)

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

Cost basis

Cost of installing eligible equipment

Cost basis determined based on specific technology.

Base / Bonus Credits

6% - 50%

based on location, labor standards, domestic content, project size, commence construction date

+ 10-20%

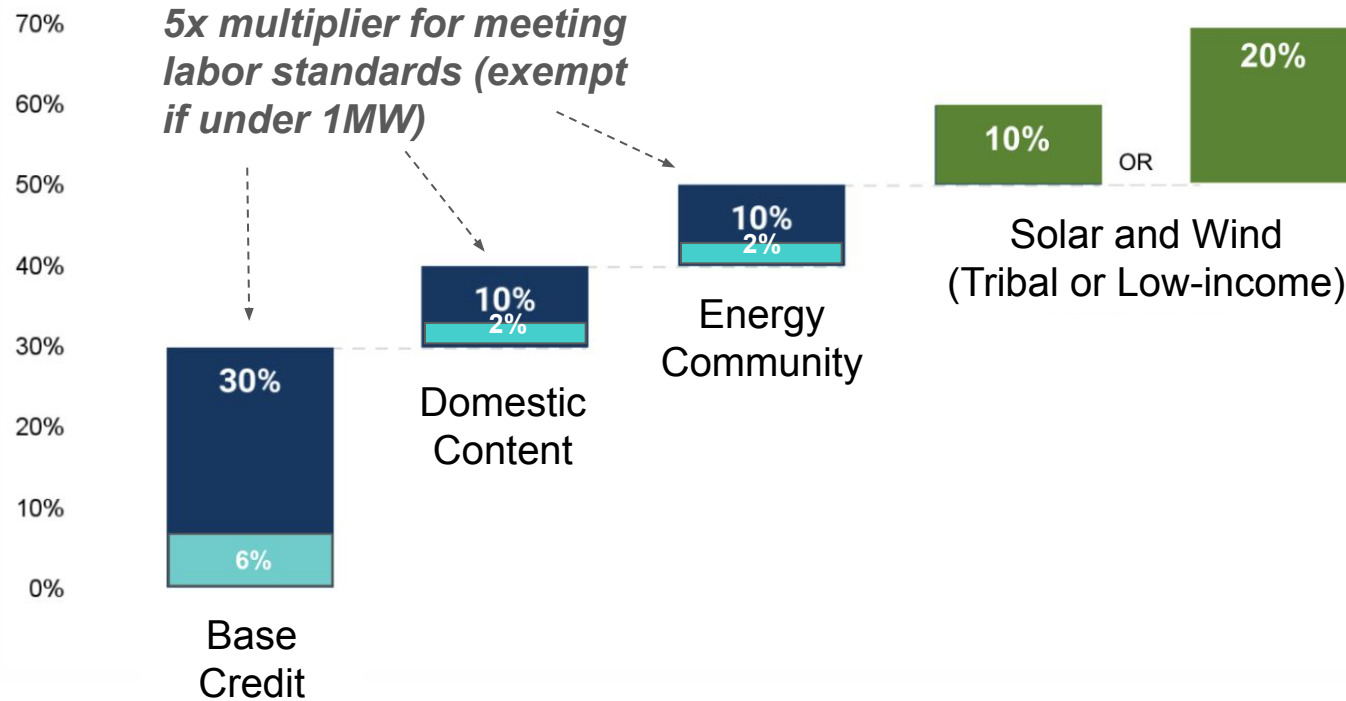
for solar & wind through [competitive process for certain sites.](#)

Other \$?

Reduce by up to 15% for use of tax-exempt financing

Grants and tax credits can not exceed total costs.

Base and bonus credits for Sec 48 ITC



Sec. 48: Investment Tax Credit - Example

	Cost basis	Rate	Adjusted rate	=	Estimated value
Ground-source heat pumps	\$10,000,000	40%	34%		\$3,400,000
Solar	\$2,000,000	30%	25.5%		\$510,000
Energy storage	\$500,000	30%	25.5%		\$127,500
Total estimated investment tax credit					\$4,037,500

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

\$15,000 per vehicle
if < 14,000 pounds

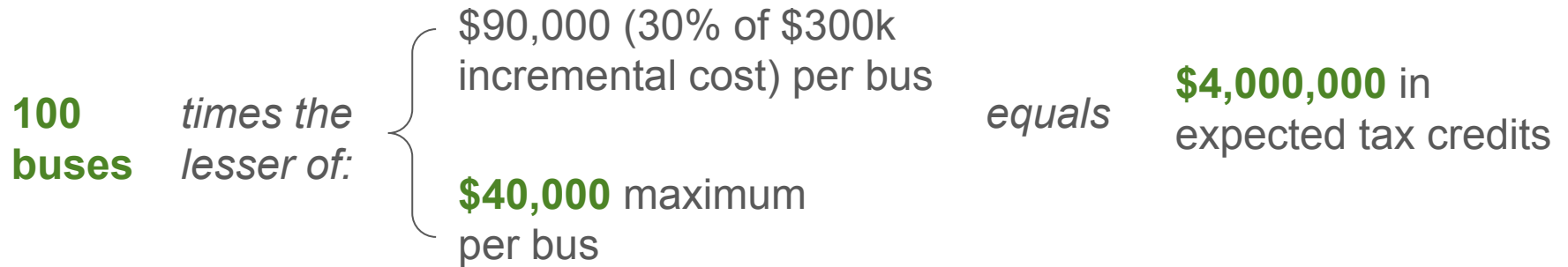
\$40,000 per vehicle
if > 14,000 pounds

Other \$?

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

Sec. 45W: Clean Commercial Vehicle - Example

A school district purchases 100 electric school buses from an eligible manufacturer at a price of \$400,000 each with an incremental cost of \$300,000 over a comparable vehicle.



Sec. 45W: Clean Commercial Vehicle - Example w grants

A school district purchases 100 electric school buses from an eligible manufacturer at a price of \$400,000 each with an incremental cost of \$300,000 over a comparable vehicle. **The district receives \$375,000 in grants for each bus.**

100 buses *times the lesser of:*

- \$90,000 (30% of \$300k incremental cost) per bus
- \$40,000** maximum per bus

equals \$4,000,000 but tax credits are reduced to **\$2,500,000** because of grants.

Sec. 30C: Alternative Fuel Refueling Property

✓ Must be located in qualifying areas. Check site address [here](#).

Cost basis

Cost of installing
each charging
station

Rate

6%
*if labor standards
are not met*

30%
*if labor standards
are met*

Maximum

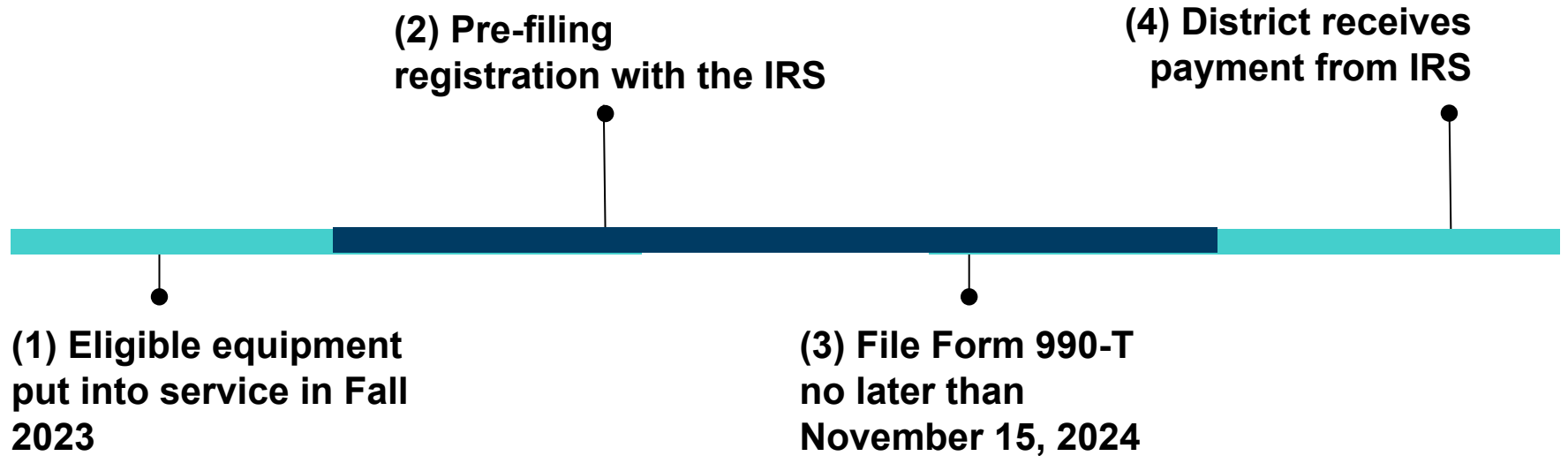
\$100,000
limit per charger
(not per site)

Sec. 30C: Alternative Fuel Refueling Property - Example

A school district installs 10 electric vehicle charging stations at an eligible location at a cost of \$115,000 per station. The project met labor standards which included meeting prevailing wage and apprenticeship requirements.

10 stations	<i>times</i>	\$34,500 per charging station (30% of \$115,000)	<i>equals</i>	\$345,000 in expected tax credits
------------------------------	--------------	---	---------------	---

Here's an example



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

Where do you go from here?

Laying the groundwork

- Put together your IRA team
- Learn and share about the IRA with your team
- Identify a budget for professional services
- Review “[energy communities](#)” & [30C eligibility](#) map for your district

Claim credits for
2023 completed
projects

“Get what you got”

Evaluate current
projects for
credits

*“Apply the new
rules of the road”*

Re-evaluate
current projects
for clean alts

“Take another look”

Strategic
planning and
preparation

*“New business as
usual”*



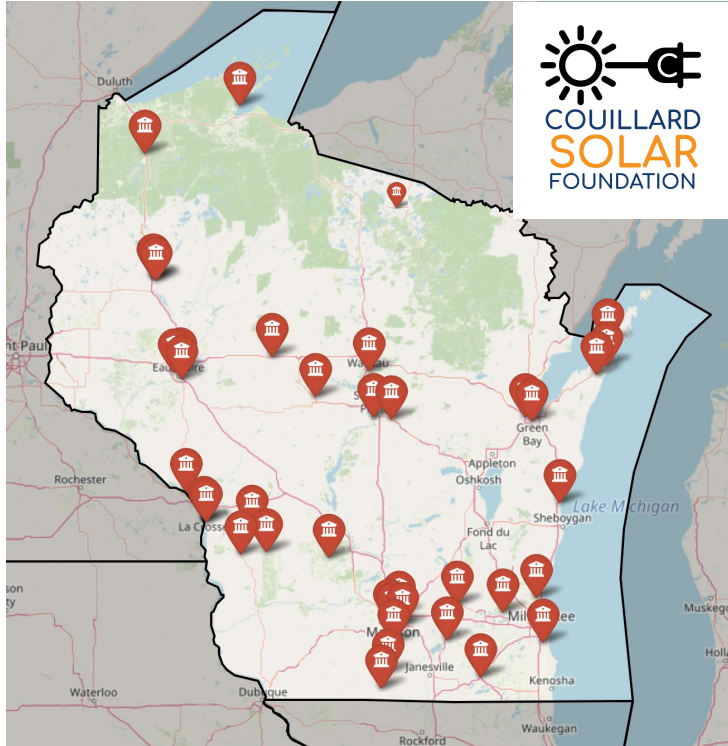
St. Germain Elementary School - 2023

Utilizing IRA Eligible Technologies in Wisconsin Schools

*Henry Hundt
Sustainability Lead
hhundt@hoffman.net
608.422.1321*



Additional Funding for IRA Eligible Technologies in Wisconsin



Solar on Schools/Couillard Solar Foundation – Panel Donation

- Technology Support: Solar PV
- Grant amount depends on project size
- Rolling application
- For PV systems smaller than 100 kW, grants are awarded for up to 50% of the system size.
- For PV systems 100 kW and larger, grants are awarded for 50kW DC
- Learn more at [Midwest Renewable Energy Association](#)

Couillard Solar Canopies – Outdoor Classroom and Recreation Space



Entire structure cost (not just panels) is eligible for direct pay of ITC

All profits from sales goes back to supporting solar on schools in Wisconsin



Additional Funding for IRA Eligible Technologies in Wisconsin



Focus on Energy – Prescriptive Incentives

- Technology Support: Solar PV, Geothermal
- Incentive amount depends on project size
- Solar Incentives have been falling year to year, expect to cover 5%-10%
- Incentives for geothermal depend on overall facility design
- Learn more at [Focus on Energy](#)

Business Customer Solar PV Rebates

System Size in kW (DC)	Rebate per kW (DC)	Max Rebate
Up to 5 kW	\$200	\$1,000
5-10 kW	\$1,000 + \$150 per kW above 5 kW	\$1,750
10-100 kW	\$1,750 + \$125 per kW above 10 kW	\$13,000
100-300 kW	\$13,000 + \$100 per kW above 100 kW	\$33,000
300-500 kW	\$33,000 + \$85 per kW above 300 kW	\$50,000
500+ kW	\$50,000 + \$0 per kW above 500 kW	\$50,000

Careful Planning Pays Off – Wisconsin School Implementation Scenario



Example Project in Wisconsin – Phase 1

Referendum Funded Geothermal HVAC: 34% ITC Elective Payment

96,000 sqft Facility	Geothermal System (\$65/sqft)	Gas Boiler & Chiller System (\$48/sqft)
System Cost	\$6,240,000	\$4,608,000
IRS Incentive YR 1	\$2,121,600	-
Net System Cost	\$4,118,400	\$4,608,000
O&M Savings YR 1	\$15,000 (varies by utility)	-
Simple Payback	0 years	

Typical Payback **without** ITC can be very large, very between 15 to 25 years depending utility gas and electricity rates

Example Project in Wisconsin – Phase 2

Elective Payment Incentive Funded Solar PV: 30% ITC

Rooftop Solar	300kW of Solar Panels
System Cost	\$630,000
IRS Payment	\$189,000
Focus on Energy	\$33,000
Solar on School	\$20,000
Net System Cost	\$388,000
Simple Payback	6yrs-12yrs (depends on utility)

PV Equipment Lifetime: 30yr warranty on panels, budget for inverter replacement in year 15

Example Project in Wisconsin – Phase 2



Parting Comments on Solar, Batteries and Geothermal in Wisconsin



- Any plan for solar and geothermal should also look at additional energy efficiency measures with good paybacks
- Add solar on new or recently replaced roofs
- Ground mount solar is cost competitive with rooftop systems – can be done at any time
- Geothermal and solar PV are a great pair
- Plan for future loads when installing PV: Electric buses, EV charging, and classroom technology.
- Solar, geothermal and battery systems are great tools for classroom learning

Want more on IRA and ground-source heat pumps?

Inflation Reduction Act

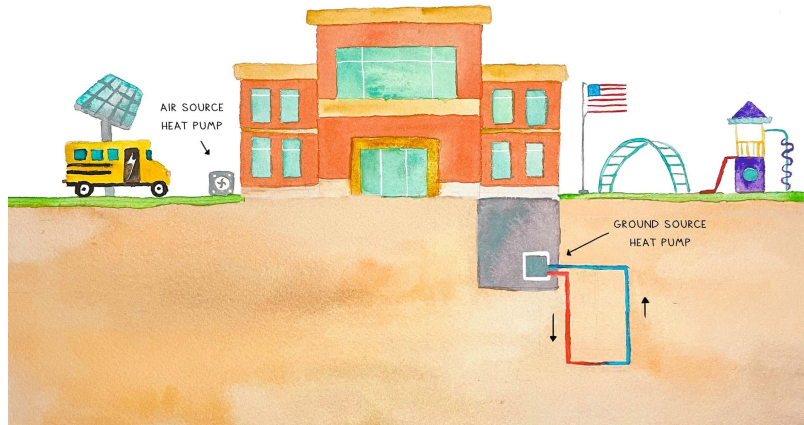
- [Schools and the IRA](#) including [5 Actions to Get Started](#) - Our web resources
- [Schools Can Use These Little-Known, Unlimited Funds...](#) - Article in EdWeek
- [Inflation Reduction Act](#) - 90-min webinar from Eversource's Zero Energy Buildings Conference
- [US Dept of the Treasury](#) Fact Sheet on Schools & the IRA

HVAC System Choices / Ground-Source Heat Pumps

- [HVAC Choices for Student Health & Learning](#) - Report with RMI for non-technical audiences
- [Ground Source Heat Pumps](#) - Eversource Zero Energy Buildings Conference
- [Making Climate Smart HVAC Investments](#) - Webinar in partnership w AASA featuring Prince George's County Maryland

Thank you!

COOL SCHOOLS HAVE HEAT PUMPS



Sara Ross, Co-founder
UndauntedK12
sara@undauntedk12.org

Henry Hundt, Sustainability Lead
Hoffman Planning, Design &
Construction
hhundt@hoffman.net
608.422.1321

UNDAUNTEDK12
NICOLE KELNER

Q&A

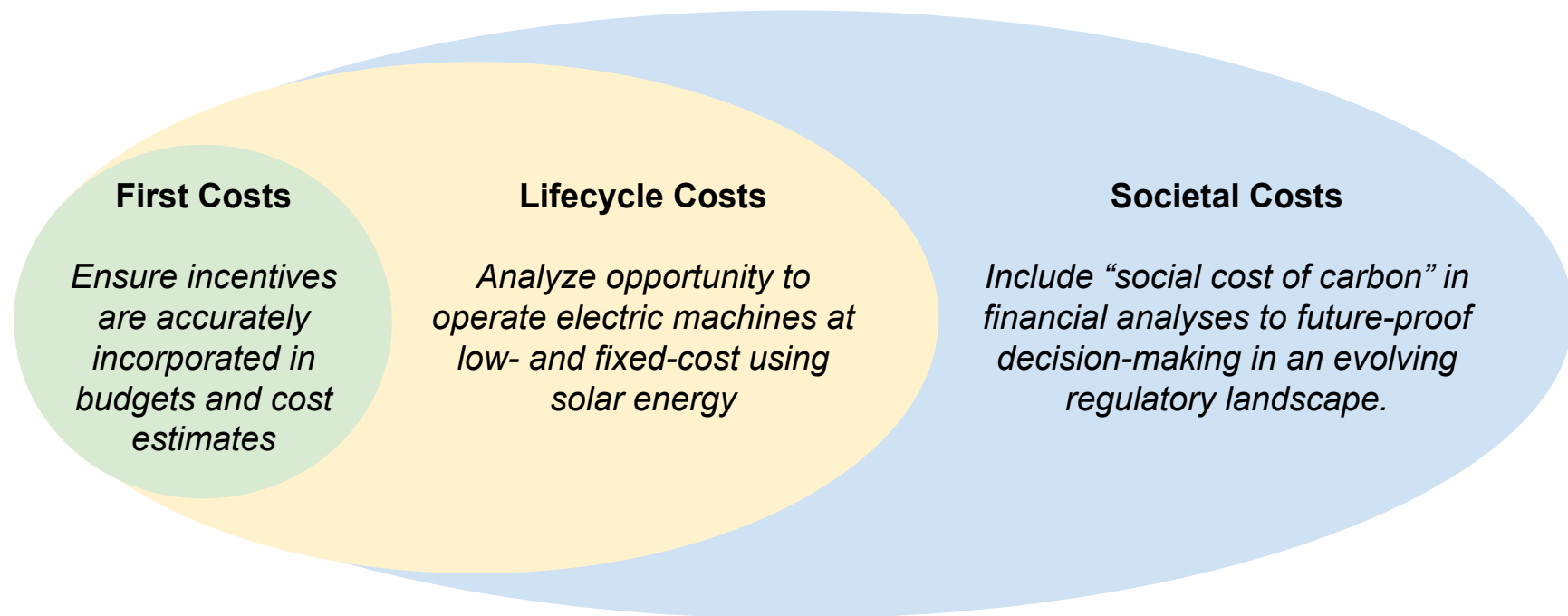


Financial Impact of Solar, Efficiency, and Demand Management

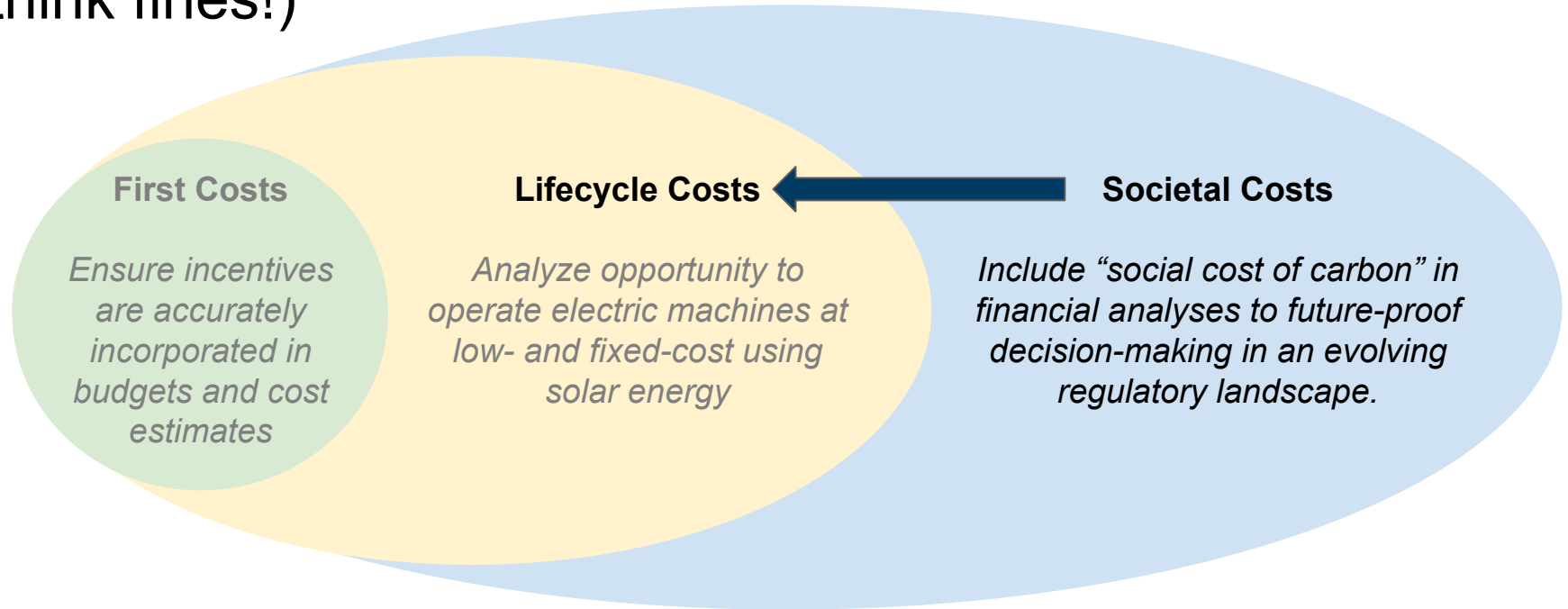
Northland Pines High and Middle School	2016	2019
Total Electricity Use in MWh (thousands of KWh)	1509	1208
Solar Electricity Use included in Total in MWh	none	193
Percentage of Total from Solar (not including 8% of solar production sold to the grid)	none	16%
Solar Electricity Cost (until a buy-out of the PV system owned from investors at market value)	none	\$27,200
Total Electricity Cost including Solar Cost	\$160,718	\$111,936
Annual Cost Savings from Solar with Demand Management and Efficiency	-	\$48,782



Integrating IRA incentives into costs at all levels



Policy is shifting “societal costs” into “lifecycle costs” (think fines!)



Future-proofing essential in rapidly changing environment

