

# How Governmental Entities and Nonprofits Can Access Cash Payments under the Inflation Reduction Act

Presentation for  
**Association for Governmental Leasing &  
Finance**  
May 3, 2024





## **Poll Question: How familiar are you with the IRA?**

- A. *Does that have something to do with my 401(k) plan?***
- B. I am an ESCO trying to educate my customers about the money they can get under the IRA**
- C. I am a Lender whose clients ask if they can have a one-time IRA optional prepayment**
- D. I am an FA, consultant or bond counsel helping my clients figure out how to comply with the 5x PWA multiplier and domestic content requirements for projects that are 1 MW or more**



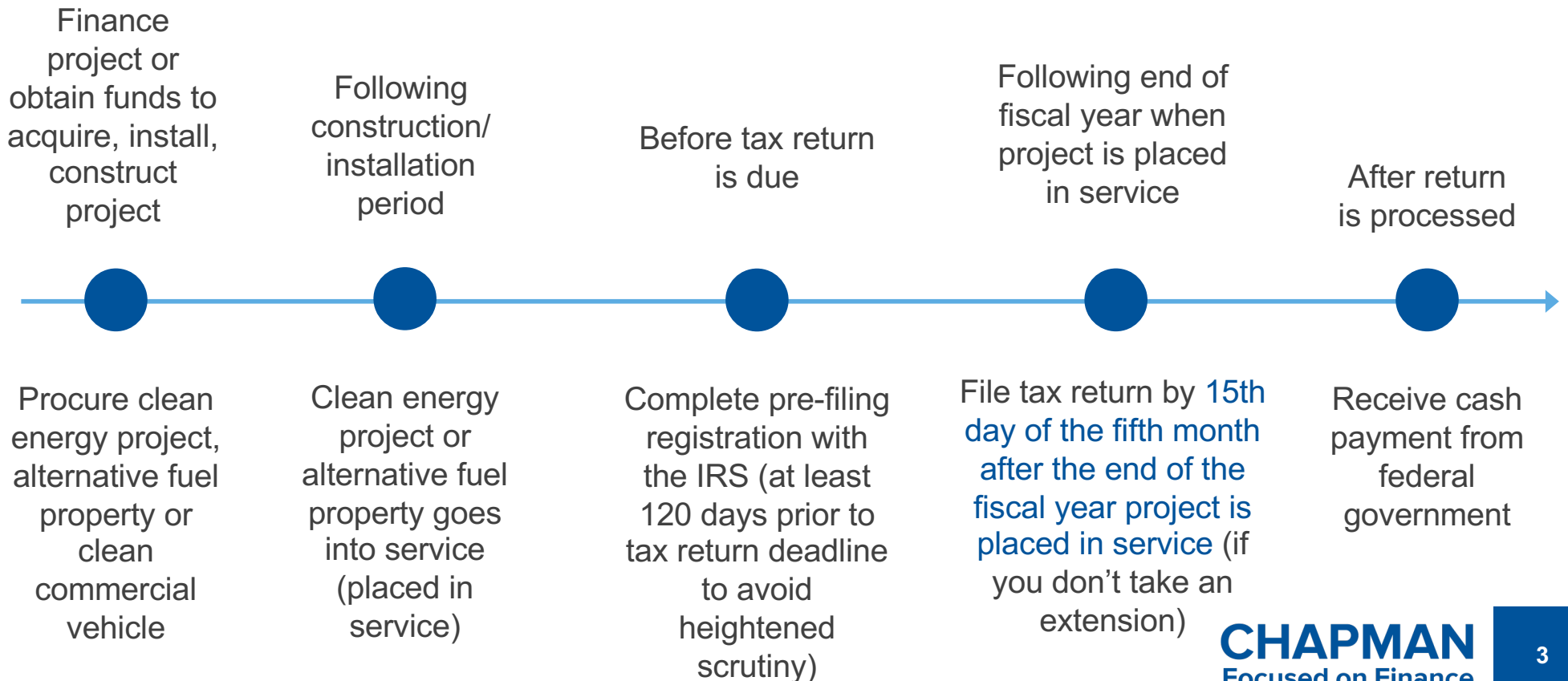
## IRS Elective Pay Final Regulations Released

- ▶ During 2023 the IRS released proposed regulations relating to elective payment of tax credits and requested comments.
- ▶ On March 5, 2024 the IRS released final regulations regarding elective payment of tax credits (“Final Regulations”)
- ▶ The Final Regulations become effective 60 days after publication in the Federal Register.
- ▶ The Final Regulations were published on March 11, 2024, making them effective on Friday, May 10, 2024.
- ▶ Once effective, the Final Regulations will be applicable for taxable years ending on or after publication in the Federal Register.
- ▶ Taxpayers with taxable years ending before that date may choose to apply the final rules, if done so entirely and in a consistent manner.



# Timing of Funds for Tax Credit

Governmental Entity or Nonprofit (“Applicable Entity”) will apply for and receive the direct payment **after the facility is financed, procured, installed and actually placed in service.** If financing the facility, Applicable Entity may want to negotiate a one-time prepayment of facility in the expected amount of the direct payment.





## Effective Date –Taxable Year Limitation (aka “Fiscal Year Hangover Issue”)

- ▶ Technically the IRA only applies to taxable years beginning after 2022.
- ▶ Subsection (g) of IRA section 13801 states:  

(g) EFFECTIVE DATE.—The amendments made by this section shall apply to taxable years beginning after December 31, 2022.
- ▶ Per IRS FAQs on Elective Pay at <https://www.irs.gov/credits-deductions/elective-pay-and-transferability-frequently-asked-questions-elective-pay>

### **Q27. Can I apply elective pay to taxable years beginning before December 31, 2022? (added June 14, 2023)**

A. No. Elective pay is only effective for taxable years beginning after December 31, 2022. As a result, if your taxable year begins in the middle of the calendar year, even though one of your taxable years ends during 2023, section 6417 only applies to the taxable year that begins in 2023.



## Fiscal Year Hangover Issue Fix for Governmental Entities and Entities without Federal Tax Filing Requirement

- ▶ If a governmental entity or nonprofit with fiscal year of July 1 to June 30 places its project in service between January 1, 2023 and June 30, 2023, technically that project isn't eligible under IRA because it is part of a fiscal year that started in 2022.
- ▶ GFOA and other groups lobbied so that *governmental entities* that placed a project in service in 2023 would still be eligible for direct pay.
- ▶ The Final Regulations **permit** an entity that is not required to file a Federal income tax return pursuant to section 6011 or Federal return pursuant to section 6033(a) (like a school **but not an entity that files federal tax returns like a 501c3 hospital or 501c3 college**), **when filing an initial Form 990-T, to adopt a taxable year based upon a calendar or fiscal year**, provided that such entity maintains adequate book and records, including a **reconciliation of any difference between its regular books of account and its chosen taxable year**, to support making an elective payment election on the basis of its chosen taxable year.



# Entities without a Federal Tax Filing Requirement Have an Option to Determine their Taxable Year

## Example

Under the final regulations, a town (as described below) can choose to file a Form 990-T for 2023 using a calendar year tax year, enabling it to make an elective pay election with respect to an applicable credit property regardless of when it was placed in service during calendar year 2023. **The town has no Federal income tax return requirement under section 6011 of the Code and no Federal return requirement under 6033(a) of the Code but is filing Form 990-T for the sole purpose of using elective pay.**



July 1, 2022

The town's fiscal year (for non-tax purposes) begins on July 1, and ends June 30.



April 1, 2023

The town places applicable credit property in service on April 1, 2023.



After April 1, 2023 and before filing

The town completes its pre-filing registration and chooses to adopt a calendar year (January 1 – December 31) tax year for purposes of section 6417. It maintains adequate books and records.



by May 15, 2024

The town files their 2023 Form 990-T on a calendar year basis to claim credits on the applicable credit property placed in service on April 1, 2023.



# What Tax Credits Are Most Relevant to Governmental Entities and Nonprofits?

- ▶ 12 tax credits total eligible for elective pay



- ▶ Tax credits most relevant to governmental entities and nonprofits are:

- ▷ § 45W Qualified Commercial Vehicle Tax Credit

- > **Electric school buses, electric vans**



- ▷ § 30C Alternative Fuel Refueling Property Credit

- > **EV charging station, hydrogen fueling station**



- ▷ § 48 Investment Tax Credit for Energy Property

- > **Solar, wind, ground source heat pump, battery storage, thermal energy storage (TES), combined heat and power (co-gen/CHP), geothermal, biomass, waste energy recovery property**







# Electric School Buses & Other Qualified Commercial Clean Vehicles – Section 45W (NEW)



Spokane Transit Authority 40-foot Proterra ZX5 battery electric bus 22242 preparing to charge at Moran Prairie Park and Ride via overhead ABB pantograph.

Photo credit: JT Ramsey, [https://commons.wikimedia.org/wiki/File:I-CHARGE\\_charging\\_station\\_close-up.jpg](https://commons.wikimedia.org/wiki/File:I-CHARGE_charging_station_close-up.jpg)



Electric school bus in California.

Photo credit: California Energy Commission

# ➤ Electric Firetrucks



The Los Angeles Fire Department's Rosenbauer RTX Fire Engine. The LAFD was the first fire department in North America to purchase an electric fire engine from Austrian-based manufacturer Rosenbauer.

Photo credit: Rosenbauer America

# ➤ Electric Trucks



This photograph shows some of the white cases which enclose the battery packs on this electric vehicle. The vehicle platform is a GM (Chevrolet) 6500XD Low Cab Forward Class 6 truck.

Photo credit: Foxcorner, [https://commons.wikimedia.org/wiki/File:Electric\\_GM\\_6500XD\\_truck.jpg](https://commons.wikimedia.org/wiki/File:Electric_GM_6500XD_truck.jpg)

# ➤ Electric Forklifts & Mobile Machinery IRC 4053(8)



A Toyota electric-powered walkie-stacker type pallet stacker on the liftgate of a small semi-trailer owned by Pepsico making a delivery at the Petro Stopping Center in Irvine, Florida.

Photo credit: DanTD,  
[https://commons.wikimedia.org/wiki/File:Toyota\\_Walkie\\_Stacker\\_Forklift\\_on\\_Pepsi\\_Truck\\_in\\_Irvine\\_FL.jpg](https://commons.wikimedia.org/wiki/File:Toyota_Walkie_Stacker_Forklift_on_Pepsi_Truck_in_Irvine_FL.jpg)

# ➤ EV Chargers



i-CHARGE wall mounted electric vehicle charging equipment.

Photo credit: Ivan Racic,  
[https://commons.wikimedia.org/wiki/File:i-CHARGE\\_charging\\_station\\_close-up.jpg](https://commons.wikimedia.org/wiki/File:i-CHARGE_charging_station_close-up.jpg)



# Solar Projects

Equipment which uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat.



A 2.2 MW solar array at the Old Midville solar project in Millen, Georgia. This image was taken on the first full day of energy being generated into the grid.

Photo credit:  
<https://www.rawpixel.com/image/3322811/free-photo-image-solar-panels-cc0-creative-commons>

# Solar Projects



The 592 kW PV solar energy system on the Dr. Martin Luther King, Jr. School in Cambridge, MA, includes 1,599 Sunpreme bifacial modules, which are high-performing solar panels that absorb direct sunlight on the front along with reflected and diffused sunlight on the back.

Photo credit: Tschoder, [https://commons.wikimedia.org/wiki/Category:Solar\\_panels\\_in\\_the\\_United\\_States#/media/File:MLK\\_Project.jpg](https://commons.wikimedia.org/wiki/Category:Solar_panels_in_the_United_States#/media/File:MLK_Project.jpg)



# Qualified Small Wind Project

With nameplate capacity of not more than 100 kilowatts

Photo credit:  
[https://commons.wikimedia.org/wiki/File:Hull\\_1\\_wind\\_turbine\\_13477190\\_0f24ca0d5b\\_b.jpg](https://commons.wikimedia.org/wiki/File:Hull_1_wind_turbine_13477190_0f24ca0d5b_b.jpg)





# Battery Storage

With nameplate capacity of not less than 5 kilowatt hours



An energy storage system is installed in Schweitzer Engineering Laboratories, on Northeast Hopkins Court, Pullman, WA. The 4 MWh project consists of two 2 MWh strings. Each string consists of five 20-foot shipping containers, four of which hold a DC battery and one of which holds the power conversion system. Each DC battery container consists of two tanks, one with Anolyte and one with Catholyte, three cell stacks and the plumbing connecting the tanks to the stacks.

Photo credit: UniEnergy Technologies,  
[https://commons.wikimedia.org/wiki/File:1 MW 4 MWh Turner Energy Storage Project in Pullman, WA.jpg](https://commons.wikimedia.org/wiki/File:1_MW_4_MWh_Turner_Energy_Storage_Project_in_Pullman,_WA.jpg)

# ➤ Thermal Energy Storage (TES)



These three heat recovery chillers (HRC) are huge, custom-built so each of them has a 2,500 tons cooling capacity and produces 40M BTUs of heat/hr for the hot water loops. In aggregate, the system you see here could heat and cool 30,000 average homes. HRCs have never been done at this scale before (600T is the prior record).

## Big Pipes at Stanford's New Central Energy Facility

By shifting from a cogen plant, Stanford achieved a 68% reduction in greenhouse gas emissions and a 67% reduction in water use (saving 127 million gallons in the first year). 90% of the campus' heating needs are met by waste heat recovery. The facility cost \$300M, about \$30-40M more than a comparable cogen facility, and it is expected to save an incremental \$300M in energy costs over its lifetime.

Photo credit: Steve Jurvetson, [https://commons.wikimedia.org/wiki/File:Thermal\\_Storage\\_Tanks\\_\(9806162026\).jpg](https://commons.wikimedia.org/wiki/File:Thermal_Storage_Tanks_(9806162026).jpg)

# ➤ Ground/Geothermal Source Heat Pumps

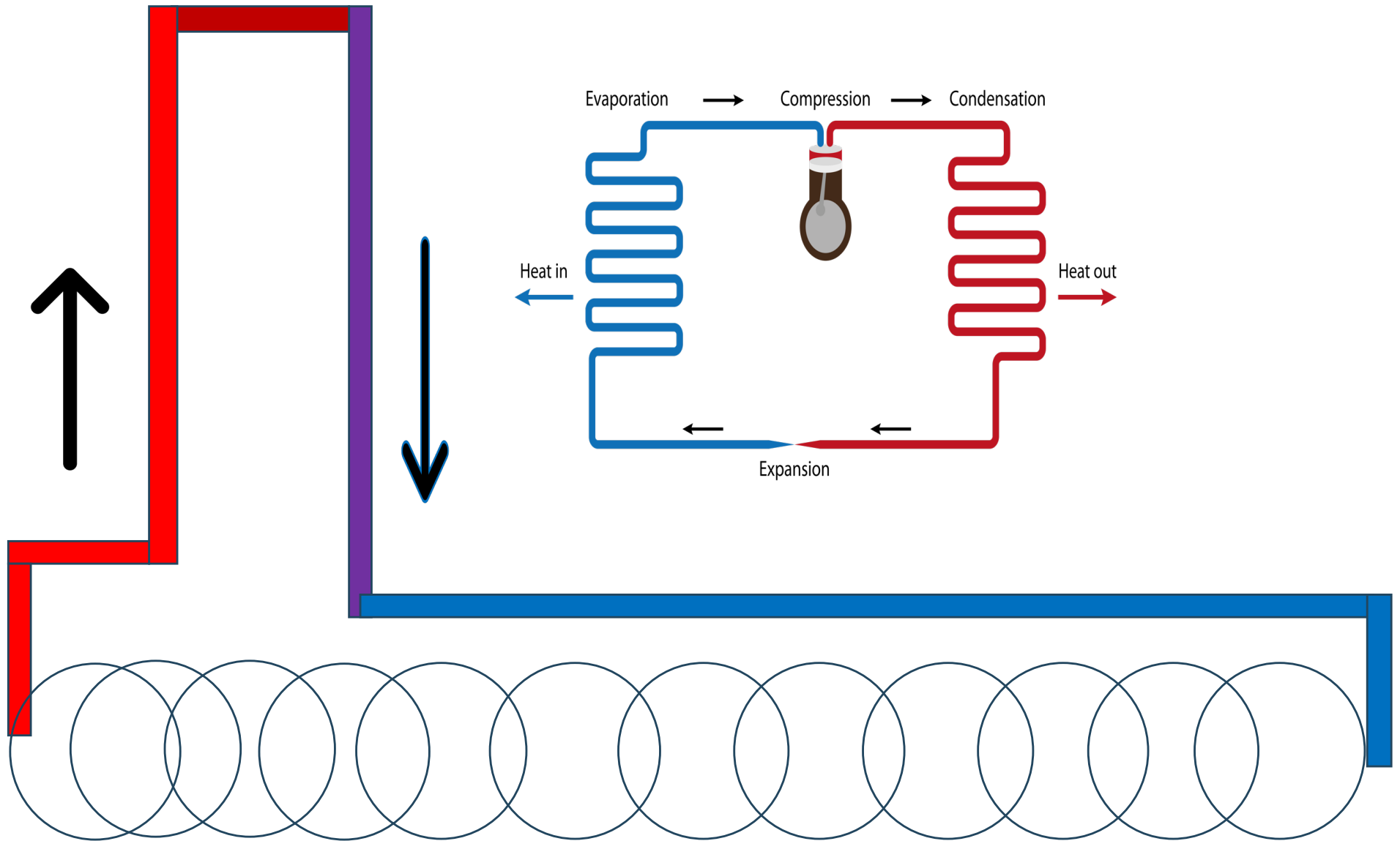


Photos credit: Courtesy of Ameresco





# Ground/Geothermal Source Heat Pumps





# Not Just for Heat – Heat Pumps Provide Cooling too!

- ▶ Heat pumps **redistribute** heat that's already present in the environment. Transferring heat energy does not require as much electricity as producing it. In this way heat pumps can provide both **energy-efficient heating and cooling**.
- ▶ Heat pumps work in all climates as an extremely energy-efficient alternative to conventional HVAC systems, furnaces and air conditioners.
- ▶ So how and why are heat pumps so efficient at heating and cooling?
  - ▷ The biggest reason: Heat pumps don't produce heat at all. Instead, they redistribute heat that's already present in the environment. In the winter, a heat pump extracts heat from the outside environment and moves it indoors. In the summer, the process is reversed: The heat pump takes heat from indoors and moves it outside.
- ▶ **IRA includes an investment tax credit for ground source heat pumps that commences construction before January 1, 2035.**
- ▶ IRA includes a consumer tax credit of \$2,000 for residential heat pumps.





# Combined Heat & Power Project (CHP or Co-Gen)



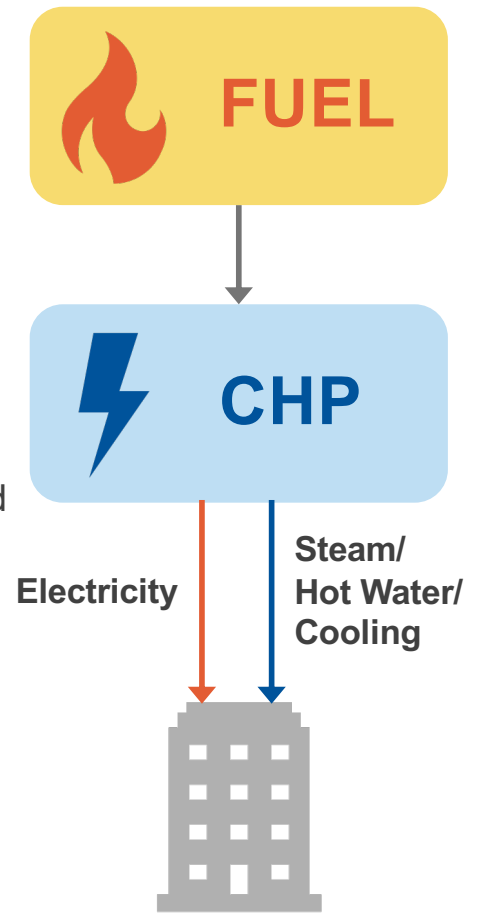
Photo credit: Scenic Hill Solar

Photo credit: Photo credit: Courtesy of Baker Tilly



# Upgrading Energy Systems – Benefits of Co-GEN aka Combined Heat and Power (CHP) Property

- ▶ Combined heat and power (CHP) systems provide on-site electric power, heating, and cooling from a single or blended fuel source. This power generation technology is also called **cogeneration, and increases system efficiencies and lowers fuel consumption and costs**
- ▶ Common CHP equipment typically uses natural gas to generate electricity and steam and includes reciprocating engines, microturbines, fuel cells, steam turbines, and gas turbines
- ▶ To be eligible for the ITC the CHP system must use the same energy source for the simultaneous or sequential generation of electrical power, mechanical shaft power, or both, in combination with the generation of steam or other forms of useful thermal energy (including heating and cooling applications) and produce:
  - ▷ at least 20 percent of its total useful energy in the form of thermal energy which is not used to produce electrical or mechanical power (or combination thereof), and
  - ▷ at least 20 percent of its total useful energy in the form of electrical or mechanical power (or combination thereof), and
  - ▷ the energy efficiency percentage must exceed 60 percent, and
  - ▷ **Construction must begin before January 1, 2025**



Resiliency

Fuel Cost Savings

Increased Efficiency

Lower Emissions

# Fuel Cell Power Plant

With (i) a nameplate capacity of at least 0.5 kilowatt (1 kilowatt in the case of a fuel cell power plant with a linear generator assembly) of electricity using an electrochemical or electromechanical process, and (ii) an electricity-only generation efficiency greater than 30 percent

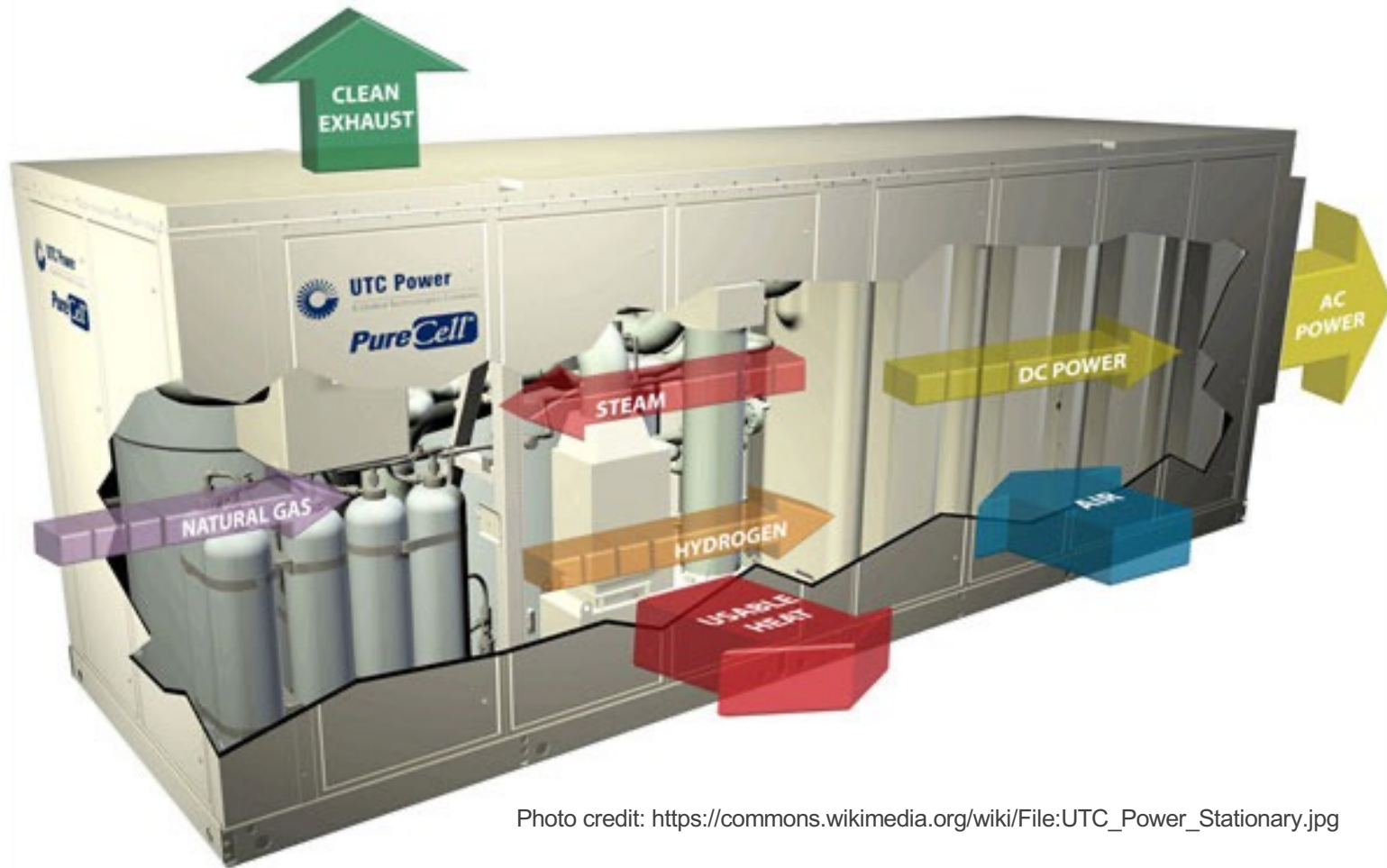


Photo credit: [https://commons.wikimedia.org/wiki/File:UTC\\_Power\\_Stationary.jpg](https://commons.wikimedia.org/wiki/File:UTC_Power_Stationary.jpg)



# Microgrid Controllers

For independent microgrids capable of generating not less than 4 kilowatts and not greater than 20 megawatts of electricity

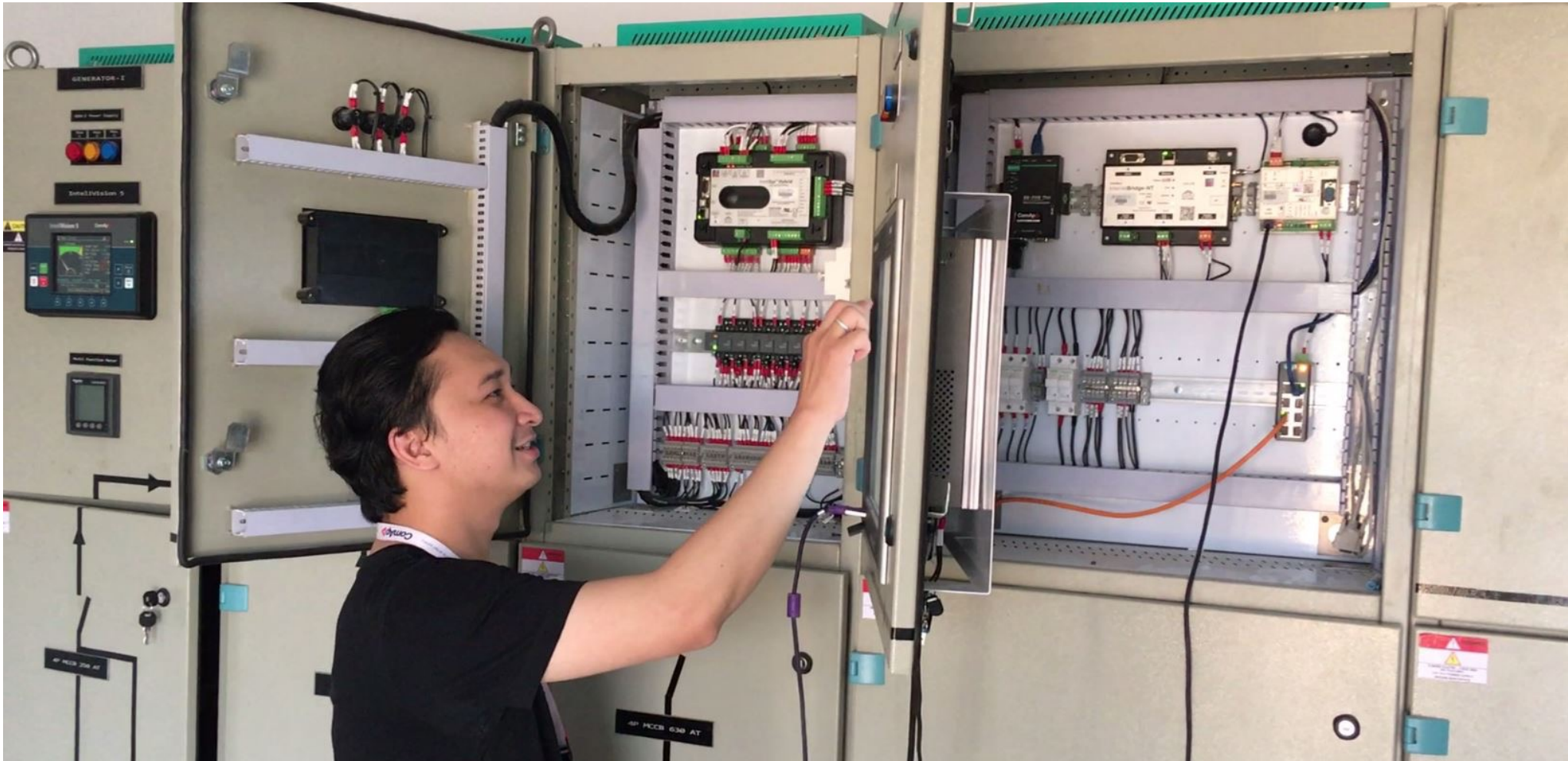


Photo credit: <https://microgridnews.com/selecting-a-smart-microgrid-controller-comap/>



# Biogas Project

Converts biomass into a gas which (i) consists of not less than 52 percent methane by volume, or (ii) is concentrated by such system into a gas which consists of not less than 52 percent methane, and captures such gas for sale or productive use, and not for disposal via combustion



Photo of Biogas Plant at largest municipal wastewater system in Maricopa County, AZ  
Photo credit: Courtesy of Ameresco



# Stationary Microturbine Power Plant

which has a nameplate capacity of less than 2,000 kilowatts, and has an electricity-only generation efficiency of not less than 26 percent at International Standard Organization conditions



Photo credit: Capstone Turbine Corp. <https://www.powermag.com/microturbine-technology-matures/> and <https://www.intechopen.com/chapters/45114>



# Waste Energy Recovery Property

Generates electricity solely from heat from buildings or equipment if the primary purpose of such building or equipment is not the generation of electricity and does not have capacity in excess of 50 megawatts



Photo credit: <https://www.swri.org/industry/advanced-power-systems/waste-heat-recovery-research>

# ➤ Electrochromic Glass

Electrochromic glass which uses electricity to change its light transmittance properties in order to heat or cool a structure



# ➤ Geothermal Energy

Equipment used to produce, distribute, or use energy derived from a geothermal deposit, up to (but not including) the electrical transmission stage



Photo credit: Scott Ableman

# Closed Loop and Open Loop Biomass Facilities



Ameresco operates and maintains the 20 megawatt electric capacity biomass-fueled steam cogeneration plant and two smaller biomass-fueled plants at the DOE Savannah River Site.

Photo credit: Savannah River Site, [https://commons.wikimedia.org/wiki/File:Ameresco\\_Biomass\\_Cogeneration\\_Facility\\_at\\_SRS\\_\(6516064593\).jpg](https://commons.wikimedia.org/wiki/File:Ameresco_Biomass_Cogeneration_Facility_at_SRS_(6516064593).jpg)

# ➤ Landfill Gas Facilities



The Cloverbar Landfill Gas Power Plant in Canada burns methane to produce 4.6 megawatts of electricity, enough to power 4,600 homes.

Photo credit: Photo David Dodge, Green Energy Futures Edmonton Waste Management Facility



*One of the plant's three V20 engine rooms.*



# ➤ Qualified Hydropower Facilities

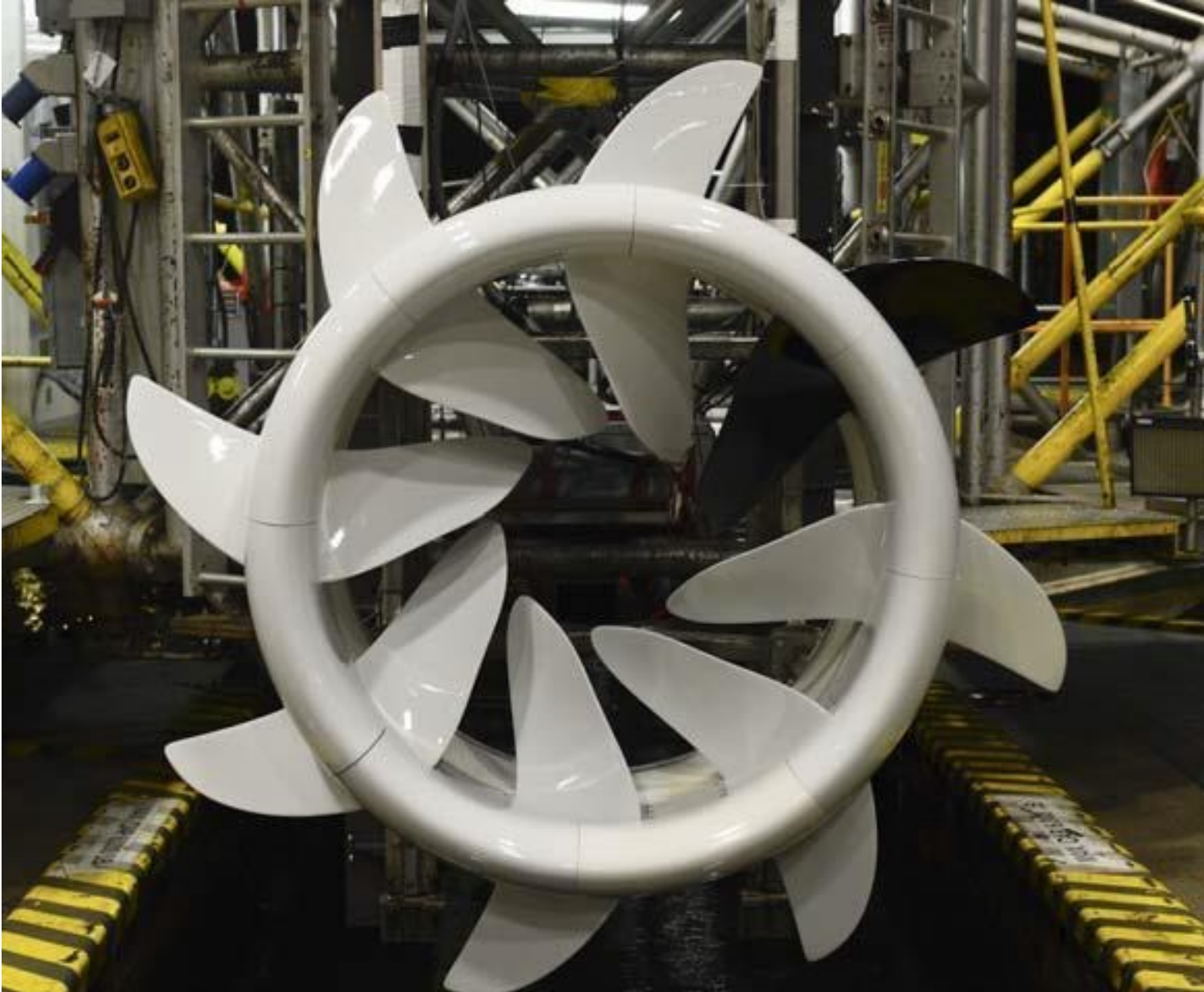


The Cannelton hydroelectric facility (shown here under construction in 2012) is an 88 MW run-of-the-river hydroelectric power plant providing renewable generation to the region. The facility is located on the Ohio River near Hawesville, Kentucky.

Photo credit: LouisvilleUSACE



# Marine and Hydrokinetic Renewable Energy Facilities



This in-stream hydrokinetic device, developed by Oceana Energy, is designed to generate energy by leveraging natural water flow in a river. During testing in 2014, the device was able to generate up to 8.15 kilowatts of power.

Photo credit: Oceana Energy



# Investment Tax Credit (ITC) vs Production Tax Credit (PTC)

- ▶ Owners installing credit eligible energy facilities will have a choice between electing to use ITC or PTC. Considerations:
  - ▶ Amount of credit – one time vs periodic
    - > Risk of sequestration for direct-pay
  - ▶ Placed in service date
  - ▶ Off-takers (or net metering if PTC under 45Y)



## ITCs

- ▶ One time credit for the year placed in service, based on credit percentage x facility cost
- ▶ Calculated as % of cost (6%/2% or 30%/10%)
- ▶ Eligible for multiplier/bonus/adders
- ▶ Tax-exempt financing “haircut”
- ▶ Vests 20% over 5 years; subject to recapture

## PTCs

- ▶ Annual tax credit based on credit amount (\$x) x output/year for x years
- ▶ Calculated based on KWh of electricity produced and sold to third parties
- ▶ Eligible for multiplier/bonus/adders
- ▶ Tax-exempt financing “haircut”
- ▶ Not subject to recapture



## Section 48E – Transition to Zero Greenhouse Gas Emissions Rate Technology

- ▶ In 2025, ITC (Section 48) and PTC (Section 45) will switch to Sections 48E and 45Y
- ▶ Instead of having a list of qualified technologies, tax credit will be based on the anticipated “greenhouse gas emissions rate” of technologies in order to subsidize technologies with greenhouse gas emissions rates not greater than zero and to pick up new technologies not currently enumerated in Section 48 and 45
  - ▷ Rate will be expressed as grams of CO<sub>2</sub>e per KWh
  - ▷ IRS will publish tables showing rate for different types of facilities
- ▶ **Qualified facility:**
  - ▷ A facility used for the generation of *electricity*
  - ▷ Placed in service after 12/31/24
  - ▷ **Anticipated greenhouse gas emissions rate not greater than zero – Likely excludes CHP? What about biogas and microturbines?**
- ▶ **Energy Storage Technology**
  - ▷ Battery storage with nameplate capacity of not less than 5 kilowatt hours
  - ▷ Thermal energy storage



# Phaseout of Section 48E Investment Tax Credit

- ▶ Section 48E(e) phases out the ITC when construction of the facility begins during the first calendar year following the “applicable year”.
- ▶ “Applicable year” is defined in Section 45Y(d)(3) as the later of:
  - ▷ the calendar year in which the Secretary determines that the annual greenhouse gas emissions from the production of electricity in the United States are equal to or less than 25 percent of the annual greenhouse gas emissions from the production of electricity in the United States for calendar year 2022, or
  - ▷ 2032
- ▶ Section 48E ITC phase-out percentages are as follows (multiply tax credit by phase-out percentage below):

If construction begins “x” year following applicable year	% of ITC available
First Year	100%
Second Year	75%
Third Year	50%
Fourth Year and After	0%

# Comparison of Section 48 versus Section 48E for Certain Facilities

		Section 48	Section 48E
<b>Solar</b>	Equipment which uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat	Must start construction before 1/1/25	✓
<b>Small Wind</b>	Qualified small wind energy property with nameplate capacity of not more than 100 kilowatts.	Must start construction before 1/1/25	✓
<b>Energy Storage Technology</b>	Battery storage with nameplate capacity of not less than 5 kilowatt hours or Thermal energy storage	Must start construction before 1/1/25	✓
<b>Ground Source Heat Pump</b>	Equipment which uses the ground or ground water as a thermal energy source to heat a structure or as a thermal energy sink to cool a structure	<b>Must start construction before January 1, 2035</b>	<b>N/A</b>
<b>Microgrid controllers</b>	For independent microgrids capable of generating not less than 4 kilowatts and not greater than 20 megawatts of electricity	Must start construction before 1/1/25	✓
<b>Waste Energy Recovery Property</b>	Generates electricity solely from heat from buildings or equipment if the primary purpose of such building or equipment is not the generation of electricity and does not have capacity in excess of 50 megawatts.	Must start construction before 1/1/25	✓
<b>Geothermal</b>	Equipment used to produce, distribute, or use energy derived from a geothermal deposit, up to (but not including) the electrical transmission stage	Must start construction before 1/1/25	✓
<b>Fiber optic solar lighting</b>	Equipment which uses solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight	Must start construction before 1/1/25	?

# Comparison of Section 48 versus Section 48E for Certain Facilities

		Section 48	Section 48E
<b>Fuel Cell</b>	Fuel cell power plant with (i) a nameplate capacity of at least 0.5 kilowatt (1 kilowatt in the case of a fuel cell power plant with a linear generator assembly) of electricity using an electrochemical or electromechanical process, and (ii) an electricity-only generation efficiency greater than 30 percent	Must start construction before 1/1/25	✓
<b>Combined Heat &amp; Power (CHP or Co-Gen)</b>	A system which uses the same energy source for the simultaneous or sequential generation of electrical power, mechanical shaft power, or both, in combination with the generation of steam or other forms of useful thermal energy (including heating and cooling applications), and which produces-- (I) at least 20 percent of its total useful energy in the form of thermal energy which is not used to produce electrical or mechanical power (or combination thereof), and (II) at least 20 percent of its total useful energy in the form of electrical or mechanical power (or combination thereof); and for which the energy efficiency percentage of which exceeds 60 percent	Must start construction before 1/1/25	N/A
<b>Biogas</b>	Converts biomass into a gas which (I) consists of not less than 52 percent methane by volume, or (II) is concentrated by such system into a gas which consists of not less than 52 percent methane, and captures such gas for sale or productive use, and not for disposal via combustion.	Must start construction before 1/1/25	??
<b>Electrochromic Glass</b>	Electrochromic glass which uses electricity to change its light transmittance properties in order to heat or cool a structure	Must start construction before 1/1/25	N/A
<b>Microturbines</b>	A stationary microturbine power plant which has a nameplate capacity of less than 2,000 kilowatts, and has an electricity-only generation efficiency of not less than 26 percent at International Standard Organization conditions	Must start construction before 1/1/25	?? or N/A



# Factors that Impact Applicability, Eligibility and Value of Tax Credits

- ▶ Tax credit applicability, eligibility and value can differ significantly depending on the type of project and other factors
- ▶ Potential factors that affect eligibility for and amount of credit:
  - ▷ start of construction date
  - ▷ placed-in-service date
  - ▷ facility type
  - ▷ facility size
  - ▷ facility location
  - ▷ compliance with prevailing wage, apprenticeship and domestic content requirements
- ▶ What constitutes a project for “less than 1MW” threshold? Existing guidance re “commence construction” safe harbors. Certain questions require IRS regulations or further guidance





# Tax Credit Entitlement Regime

- ▶ Generally speaking, the tax credit regime is an entitlement regime. If a project meets the requirements for eligibility then the taxpayer/applicable entity is entitled to take the tax credit on its return and does not need to apply for an allocation from federal government.
  
- ▶ Multipliers/Bonus/Adders to Tax Credits
  - ▷ Labor: Prevailing Wage & Apprenticeship
  - ▷ Domestic Content
  - ▷ Energy Communities
  - ▷ Low-Income Communities – ***Must apply for allocation***



# IRA Changes How ITC is Calculated

- ▶ Tax credits are now structured to have a lower **base credit** that can be increased if certain requirements are met
- ▶ Investment Tax Credits (ITC)
  - ▷ Now have a set **base credit value (e.g., 6% or 2%)** and if **prevailing wage and apprenticeship requirements** are met – a **5X multiplier** of the base credit is earned (**30% or 10%**). **If facility is less than 1 MW, 5x multiplier is automatic**
- ▶ **3 potential bonus adders (ITC) to certain base credits available**
  - ▷ **Domestic content** – get an additional **10% or 2%**
    - > Reduced to 2% if capacity is 1 MW or more and prevailing wage/apprenticeship requirements not met)
  - ▷ **Energy community** – get an additional **10% or 2%** for **brownfields, coal, oil, natural gas communities, or areas with decommissioned coal-fired power plants**
    - > Reduced to 2% if capacity is 1 MW or more and prevailing wage/apprenticeship requirements not met)
  - ▷ **Environmental justice** – **Low-Income Communities, Housing Projects, Tribal Land**
    - > get an additional **10%** for low-income community or Tribal land **or 20%** for certain low-income housing buildings or certain projects with households below poverty level/income levels
    - > **limited to solar and wind ITC < 5 MW**
    - > must apply for and receive an allocation



# 4 Key Goals of the Inflation Reduction Act Achieved through Multipliers/Adders to Tax Credits

**Create More Middle Class Jobs**

Credit Multiplier for meeting Davis-Bacon Prevailing Wage Requirements & Department of Labor Apprenticeship program requirements

**Compete with China: Increase Domestic Manufacturing**

Credit Adder for meeting Domestic Content Requirements (and direct-pay phaseout)

**Environmental Justice**

ITC Credit Adder for investments that reduce pollution with solar or wind in low-income communities, Tribal land, or certain low-income housing/low-income projects

**Help Communities historically tied to coal, oil or natural gas**

Credit Adder for investments in “Energy Communities” (brownfields, coal, oil or natural gas, or areas with decommissioned coal-fired power plants and coal mines)



# Certain Requirements and Bonuses That May Affect the Amount of Tax Credits

<b>Prevailing Wage and Apprenticeship Requirements</b>	<p>For various tax credits created or modified by IRA, the base credit amount is increased by five times for projects that meet certain requirements (i.e. paying prevailing wages and registered apprenticeship programs). Facility less than 1 MW of electrical (as measured in alternating current) or thermal energy, in does not need to meet labor requirement - 5x multiplier applies automatically for a facility less than 1 MW of electrical (as measured in alternating current) or thermal energy.</p>
<b>Domestic Content Bonus</b>	<p>A facility that meets domestic content requirements is eligible for up to a 10 percentage point increase to the Investment Tax Credit (48, 48E).</p> <p>For projects or facilities 1 MW or more beginning construction starting in 2024, for recipients of elective pay, the domestic content requirement can also result in a phase-out of the Investment Tax Credit if it is not met. No phaseout of direct payment for facilities less than 1 MW that fail to meet domestic content requirements</p>
<b>Energy Communities Bonus</b>	<p>Projects located in energy communities (brownfields, closed coal mines or coal-fired power plants, or areas that have significant employment or local tax revenues from fossil fuels and higher than average unemployment) are eligible for an up to 10 percentage point increase in the ITC.</p>
<b>Low Income Communities Bonus Credit Program</b>	<p>IRA provides increased credit of 10 percentage points or 20 percentage points for Investment Tax Credit for solar or wind facilities less than 5 MW located in low-income communities, Indian lands, or federal housing projects, or serving low-income households.</p> <p>You must apply and receive a low-income capacity allocation, and then place your facility in service to claim this bonus.</p>



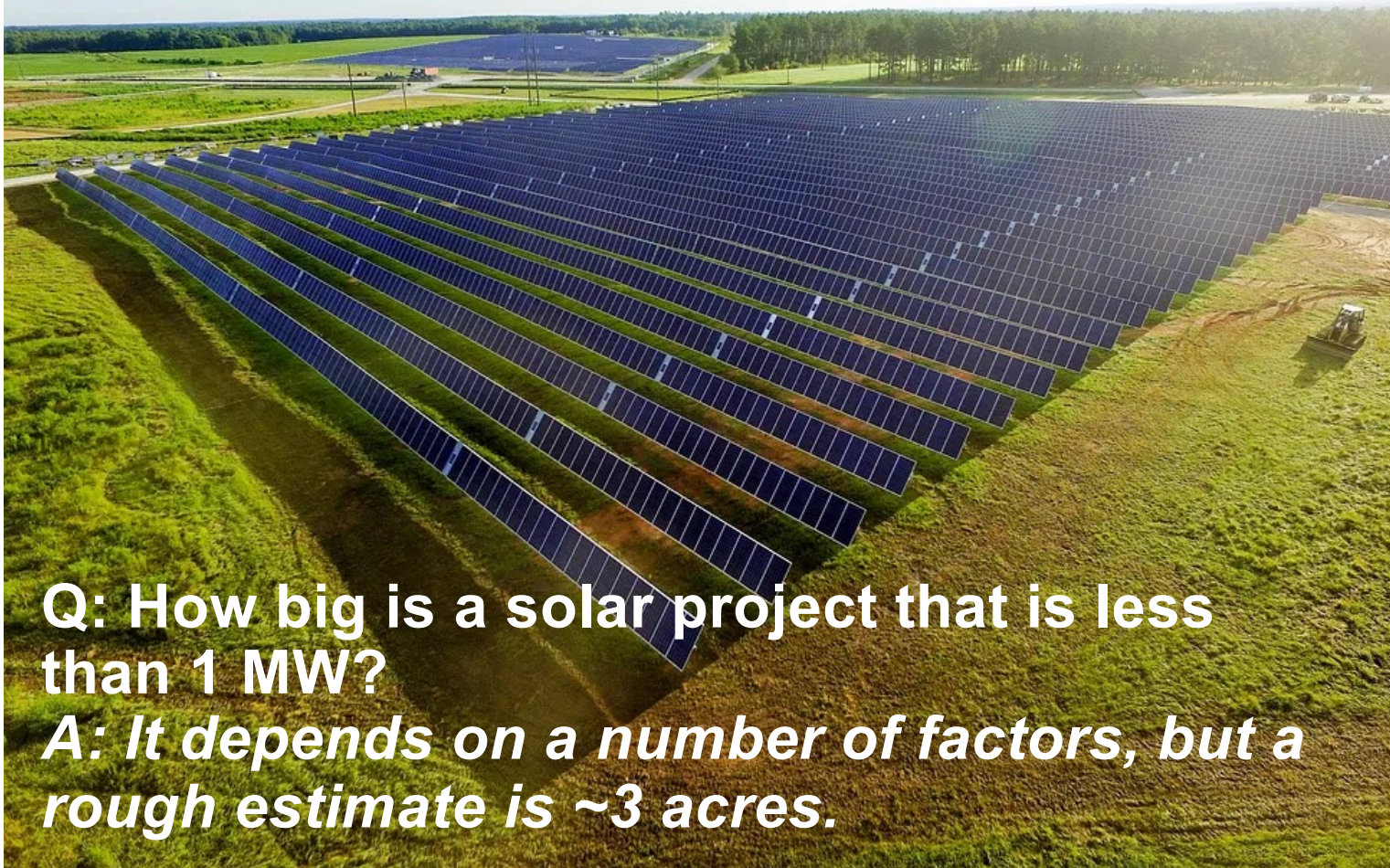
## Fewer Requirements under IRA for ITC Projects that are less than 1 Megawatt

- ▶ IRA makes it easier to get full ITC for smaller projects.
- ▶ IRA rules are more lenient on ITC < 1MW
- ▶ ITC projects that are less than **1 megawatt of electrical (as measured in alternating current) or thermal energy**
  - ▷ Automatically get the 5x multiplier without complying with Prevailing Wage & Apprenticeship labor requirements
  - ▷ Are not subject to phase-out of direct payment for failure to comply with Domestic Content requirements



# How Big is a 1 MW Solar Project Anyway?

The amount of land required for a 1 megawatt (MW) solar power plant can vary depending on the type of solar technology used, the efficiency of the panels, and the local climate conditions. As a rough estimate, a 1 MW solar power plant could require anywhere from 3 to 5 acres of land. Keep in mind that this is a general estimate and actual land requirements may differ based on specific project details.



**Q: How big is a solar project that is less than 1 MW?**

**A: It depends on a number of factors, but a rough estimate is ~3 acres.**

A 2.2 MW solar array at the Old Midville solar project in Millen, Georgia. This image was taken on the first full day of energy being generated into the grid.

Photo credit:  
<https://www.rawpixel.com/image/3322811/free-photo-image-solar-panels-cc0-creative-commons>



## 5X Credit Multiplier Part 1 – Labor Requirement: Prevailing Wage Requirement

- ▶ Facilities 1 MW or more must satisfy both Prevailing Wage and Apprenticeship labor requirements to get 5x multiplier
- ▶ Wages of mechanics and laborers must be at least equal to DOL’s prevailing wages for type of work and locality
- ▶ Piggybacks off Department of Labor’s Davis-Bacon rules
- ▶ Requirement must be met for all “construction, alteration, or repair”:
  - ▷ For ITC – during construction and 5 years after project placed into service
  - ▷ For 30C – prevailing wage/apprenticeship requirements apply for all “construction, alteration, or repair” beginning with construction and for 10 years after facility placed into service
  - ▷ For PTC – through the facility’s construction and for the 10-year period beginning when facility is placed in service
- ▶ Recapture and Correction/Penalties if requirement not met
  - ▷ Catch-up payment to worker (with interest) + \$5,000 penalty to IRS per worker
  - ▷ Higher penalties for case of “intentional disregard”
- ▶ **Not required for facilities under 1MW. Still get 5x multiplier without meeting the prevailing wage/labor requirements if the maximum net output of the facility is less than 1 megawatt of electrical (as measured in alternating current) or thermal energy.**





## 5X Credit Multiplier Part 2 – Labor Requirement: Apprenticeship Requirement

- ▶ Facilities 1 MW or more must satisfy both Prevailing Wage and Apprenticeship labor requirements to get 5x multiplier
- ▶ **Must make good faith effort to request qualified apprentice from registered (federal/state) program**
- ▶ Contractors and subcontractors with more than 4 employees must employ at least one qualified apprentice
- ▶ Specified percentage of total labor hours must be performed by a “qualified apprentice”
  - ▷ Construction begins in 2022: 10%
  - ▷ Construction begins in 2023: 12.5%
  - ▷ Construction begins in 2024 or later: 15%
- ▶ Recapture possible if requirement not met
- ▶ Failure is excused if
  - ▷ **Good faith effort to request qualified apprentice from registered program**
  - ▷ Correction and Penalty – If the above requirements are not met, the taxpayer can correct such failure by paying to the Treasury \$50 for every labor hour in which the above requirements were not satisfied (x10 multiplier if intentional disregard for requirement)
- ▶ Relies on Department of Labor and State Apprenticeship Agencies
- ▶ **Not required for facilities under 1MW (as measured in alternating current) or thermal energy. Still get 5x multiplier without meeting the apprenticeship/labor requirements if the maximum net output of the facility is less than 1 megawatt of electrical (as measured in alternating current) or thermal energy.**







# What does “Construction, Alteration or Repair” mean for Labor Requirements?

- ▶ For 5x multiplier, prevailing wage and apprenticeship requirements apply for all to all “construction, alteration, or repair” for applicable period beginning with commencement of construction.
- ▶ See Q5 under the IRS FAQs about the prevailing wage and apprenticeship under the IRA at <https://www.irs.gov/credits-deductions/frequently-asked-questions-about-the-prevailing-wage-and-apprenticeship-under-the-inflation-reduction-act>



- ▷ Q5. What does construction, alteration, or repair mean for purposes of the IRA prevailing wage and apprenticeship requirements? (added August 29, 2023)
- ▷ A5. Under the proposed regulations, the term construction, alteration, or repair generally means all types of work performed at the location of the facility. Construction, alteration or repair also includes, but is not limited to:
  - > constructing, altering, remodeling, or installing of items fabricated offsite;
  - > painting and decorating; and manufacturing or furnishing of materials, articles, and supplies or equipment at the location of the facility.

**Construction, alteration, or repair does not include maintenance work that occurs on the facility.**

**Maintenance is work that is ordinary and regular in nature and designed to maintain existing functionality of a facility as opposed to an isolated or infrequent repair of a facility to restore specific functionality or adapt it for a different or improved use.**

# Bonus/Adder: Domestic Content

- ▶ Domestic Content – A facility that meets domestic content minimums is eligible for:
  - ▶ 10 percentage point increase in value of the ITC (e.g., an additional 10% for a 30% ITC = 40%). Section 48(a)(12) for ITC; or
  - ▶ Reduced to 2% if capacity is 1 MW or more and prevailing wage/apprenticeship requirements not met
- ▶ Steel and iron used in facility must be produced in U.S.
- ▶ Specified percentage of “manufactured products” must be produced in U.S.:
  - ▶ 40% for all projects beginning construction before 2025,
  - ▶ 45% for projects beginning construction in 2025,
  - ▶ 50% for projects beginning construction in 2026, and
  - ▶ 55% for projects beginning construction after 2026.
- ▶ Taxpayer must certify compliance
- ▶ **Failure to meet domestic content requirements results in phaseout of direct payment for projects 1 MW or more (as measured in alternating current)**





## Phaseout of Direct Payment (Section 6417) for Failure to Meet Domestic Content Requirements

- ▶ **Starting in 2024, phaseout of direct payment for projects 1 MW or more if there is a failure to meet domestic content requirements**
- ▶ Phaseout applies to PTC and ITC under Sections 45, 45Y, 48, 48E
- ▶ **Amount of phaseout is based on year in which construction begins:**
  - ▷ For 2024, direct pay reduced to 90% of full amount
  - ▷ For 2025, percentage is 85%
  - ▷ For 2026 and later, percentage is 0%
- ▶ ***Phaseout does not apply if the maximum net output of the facility is less than 1 megawatt (as measured in alternating current) but does not reference facilities with a maximum net output of less than one megawatt of thermal energy (only facilities measured in alternating current).*** The Proposed Regulations do not clarify that this exception applies to thermal energy projects, but hopefully comments will be raised to that effect and the IRS will provide further clarification.



## Exceptions to Phaseout of Direct Payment (Section 6417) for Failure to Meet Domestic Content Requirements

- ▶ **Two Exceptions for Phaseout of Direct Payment:** The IRA directs the Treasury to provide exceptions to phaseout for projects if:
  - ▷ the inclusion of US-made steel, iron or manufactured products would increase overall construction costs by more than 25% (**the “Increased Cost Exception”**), or
  - ▷ the relevant steel, iron or manufactured products are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (**the “Non-Availability Exception”**).
- ▶ On December 28, 2023, the IRS released Notice 2024-9, which provides relief for applicable entities facing a phaseout of elective pay tax credits related to a failure to meet domestic content requirements. IRS has requested comments on the Increased Cost Exception and the Non-Availability Exception to inform the development of the forthcoming proposed regulations. Written comments were due by February 26, 2024.

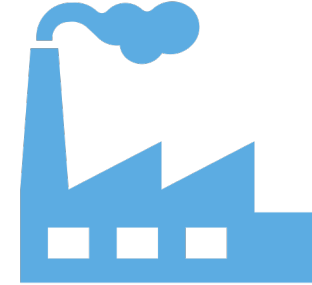
## 2024 Exceptions to Phaseout of Direct Payment (Section 6417) for Failure to Meet Domestic Content Requirements (IRS Transitional Guidance)

- ▶ The December 28, 2023 transitional IRS guidance provides that, for projects that begin construction before January 1, 2025, applicable entities can qualify for either exception by attaching an attestation regarding qualification to an IRS Form 8835, IRS Form 3468, or other applicable form filed with the IRS. The applicable entity must attest, under penalties of perjury, that it has reviewed the requirements for the Increased Cost Exception and the Non-Availability Exception provided under §§ 45(b)(10)(D), 48(a)(13), 45Y(g)(12)(D), or 48E(d)(5), as applicable, and has made a good faith determination that the qualified facility, energy project, or qualified investment with respect to a qualified facility or energy storage technology, as applicable, qualifies for either the Increased Cost Exception or the Non-Availability Exception, or both. The attestation must be signed by a person with the legal authority to bind the applicable entity in federal tax matters. An applicable entity providing such an attestation must meet the general recordkeeping requirements under § 6001 and the regulations thereunder to substantiate its attestation.
- ▶ The IRS intends to provide more detailed regulatory guidance in the future that will apply to projects that begin construction on or after January 1, 2025.



## Bonus/Adder: Energy Communities

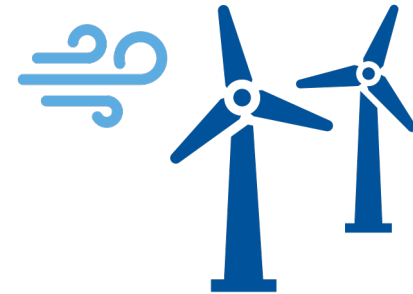
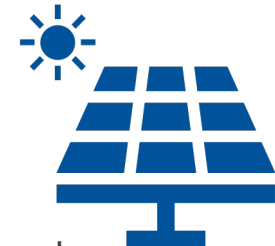
- ▶ Energy Communities Bonus
  - ▷ Section 45(b)(11) for PTC
    - > 10% of the tax credit is added on
  - ▷ Section 48(a)(14) for ITC
    - > 10% adder to tax credit
  - ▷ Reduced to 2% if capacity is 1 MW or more *and* prevailing wage/apprenticeship requirements not met
- ▶ Energy communities are:
  - ▷ Brownfield sites
  - ▷ Statistical areas with historical connection (since 2009) to coal, oil and natural gas industries and high unemployment
  - ▷ Census tracts where coal mine has closed (since 1999) or coal-fired electric generating unit has been retired (since 2009), and directly adjacent census tracts





## Bonus/Adder: Low-Income & Tribal Communities for small Solar and Wind ITC

- ▶ Bonus is 10% or 20%, depending on type of community
- ▶ Facility must obtain an allocation of “environmental justice solar and wind capacity limitation” from Treasury Department and DOE
- ▶ Capped at 1.8 gigawatts annually for each of 2023 and 2024
- ▶ Available for solar and wind projects with capacity of less than 5 MW
- ▶ Available for a facility placed in service after 2024 under 48E, that produces electricity through any means other than combustion or gasification that is less than 5 megawatts (as measured in alternating current)
- ▶ ***Must apply for allocation before facility is placed in service***
- ▶ Bonus is available for facilities
  - ▷ In a “low-income community” as defined in Section 45D(e) (10%)
  - ▷ On Indian land (10%)
  - ▷ Part of a “qualified low-income residential building project” (20%)
  - ▷ Part of a “qualified low-income economic benefit project” (20%)
- ▶ Section 45D, which defines “low-income community,” provides for the New Markets Tax Credit. The Community Development Financial Institutions Fund has prepared a map of census tracts that qualify for the New Markets Tax Credit (see url below)



<https://cimsprodprep.cdfifund.gov/CIMS4/apps/pn-nmtc/index.aspx#?center=-98.212,38.929413&level=4>

- ▶ **Not available for PTC**



## Criteria for Treatment as a Single Energy Project for One Megawatt Exception

- ▶ On November 17, 2023, the IRS released proposed regulations which, among other things, explain the test for determining if a project has a maximum net output of less than one megawatt of electrical energy (measured in alternating current) or thermal energy, for purposes of the 5x multiplier and increasing the domestic content bonus and energy community bonus from 2% to 10% for projects that meet the “**One Megawatt Exception**”.
- ▶ Multiple energy properties are aggregated into a single project if, at any point **during the construction of the multiple energy properties**, the energy properties are **owned by a single taxpayer** (including certain related taxpayers) and **any two or more** of the following seven factors are present:
  - ▷ The energy properties are constructed on contiguous pieces of land;
  - ▷ The energy properties are described in a common power purchase, thermal energy, or other off-take agreement or agreements;
  - ▷ The energy properties have a common intertie;
  - ▷ The energy properties share a common substation, or thermal energy off-take point;
  - ▷ The energy properties are described in one or more common environmental or other regulatory permits;
  - ▷ The energy properties are constructed pursuant to a single master construction contract; or
  - ▷ The construction of the energy properties are financed pursuant to the same loan agreement.



## Conversion from BTUs to MW for One Megawatt Exception

- ▶ The IRS guidance provides that in the case of thermal energy storage property and other energy property that generates thermal energy for productive use (i.e., direct geothermal use, geothermal heat pumps, solar process heating), a taxpayer must use the equivalent of 3.4 million British Thermal Units per hour (mmBtu/hour) for heating and 284 tons for cooling to determine if the thermal storage property qualifies as a “small project” or satisfies the One Megawatt Exception ( $\text{Btu per hour} / 3,412,140 = \text{MW}$ ). For projects delivering thermal energy to one or more buildings, this can be assessed as either the aggregate maximum thermal output of all individual heating or cooling elements within the building or buildings, or as the maximum thermal output that the entire project is capable of delivering to the building or buildings at any given moment.



# Determining Tax Credit Value – ITC

## Section 48 – ITC: “Base credit” + “Bonus/Adder”

Sample Calculation of “Base credit” + “Bonus/Adder”		Cumulative	Incremental
	<b>Base Tax Credit for ITC</b>	6% (2% for certain property)	
<b>X</b>	<b>5x Multiplier if:</b> <ul style="list-style-type: none"> <li>Labor requirements (<i>i.e.</i>, Prevailing Wage &amp; Apprenticeship) met, or</li> <li>Facility &lt; 1 MW (as measured in alternating current) or thermal energy, or</li> <li>Construction began before January 29, 2023</li> </ul>	30% (10% for certain property)	6% times 5
<b>+</b>	<b>Add Domestic Content Bonus of 10% if:</b> <ul style="list-style-type: none"> <li>Domestic Content requirements met</li> <li>Bonus reduced to 2% if capacity is 1 MW or more <u>and</u> Prevailing Wage &amp; Apprenticeship not met</li> </ul>	40%	+10%
<b>+</b>	<b>Add Energy Community Bonus of 10% if:</b> <ul style="list-style-type: none"> <li>Located in Energy Community (<i>i.e.</i>, brownfield, coal, oil or natural gas communities)</li> <li>Bonus reduced to 2% if capacity is 1 MW or more <u>and</u> Prevailing Wage &amp; Apprenticeship not met</li> </ul>	50%	+10%
<b>+</b>	<b>Add Environmental Justice Bonus of 10% or 20% for ITC solar and wind &lt; 5MW:</b> <ul style="list-style-type: none"> <li>Located in low-income community or Tribal land (10%)</li> <li>Located in low-income housing buildings or certain projects with household below poverty low/low-income (20%)</li> </ul>	60% or 70%	+10% or +20%
<b>–</b>	<b>Potential Haircuts, Recapture or Phase-Out</b>		
<b>–</b>	Haircut for use of tax-exempt financing for project	Tax credit reduced by maximum of 15% (the lesser of 15% and percentage of project financed with tax-exempt proceeds)	
<b>–</b>	Vests 20% per year over 5 years	ITC subject to recapture if requirements not met	
<b>–</b>	Potential Phase-Out of <b>Direct-Pay</b> if Domestic Content not met and project is 1MW or more (as measured in alternating current)	-10%, -15% or -100% if construction begins in 2024, 2025 or 2026, respectively and domestic content not met	
<b>–</b>	Potential haircut if tax credit plus “Restricted Tax Exempt Amount” exceeds cost	See following slide re “Restricted Tax Exempt Amounts”	

Not all credits apply to all projects



# Investment Tax Credit Haircut for Tax-Exempt Financing

- ▶ Section 48(a)(4) of ITC includes a haircut for ITC property financed with tax-exempt obligations so that the amount of the ITC is reduced by the lesser of:
  - ▷ 15 percent or
  - ▷ the percentage of the ITC property financed with tax-exempt proceeds.
- ▶ The following are examples of potential haircuts if the ITC property would otherwise be eligible for a 30% tax credit, but is financed all or in part with tax-exempt obligations:

<b>% of ITC property financed with tax-exempt obligations</b>	<b>Haircut %</b>	<b>30% ITC after Haircut</b>
100%	15% haircut = 4.5%	25.5% = 30% minus 4.5%
50%	15% haircut = 4.5%	25.5% = 30% minus 4.5%
15%	15% haircut = 4.5%	25.5% = 30% minus 4.5%
10%	10% haircut = 3%	27% = 30% minus 3%
5%	5% haircut = 1.5%	28.5% = 30% minus 1.5%

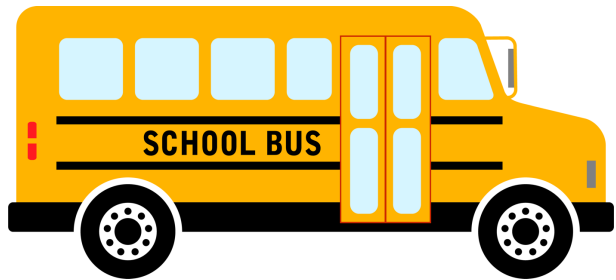


# Special Rules for all Direct Pay Tax Credits: Restricted Grants, Forgivable Loans & Other Tax-Free Income – No Excessive Benefit Rule

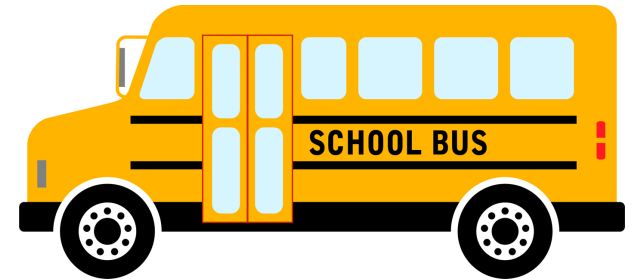
- ▶ Grants, forgivable loans & other tax-exempt income can be stacked with a tax credit and help pay for a tax credit property.
- ▶ If the applicable entity receives a grant, forgivable loan, or other tax-exempt income **for the specific purpose of purchasing, constructing, reconstructing, erecting, or otherwise acquiring the tax credit property (“Restricted Tax Exempt Amount”)**, and the Restricted Tax Exempt Amount plus the tax credit exceeds the cost of the tax credit property, then the amount of the tax credit is reduced so that the tax credit plus the Restricted Tax Exempt Amount does not exceed the cost of the tax credit property.
- ▶ This means if project is funded by grants, forgivable loans or income that is tax-free, the IRS may offset the amount the tax credit to prevent an excessive benefit.
- ▶ No Excessive Benefit Rule = Restricted Free money + tax credit cannot exceed cost of the project:
  - ▷ Tax credit will be reduced so that the aggregate of the tax credit plus the other free money equals the cost of the project
  - ▷ Federal government is not going to give you more free money (*i.e.*, tax credit) if you already have enough free money to cover the project
- ▶ The Treasury Department and the IRS confirm that the no excess benefit rule applies **after application of any tax-exempt haircut**, for certain credits such as sections 45(b)(3), 45Q(f)(8), 45V(d)(3), 45Y(g)(8), **48(a)(4), and 48E(d)(2)**, which results in a reduction of the credit amount



# How Does Other Restricted Free Money Impact Tax Credit?



Each school bus is priced at **\$400,000** meaning that **\$400,000** is the cost basis



	\$400,000	Restricted Grant
±	<u>\$40,000</u>	<u>45W Tax Credit</u>
	<b>\$440,000</b>	<b>Exceeds cost basis</b>

*\* tax credit reduced to \$0*

	\$300,000	Restricted Grant
+	\$100,000	Other unrestricted funds
±	<u>\$40,000</u>	<u>45W Tax Credit</u>
	<b>\$340,000</b>	<b>Less than cost basis</b>

*\* tax credit not reduced*



	\$375,000	Restricted Grant
+	\$25,000	Other unrestricted funds
±	<u>\$40,000</u>	<u>45W Tax Credit</u>
	<b>\$415,000</b>	<b>Exceeds cost basis</b>

*\* tax credit reduced by \$15,000 to \$25,000*



# Are Elective Payments Treated as Tax-Exempt Proceeds?

**Q: Can you confirm the amount received as an elective payment is not considered bond proceeds and therefore issuers can invest the proceeds without yield restriction?**

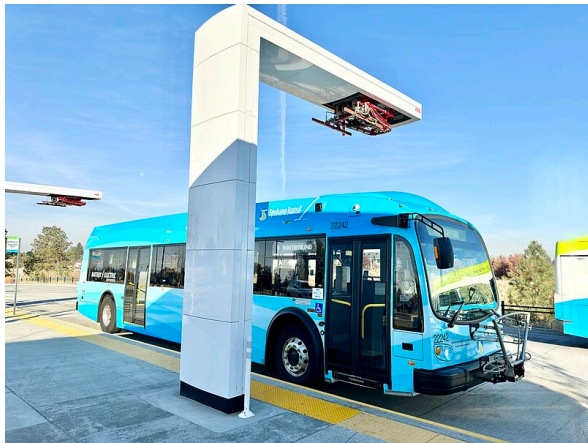
The Summary of Comments and Explanation of Revisions in the Final Regulations explains:

Multiple commenters had questions about the interplay between tax-exempt bonds and section 6417. Such questions generally fall outside of the scope of the Final Regulations because the use of proceeds of tax-exempt bonds under section 103 may impact the amount of a particular applicable credit in the underlying Code sections (such as sections 45 and 48), and such reduction in the credit amount occurs before the application of section 6417 and independently from the application of section 6417.

One commenter requested that the final regulations clarify that the amount received pursuant to an elective payment election is not treated as “proceeds” of a tax-exempt bond issue, which would be subject to use and investment limits under the tax-exempt bond rules. This commenter stated that, if the payment were treated as proceeds of a bond issue, the use of tax-exempt bond financing could ruin the economics of the deal. **The Treasury Department and the IRS confirm that section 6417(a) provides that the applicable credit is treated as a payment against the tax imposed by subtitle A and, therefore, the amount received as an elective payment is not proceeds of a tax-exempt bond issue.**



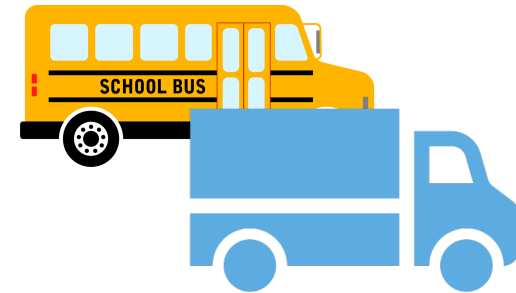
# Electric School Buses, Electric Buses, Electric Firetrucks, Electric Trucks, Electric Forklifts, Mobile Machinery & Other Qualified Commercial Clean Vehicles – Section 45W (NEW)





## Qualified Commercial Clean Vehicles – Section 45W (NEW)

- ▶ New clean vehicle tax credit for qualified commercial clean vehicles placed in service after January 1, 2023 and acquired before January 1, 2033. Applies to vehicles acquired after December 31, 2022, through December 31, 2032.
- ▶ **Direct Pay Eligibility:** Yes, for states, political subdivisions, tax-exempt organizations (other than co-ops described in Sec. 521), and Indian Tribal governments.
- ▶ Tax Credit equal to lesser of:
  - ▷ 15% of the vehicle’s basis/cost to purchaser (30% for vehicles not powered by a gasoline or diesel engine) or
  - ▷ The “incremental cost” of the vehicle over the cost of a comparable vehicle powered solely by a gasoline or diesel engine
    - > The incremental cost is the difference between the cost of the qualified commercial clean vehicle and a comparable vehicle which is powered solely by a gasoline or diesel internal combustion engine and which is comparable in size and use to such vehicle
- ▶ Credit is capped at \$7,500 for vehicles with gross vehicle weight ratings < 14,000 lb. or \$40,000 for heavier vehicles
- ▶ **No prevailing wage/apprenticeship, domestic content, energy communities or low-income communities multiplier/bonuses/adders applicable**

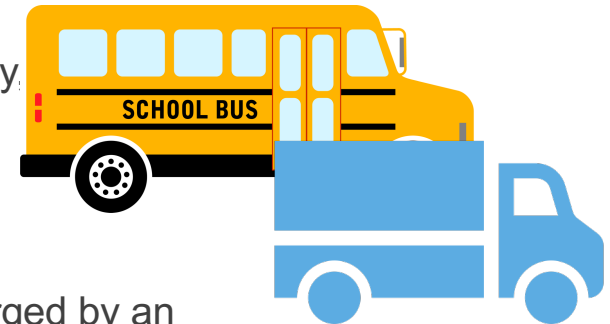




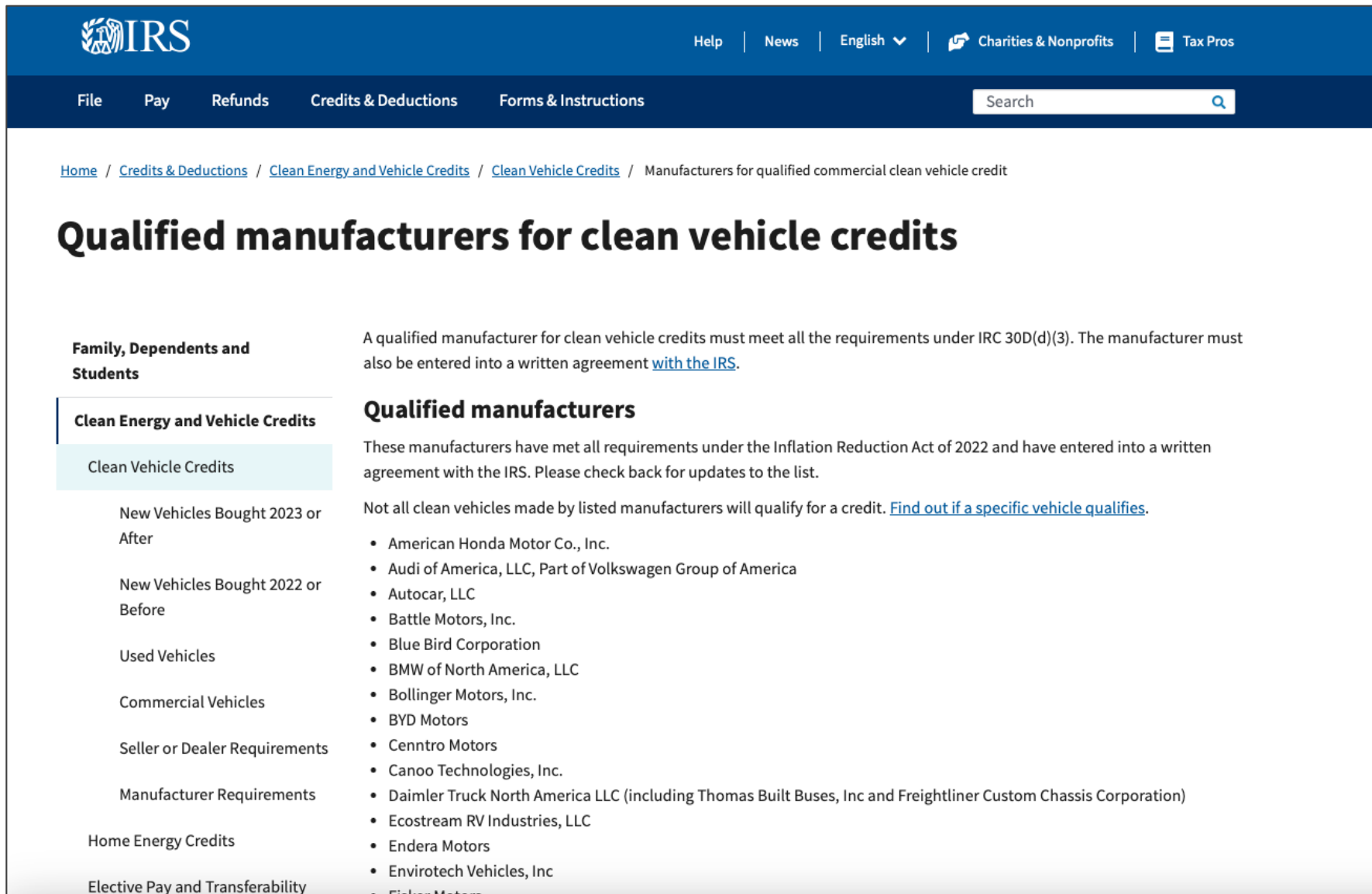


## Qualified Commercial Clean Vehicles – Section 45W (NEW) (continued)

- ▶ Vehicle must be acquired for use or lease by the applicable entity, not for resale
- ▶ Must be manufactured for use on public streets, roads, and highways or be “mobile machinery” as defined in Sec. 4053(8)
- ▶ Must have battery capacity of not less than 15 KWh and be charged by an external electricity source (7 KWh if gross vehicle weight rating is less than 14,000 lb.)
- ▶ Qualified fuel cell vehicles are also eligible (as defined in Sec. 30B(b)(3))
- ▶ Must be depreciable property
- ▶ Only vehicles made by **qualified manufacturers**, who have written agreements with and provide periodic reports to Treasury and is either:
  - ▷ **Motor vehicle** under title II of the Clean Air Act and is primarily used on roads
  - ▷ **Mobile machinery** per IRC 4053(8)
- ▶ And is either:
  - ▷ Propelled by electric motor with battery capacity  $\geq 15$  KWh (7 KWh if vehicle has GVWR  $< 14,000$  lb.) that can be recharged by an external source, or
  - ▷ Qualified fuel cell motor vehicle (IRC 30B(b)(3))
- ▶ In addition to other requirements set forth in IRS guidance, must include the vehicle identification number of such vehicle on the tax return for the taxable year.



# 45W Qualified Manufacturers



The screenshot shows the IRS website page for "Manufacturers for qualified commercial clean vehicle credit". The page features a blue header with the IRS logo and navigation links for Help, News, English, Charities & Nonprofits, and Tax Pros. Below the header is a dark blue navigation bar with links for File, Pay, Refunds, Credits & Deductions, and Forms & Instructions, along with a search bar. The main content area has a breadcrumb trail: Home / Credits & Deductions / Clean Energy and Vehicle Credits / Clean Vehicle Credits / Manufacturers for qualified commercial clean vehicle credit. The title "Qualified manufacturers for clean vehicle credits" is prominently displayed. A left sidebar contains a menu with "Clean Energy and Vehicle Credits" selected, and sub-items for "Clean Vehicle Credits", "New Vehicles Bought 2023 or After", "New Vehicles Bought 2022 or Before", "Used Vehicles", "Commercial Vehicles", "Seller or Dealer Requirements", "Manufacturer Requirements", "Home Energy Credits", and "Elective Pay and Transferability". The main text explains that a qualified manufacturer must meet all requirements under IRC 30D(d)(3) and be entered into a written agreement with the IRS. It lists "Qualified manufacturers" that have met these requirements, including American Honda Motor Co., Inc., Audi of America, LLC, Autocar, LLC, Battle Motors, Inc., Blue Bird Corporation, BMW of North America, LLC, Bollinger Motors, Inc., BYD Motors, Cenntro Motors, Canoo Technologies, Inc., Daimler Truck North America LLC, Ecostream RV Industries, LLC, Endera Motors, and Envirotech Vehicles, Inc.

<https://www.irs.gov/credits-deductions/manufacturers-for-qualified-commercial-clean-vehicle-credit> (screenshot as of February 27, 2024)



## Section 30C – EV Chargers & Alternative Fuel Vehicle Refueling Property



i-Charge wall mounted electric vehicle charging equipment.

Photo credit: Ivan Racic,  
[https://commons.wikimedia.org/wiki/File:i-CHARGE\\_charging\\_station\\_close-up.jpg](https://commons.wikimedia.org/wiki/File:i-CHARGE_charging_station_close-up.jpg)



# Alternative Fuel Vehicle Refueling Property Credit (i.e., “Charging Station” Credit) – Section 30C

- ▶ Tax credit for **alternative fuel vehicle refueling and charging property in low-income urban and any non-urban areas**
- ▶ Alternative fuels include electricity, ethanol, natural gas, hydrogen, biodiesel, and others.
- ▶ **Period of Availability:** January 1, 2023-December 31, 2032
- ▶ Extended and modified to include prevailing wage and registered apprenticeship requirements for businesses claiming the credit. Adds bidirectional charging equipment, charging equipment for 2- and 3-wheel electric vehicles. **Limited to low-income urban and any non-urban areas.**
- ▶ **Base Credit Amount:** 6% for depreciable property, limited to a \$100,000 credit per item of depreciable property.
- ▶ **Bonus Credit Amount:** **5x multiplier/30% credit for projects meeting prevailing wage and registered apprenticeship requirements, limited to a \$100,000 credit per item of depreciable property.**
- ▶ **No domestic content, energy communities or low-income communities bonuses/adders applicable**
- ▶ **Direct Pay Eligibility:** Yes, for tax-exempt organizations; states; political subdivisions; the Tennessee Valley Authority; Indian Tribal governments; Alaska Native Corporations; and rural electricity co-ops.





# Applicability of Multiplier, Bonuses, Adders, Tax-Exempt Haircut and Potential Haircut for Restricted Tax-Exempt Amounts to 45W and 30C Tax Credits

## ▶ 45W Clean Commercial Vehicles Tax Credit:

- ▷ Do not need to comply with prevailing wage/apprenticeship requirements (no 5x multiplier).
- ▷ Needs to be a “qualified manufacturer” but otherwise **none of the prevailing wage/apprenticeship, domestic content, energy communities or low-income communities multiplier/bonuses/adders are applicable**
- ▷ **No haircut for use of Tax-Exempt Financing**
- ▷ Potential haircut if tax credit plus “Restricted Tax Exempt Amount” exceeds cost

## ▶ 30C Alternative Fuel Refueling Property Credit:

- ▷ 5x multiplier for complying with prevailing wage and apprenticeship requirements (tax credit capped at \$100,000) for applicable compliance period
- ▷ Needs to be in “low-income urban” or “non-urban” area but **none of the domestic content, energy communities or low-income communities bonuses/adders are applicable**
- ▷ **No haircut for use of Tax-Exempt Financing**
- ▷ Potential haircut if tax credit plus “Restricted Tax Exempt Amount” exceeds cost



# Map Location Tools for Section 30, Section 48 and Section 48E Tax Credits

	30C – Eligible Census Tract	45 and 48 – Energy Community	48 and 48E – Low-Income Community
<b>Tax Code Section</b>	30C(c)(3), Notice 2024-20	45(b)(11), 48(a)(14), 48E(a)(3), and Notices 2023-29 and 2023-45	48(e) and 48E(h), 1.48(e)-1(b)(2)(i) and (h)(3), Rev. Proc. 2023-27 and Notice 2023-17
<b>Property must be located in</b>	<ol style="list-style-type: none"> <li>Low-income community (as described in 45D(e) (New Market Tax Credits)); or</li> <li>Not an “urban area.” (Urban areas are determined in the decennial census.)</li> </ol>	<ol style="list-style-type: none"> <li>Brownfield site; or</li> <li>Statistical Area—An area with historically large economic footprint (jobs or tax revenue) of extraction of coal, oil or natural gas and high unemployment; or</li> <li>Coal Closure: A local coal plant that has closed, or an area directly adjacent to such area</li> </ol>	<ol style="list-style-type: none"> <li>Low-income community (based on New Market Tax Credit eligibility); or</li> <li>Indian land; or</li> <li>a qualified low-income* residential building project; or,</li> <li>a qualified low-income economic benefit project*</li> </ol> <p><i>* Not location-dependent</i></p>
<b>Cross-reference(s) other Tax Code Sections</b>	45D(e)	48(a)(14) and 48E(a)(3)(A) to 45(b)(11)	<ol style="list-style-type: none"> <li>45D(e) (NMTC)</li> <li>2601(2) (Indian land)</li> </ol>
<b>Location Tool(s)</b>	<ol style="list-style-type: none"> <li>Eligible census tracts are listed by their GEOIDs in <a href="#">Appendices A and B</a>. Two online mapping tools provide a location’s GEOID.</li> <li>The <a href="#">CDFI mapping tool</a> only identifies the GEOIDs of low-income communities and is only to be used for property placed in service after Dec. 31, 2022 and before Jan. 1, 2025. The GEOID provided by the CDFI Mapping Tool should be checked against the list of GEOIDs in Appendix A.</li> <li>The <a href="#">Census Geocoder mapping tool</a> identifies the GEOIDs of low-income communities and non-urban areas and can be used for property placed in service after Dec. 31, 2022 and before Jan. 1, 2030. The GEOID provided by the Census Geocoder should be checked against the list of GEOIDs in Appendix B.</li> <li>The Department of Energy <a href="#">published a map</a>, but it is not referenced in IRS materials.</li> </ol>	<ol style="list-style-type: none"> <li>Energy Community Tax Credit <a href="#">bonus map</a> published by the Department of Energy, which displays only locations that qualify as Statistical Areas. (Caution: Map not referenced in IRS materials.)</li> <li>Notice 2023-29, Section 3 provides definitions of energy communities.</li> <li>There is no map for Brownfield sites. However, a safe harbor is provided in Notice 2023-29, Section 5.02.</li> <li>For Statistical Areas, use <a href="#">Appendix B</a> (and <a href="#">Appendix 2</a> from Notice 2023-47) to determine areas with high employment in fossil fuel industry and the <a href="#">Unemployment Statistics</a> published by the Bureau of Labor and Statistics to determine the area’s unemployment rate.</li> <li>For Coal Closure, use <a href="#">Appendix C</a> (and <a href="#">Appendix 3</a> from Notice 2023-47) to determine areas in which a coal plant closed.</li> </ol>	<ol style="list-style-type: none"> <li>The <a href="#">Department of Energy has a map</a> for low-income communities, and Rev. Proc. 2023-27, Section 7.05(3) Table 5 directs applicants to the Department of Energy’s guidance.</li> <li>For applicants seeking to satisfy the geographic criteria of 1.48(e)-1(h)(3)(i)(A) as a persistent poverty county, visit this <a href="#">Census Bureau webpage</a>.</li> <li>For applicants seeking to satisfy the geographic criteria of 1.48(e)-1(h)(3)(i)(B) as a designated census tract, use this <a href="#">Climate and Economic Justice screening tool</a>. Such tracts can also be viewed using the Department of Energy tool above.</li> </ol>



# Applicability of Various Requirements and T/E Haircut

Project Category	Prevailing Wage & Apprenticeship Compliance Required for 5x Multiplier	Potential for Domestic Content Bonus?	Phaseout for Failure to meet Domestic Content requirements?	Potential for Energy Community Bonus?	Potential for Low-Income Communities Bonus?	Tax-Exempt Financing Haircut?
Less than 1 MW ITC property	<b>N/A – automatically gets 5x multiplier w/o PWA compliance</b>	Yes	<b>N/A – No phaseout for failing to meet Domestic Content requirements</b>	Yes	Yes, but only for solar and wind that applies and receives a low-income bonus allocation	<b>YES</b>
1 MW or more ITC property	<b>YES</b>	Yes (% depends on PWA compliance)	<b>YES</b>	Yes (% depends on PWA compliance)	Yes, but only for solar and wind < 5MW project that applies and receives a low-income bonus allocation	<b>YES</b>
45W (clean commercial vehicles)	N/A	N/A	N/A - but must be “qualified manufacturer”	N/A	N/A	<b>NO</b>
30C (alternative fueling property)	<b>YES</b> but tax credit is capped at \$100,000	N/A	N/A	N/A	N/A – but must be located in low-income urban or non-urban area	<b>NO</b>



## Allocating Funds to Maximize Tax Credits

- ▶ If a governmental entity or nonprofit is financing a mix of properties such as ITC (solar, batteries, ground source heat pumps, microgrid controller, CHP, thermal energy storage etc.), Section 45W (clean commercial vehicles) or Section 30C property (EV chargers or alternative fueling property):
  - ▷ **Use tax-exempt proceeds to finance 45W Clean Commercial Vehicles and 30C Alternative Fuel Vehicle Refueling Property first** before ITC property since 45W and 30C property do not receive haircuts for tax-exempt financing
  - ▷ Use taxable proceeds or funds on hand to finance ITC property first to minimize tax-exempt haircut.
- ▶ Section 6417 imposes no restriction on the use an applicable entity makes of the elective payment amount after it has been paid to the entity.





# Example Subsidy for Solar Project < 1MW

Description	Cost or Available	Tax Credit (ITC) %	Tax Credit (ITC) \$
<b>Project Cost</b>	\$3,000,000	6%	\$180,000
• 5X Multiplier Facility<1MW (as measured in alternating current)	Automatic	30%	\$900,000
• Domestic Content Bonus of 10%	Yes if satisfy	40%	\$1,200,000
• Add Energy Community Location Bonus 10% (brownfield, coal, oil or natural gas communities)	Assume not applicable	40%	\$1,200,000
• Add Environmental Justice Bonus 10% (Tribal land 10% or low income housing/poverty low income 20%)	Assume not applicable	40%	\$1,200,000
Net Cost if Paying Cash Funded (no borrowing)	\$1,800,000	40%	\$1,200,000
Net Cost if full \$3M Funded with Tax-Exempt Bonds (15% haircut)	\$1,980,000	34%	\$1,020,000



## Sequestration Protection – Lessons Learned from BABs

- ▶ The IRA provides a mechanism to protect direct payments of tax credits from the same reductions due to sequestration that have applied to Build America Bonds and other direct pay bonds.
- ▶ The current sequestration rate is 5.7 percent and is scheduled to continue through the end of the Federal government's 2030 fiscal year.
- ▶ Specifically, the IRA provides that any direct payment tax credit is automatically increased by 6.0455 percent and this “gross-up” mechanism is intended to result in 100 percent of the direct pay tax credits being paid.
- ▶ This adjustment is fixed at 6.0455 percent and as long as the sequestration rate is not changed, the gross-up should protect direct payments of tax credits from being impacted by sequestration.



## Pre-Filing Registration: Finalized Details

**As authorized in the statute, the final rule describes the required pre-filing registration process**

- ▶ Pre-filing registration is mandatory for applicable entities or electing taxpayers that wish to make an elective payment election for applicable credits.
- ▶ This is a critical tool for the IRS to safeguard against fraud and improper payments.
- ▶ Regulations describe:
  - ▷ The manner of pre-filing registration;
  - ▷ Pre-filing registration and election for members of a consolidated group
  - ▷ Timing of pre-filing registration
  - ▷ Requirement that each applicable credit property have its own registration number
  - ▷ Other information required prior to completing the pre-filing registration process
- ▶ *Publication 5884, Inflation Reduction Act (IRA) and CHIPS Act of 2022 (CHIPS) Pre-Filing Registration Tool User Guide and Instructions* provides detailed information for applicable entities.
- ▶ Treasury and IRS will continue to monitor the pre-filing registration process to determine whether there are areas in which more efficiencies in the pre-filing registration process can be created.



## How Does an Applicable Entity Apply for Direct Pay?

- ▶ This will be a multi-step process
- ▶ **First must register with the IRS on a new online registration portal before making the election.**
- ▶ The Internal Revenue Service has unveiled its online pre-registration portal for elective pay at: <https://www.irs.gov/credits-deductions/register-for-elective-payment-or-transfer-of-credits>
- ▶ **Applicable entities should pre-register using the online portal:**
  - ▷ **After placing an investment property or production facility in service, as soon as reasonably practicable during the tax year, but no earlier than the beginning of the tax period when the tax credit is earned.**
  - ▷ **At least 120 days before the due date (including extensions) for the return where the tax credit will be reported.**
    - > The IRS notes that this should allow time for IRS review and for the applicable entity to respond if the IRS requires additional information before issuing the registration numbers. The IRS will work to issue a registration number even **where the registration submission is made close in time before the registrant's filing deadline. In such cases, the registrant should anticipate that the tax return on which the elective payment or transfer election is made may undergo heightened scrutiny** to mitigate the risk of fraud and duplication that pre-filing registration is intended to address before a payment is issued.



## How Does an Applicable Entity Apply for Direct Pay? (cont'd)

- ▶ An IRS user guide for the portal can be found at: <chrome-extension://efaidnbnmnnibpcajpcglclefindmkaj/https://www.irs.gov/pub/irs-pdf/p5884.pdf>
- ▶ A video tutorial is available at: <https://www.irsvideos.gov/Governments/Resources/TheIRAandCHIPSActPreFilingRegistrationToolOverview>
- ▶ **In addition to holding certain “Office Hours” over Zoom, representatives from the IRS have been answering pre-filing registration questions via e-mail at:**  
**[irs.elective.payment.or.transfer.of.credit@irs.gov](mailto:irs.elective.payment.or.transfer.of.credit@irs.gov)**



## How Does an Applicable Entity Apply for Direct Pay? (cont'd)

- ▶ If the information provided through the portal is sufficient and verifiable, the IRS will issue a **special registration number**
- ▶ Must obtain a separate registration number for each project
- ▶ After obtaining a pre-filing registration number, a governmental entity must:
  - ▷ **Make the elective pay election on an original tax return Form 990-T**
  - ▷ Complete relevant source credit forms and:
    - > **IRS Form 3800** and
    - > **IRS Form 3468** for ITC <http://www.irs.gov/pub/irs-pdf/i3468.pdf>
    - > **IRS Form 8936** for Clean Vehicle Credits <https://www.irs.gov/pub/irs-pdf/f8936.pdf>
    - > **IRS Form 8936-A** for Clean Vehicle Credit Amount <https://www.irs.gov/pub/irs-prior/f8936sa--2023.pdf>
    - > **Schedule 1 to Form 8936** Qualified Commercial Clean Vehicle Credit Amount [https://www.irs.gov/pub/irs-access/f8936a1\\_accessible.pdf](https://www.irs.gov/pub/irs-access/f8936a1_accessible.pdf)
    - > **IRS Form 8911** for Alternative Fuel Vehicle Refueling Property Credit <https://www.irs.gov/forms-pubs/about-form-8911>
  - ▷ Provide certain supporting information and calculations
  - ▷ Annually renew registration number and attest
  - ▷ Provide updates for changes or new information



# Requesting a Registration Number

- ▶ **Applicable Entity will need to provide:**
  - ▷ General information (e.g., applicable entity's name, address, identification number, type of entity)
  - ▷ Additional information required by the portal
  - ▷ Taxpayer's taxable year
  - ▷ Type of annual tax returns normally filed by the taxpayer
  - ▷ Type of tax credit
  - ▷ List of projects for which the applicable entity intends to make a direct pay or a transfer election
  - ▷ Contact person for the applicable entity
  
- ▶ **For each project, further information may be required, such as:**
  - ▷ Type of project
  - ▷ Physical location of project
  - ▷ Documentation relating to the construction, reconstruction or acquisition of the project (such as operating permits, deeds or other evidence of ownership, etc.)
  - ▷ Beginning of construction and placed in service dates
  - ▷ Sources of funds used to acquire the project
  - ▷ Other information the applicable entity believes will be helpful for the IRS
  
- ▶ Taxpayer will need to sign a penalties of perjury statement



## Section 48 Energy Credit – Bulk Upload Excel Template

- ▶ IRS provides a bulk upload Excel template for pre-filing for Section 48 Energy Credit which requires the following information:
  - ▷ Facility/Property ID
  - ▷ (Subsidiary) Name
  - ▷ (Subsidiary) EIN
  - ▷ Type of Facility/Property
  - ▷ Number, street, and room or suite number
  - ▷ City
  - ▷ County
  - ▷ State
  - ▷ ZIP code
  - ▷ Latitude
  - ▷ Longitude
  - ▷ Date Construction Began
  - ▷ Date Placed in Service
  - ▷ Did you receive a low-income community bonus?
  - ▷ Allocation Control Number (from Department of Energy)
  - ▷ Source of Funds
  - ▷ Additional Information





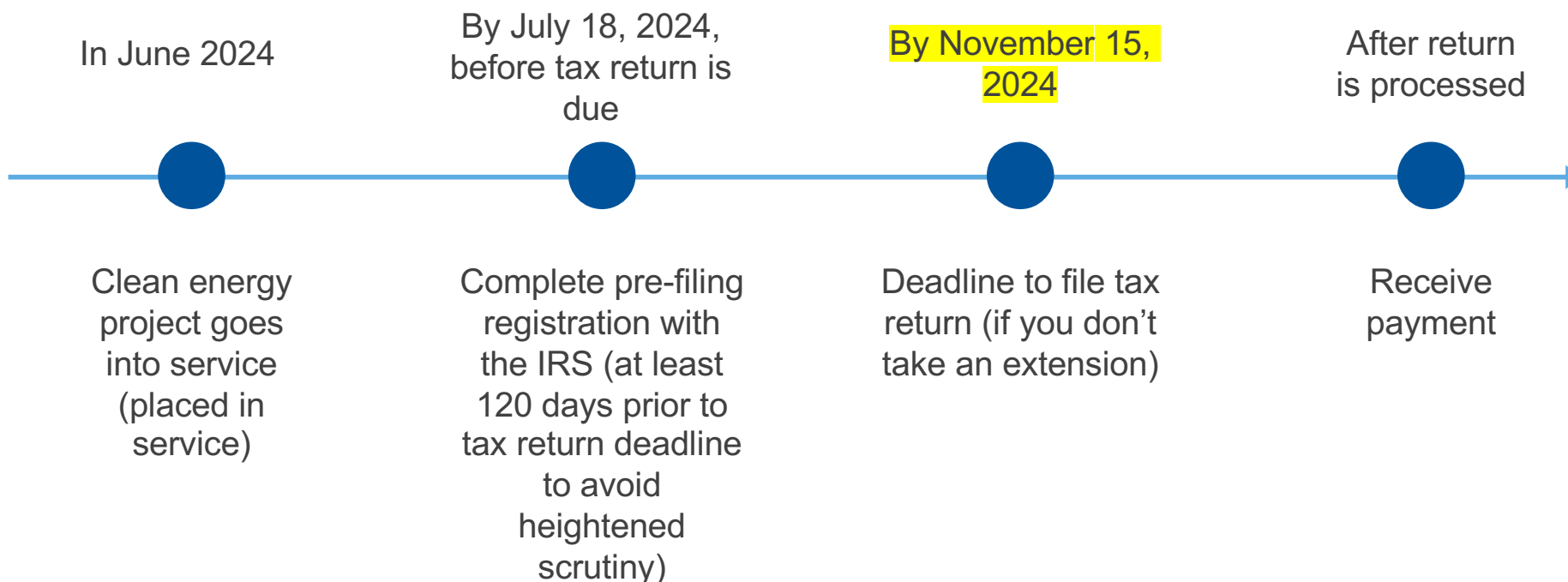
## Section 6417 – Deadline to Make Direct Pay Election on Tax Return

- ▶ If the Applicable Entity (e.g., tax-exempt organizations) or Electing Taxpayer (for credits under Sections 45V, 45Q and 45X) **is required** to file an annual federal income tax return, the election must be made no later than the due date (including extensions) for tax return for the taxable year in which the election is made
- ▶ If the Applicable Entity is not required to file annual tax return (e.g., governmental entity) the direct-pay election must be made no later than the due date (including extensions) that would apply if the entity were required to file an annual federal income tax return under the rules for tax returns of tax-exempt organizations (generally, the 15th day of the fifth month after the end of the tax-exempt organization's taxable year)
- ▶ No late filing relief for a late direct pay election



## Example Timeline: Governmental Entity's Fiscal Year Ends June 30

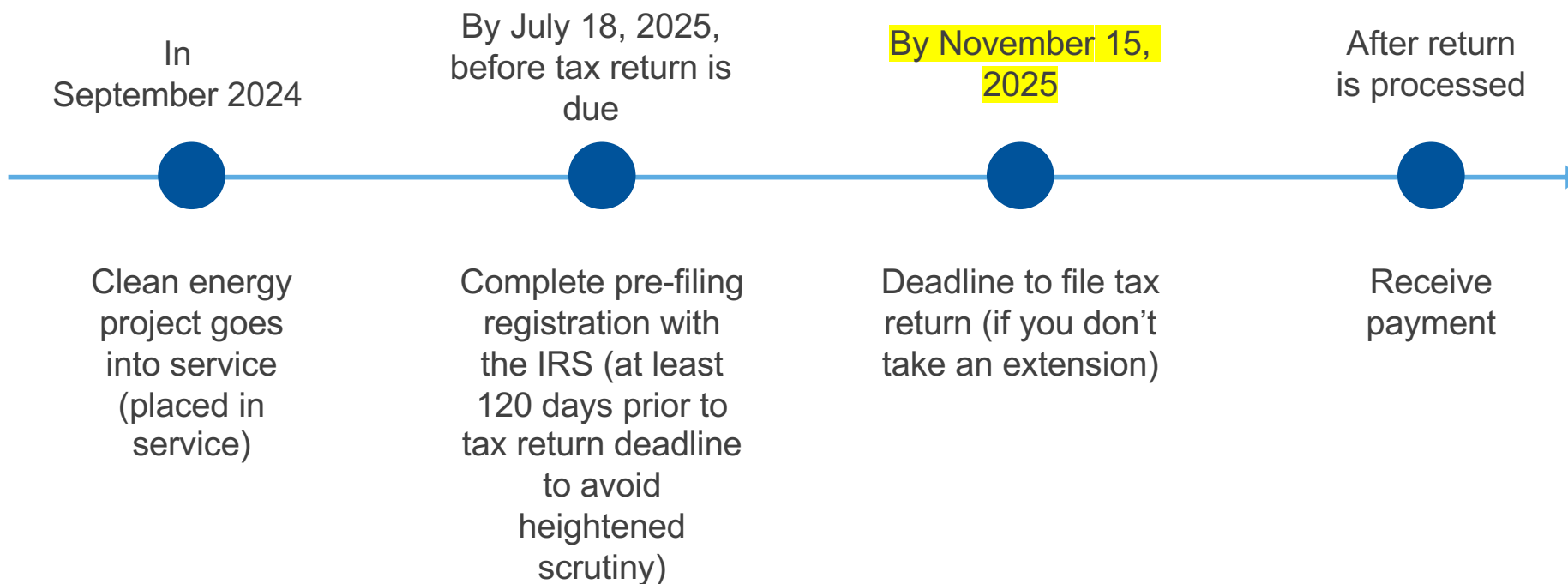
- ▶ A Governmental Entity that makes a clean energy investment that qualifies for the investment tax credit can file an annual tax return (via Form 990-T) with the IRS to claim elective pay for the full value of the investment tax credit, as long as it meets all of the requirements, including a pre-filing registration requirement
- ▶ As the Governmental Entity would not owe other federal income tax, the IRS would then make a refund payment in the amount of the credit to the Governmental Entity





## Example Timeline: Governmental Entity's Fiscal Year Ends June 30

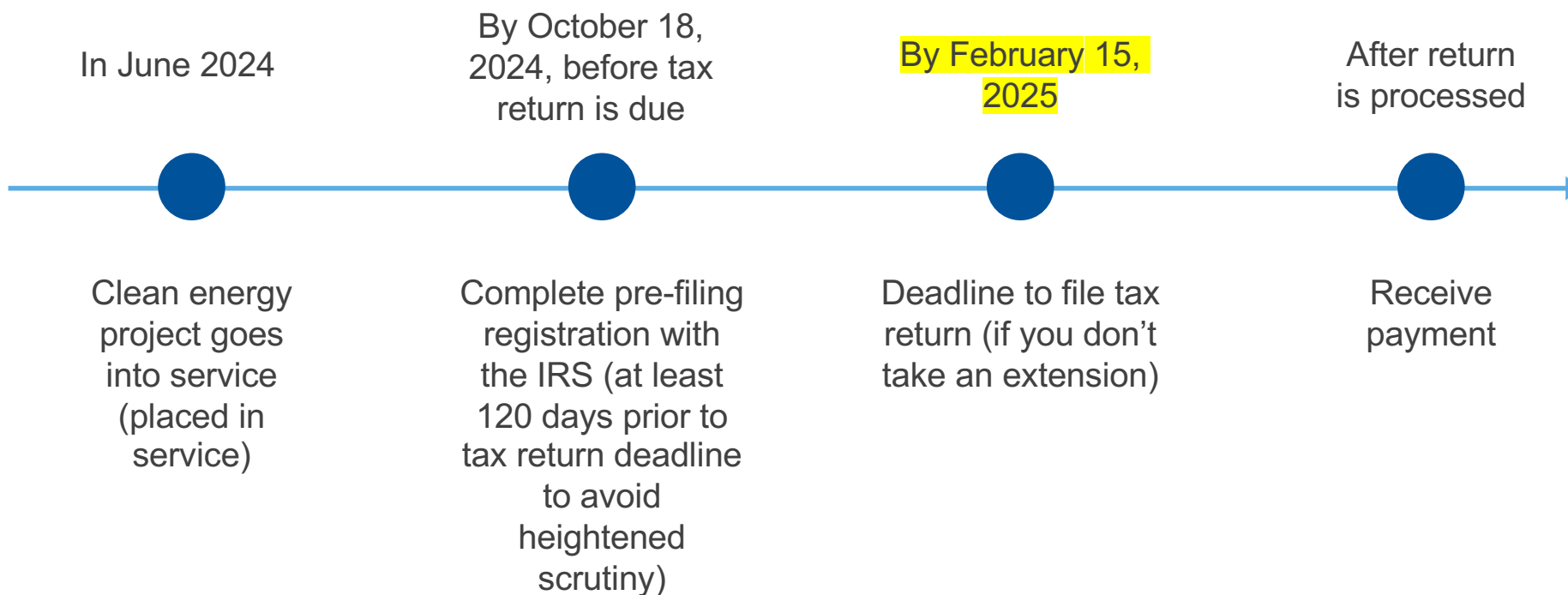
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- ▶ As the Governmental Entity would not owe other federal income tax, the IRS would then make a refund payment in the amount of the credit to the Governmental Entity





## Example Timeline: Governmental Entity's Fiscal Year Ends September 30

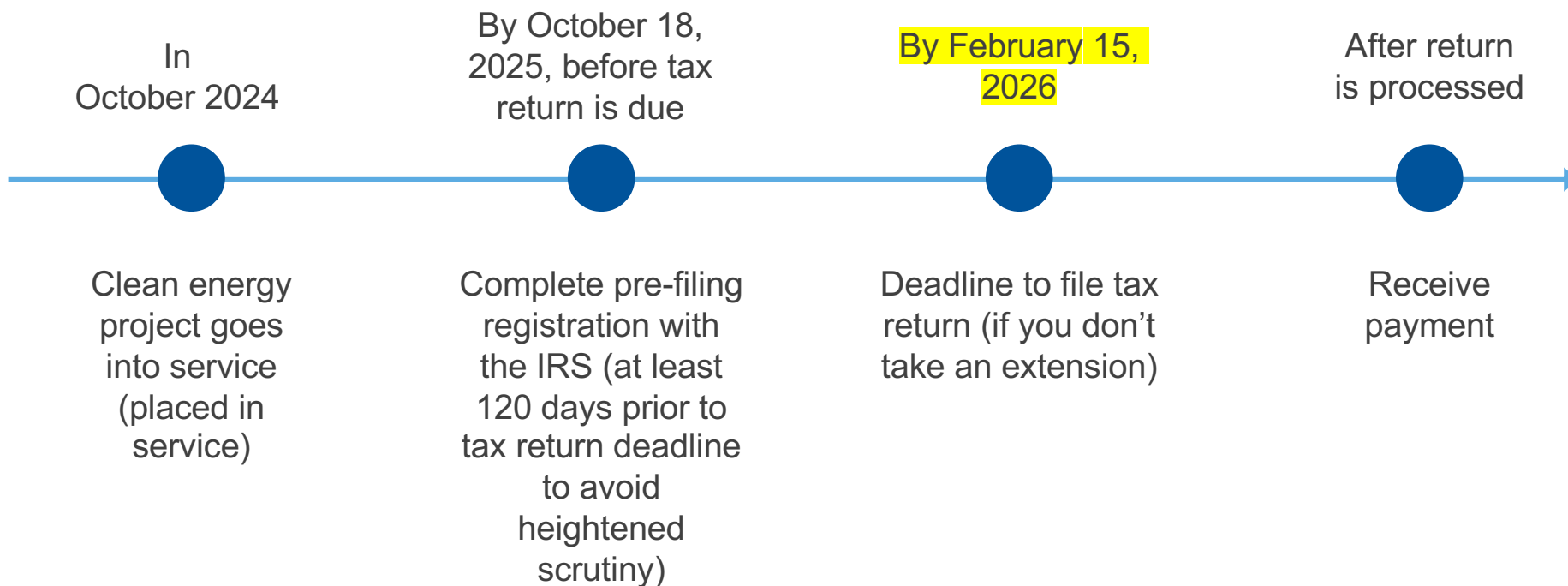
- ▶ A Governmental Entity that makes a clean energy investment that qualifies for the investment tax credit can file an annual tax return (via Form 990-T) with the IRS to claim elective pay for the full value of the investment tax credit, as long as it meets all of the requirements, including a pre-filing registration requirement
- ▶ As the Governmental Entity would not owe other federal income tax, the IRS would then make a refund payment in the amount of the credit to the Governmental Entity





## Example Timeline: Governmental Entity's Fiscal Year Ends September 30

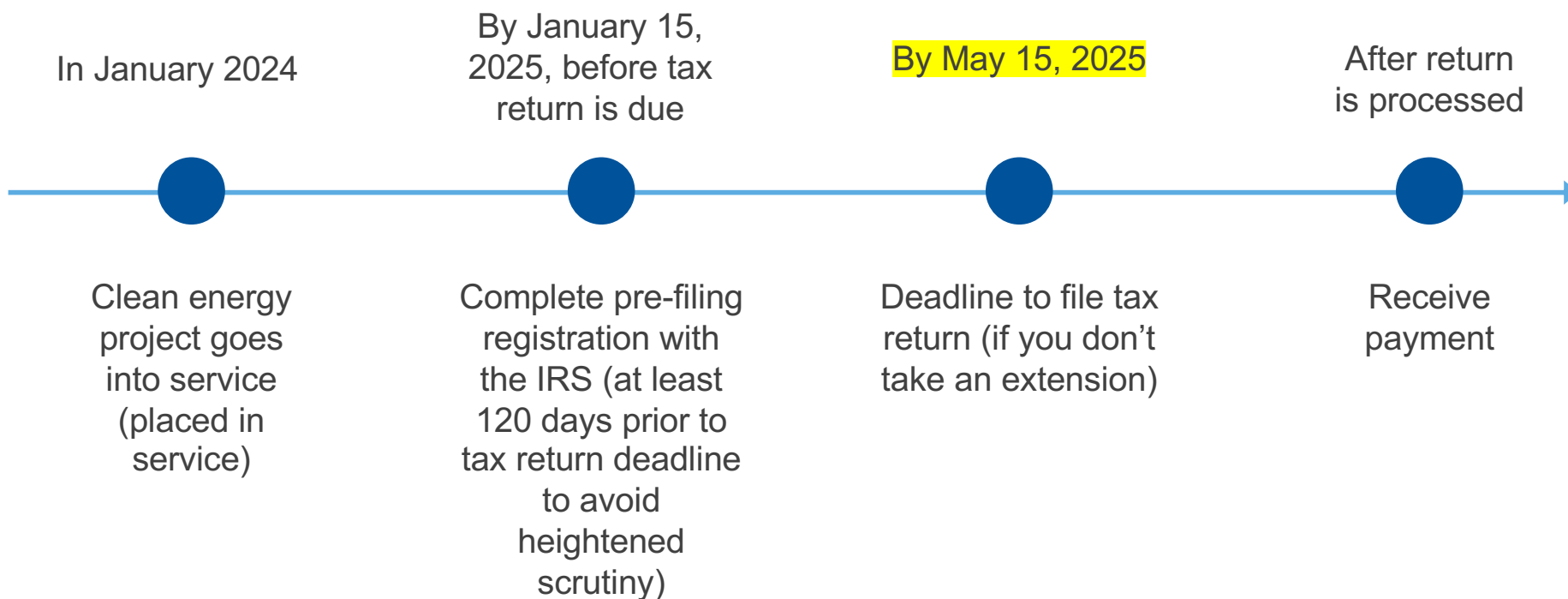
- ▶ A Governmental Entity that makes a clean energy investment that qualifies for the investment tax credit can file an annual tax return (via Form 990-T) with the IRS to claim elective pay for the full value of the investment tax credit, as long as it meets all of the requirements, including a pre-filing registration requirement
- ▶ As the Governmental Entity would not owe other federal income tax, the IRS would then make a refund payment in the amount of the credit to the Governmental Entity





## Example Timeline: Governmental Entity's Fiscal Year Ends December 31

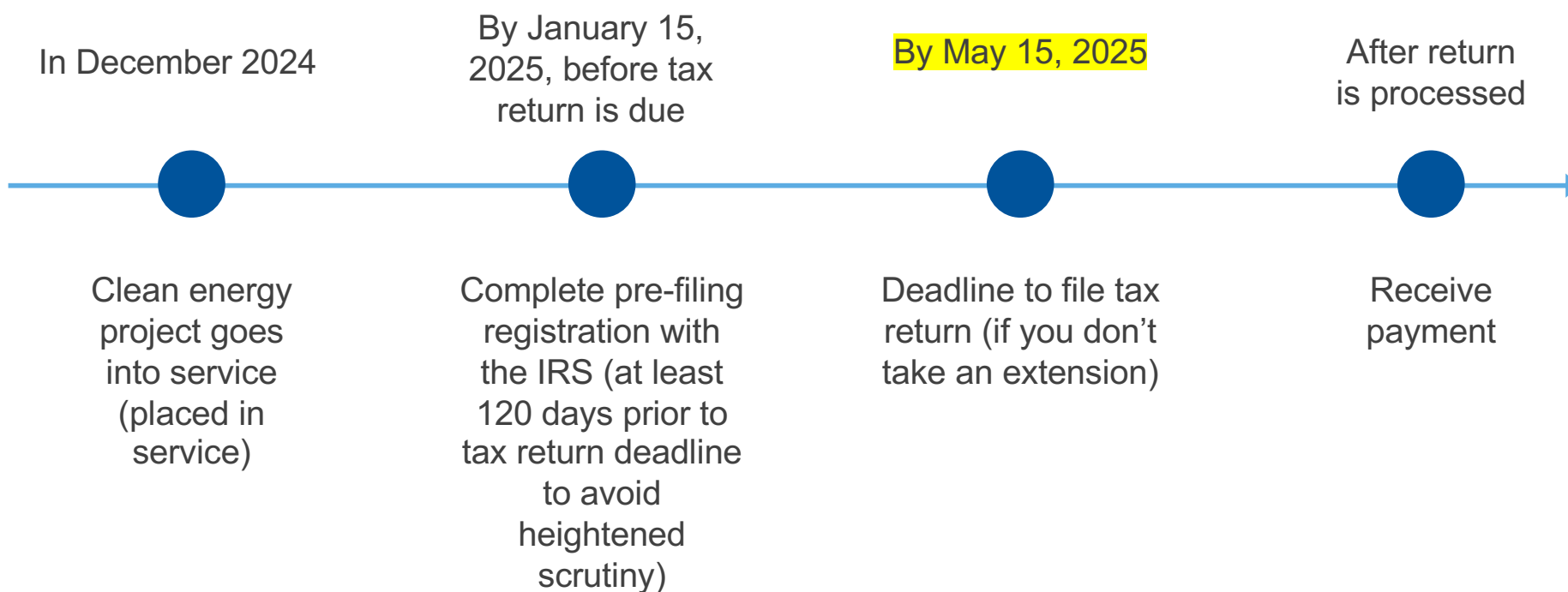
- ▶ A Governmental Entity that makes a clean energy investment that qualifies for the investment tax credit can file an annual tax return (via Form 990-T) with the IRS to claim elective pay for the full value of the investment tax credit, as long as it meets all of the requirements, including a pre-filing registration requirement
- ▶ As the Governmental Entity would not owe other federal income tax, the IRS would then make a refund payment in the amount of the credit to the Governmental Entity





## Example Timeline: Governmental Entity's Fiscal Year Ends December 31

- ▶ A Governmental Entity that makes a clean energy investment that qualifies for the investment tax credit can file an annual tax return (via Form 990-T) 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 Governmental Entity would not owe other federal income tax, the IRS would then make a refund payment in the amount of the credit to the Governmental Entity





**Questions?**



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Juliet Huang is a partner in Chapman's Public and Institutional Banking & Finance Group, National Public Finance Department and the ESG Finance and Impact Investing cross-disciplinary team. She represents clients in a wide variety of public finance transactions, including direct lending, credit-enhancement, public offerings, muni-leasing, secondary market tax-exempt securitizations, and municipal distress workouts and restructurings. Juliet regularly serves as counsel to a broad range of financial institutions that are direct purchasers of municipal obligations and/or that provide credit and liquidity in public finance transactions. Juliet also serves as underwriter's counsel and bond counsel on a variety of public finance transactions for both governmental and conduit financings and advises clients regarding securities law matters.

Juliet's practice also focuses on the municipal leasing industry and the origination, placement, and securitization of tax-exempt and taxable installment purchase, lease-purchase, and other non-bond financing and operating lease arrangements with state and local governments (including for the benefit of qualified 501(c)(3) entities) for the acquisition, construction, equipping, and installation of a broad range of essential government buildings, facilities, equipment, and other real and personal property.

Juliet has considerable experience in financings for renewable energy, solar, and energy efficiency projects. Juliet also represents bank-affiliated and independent lenders, investors, leasing companies, servicers, and buyers and sellers in municipal asset portfolio transactions, syndications, pooled securitizations, and other secondary market municipal asset products.

Juliet has been elected to serve as President of the Association for Governmental Leasing and Finance (AGLF) and is a member of the National Association of Bond Lawyers (NABL). She is a frequent speaker on topics relevant to financial institutions and investors in the municipal bond market. She served as Chair of NABL's The Workshop 2023 conference.

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