

ELECTIVE PAYMENT/TRANSFERABILITY PRE-FILING REGISTRATION TOOL

INTERNAL REVENUE SERVICE, STAKEHOLDER LIAISON



- With Elective Pay, tax-exempt and governmental entities that do not owe Federal income taxes will, for the first time, be able to receive a payment equal to the full value of tax credits for building qualifying clean energy projects or making qualifying investments.
- Unlike competitive grant and loan programs, in which applicants may not receive an award, Elective Payment allows entities to get their payment if they meet the requirements for both elective pay and the underlying tax credit.
- The entities eligible for Elective Payment (*applicable entities*) would not normally owe federal income tax. However, by filing a return and using Elective Payment, these entities can receive tax-free cash payments from the IRS for clean energy tax credits earned, so long as all requirements are met, including a pre-filing registration requirement.



IRC 6418: TRANSFER ELECTION

Provision allows for eligible entities to make an election to transfer all (or the portion specified) of an eligible credit determined to an unrelated taxpayer for a cash payment, which is not included in gross income.

- The unrelated taxpayer (transferee) is then treated as the taxpayer for purposes of the Code with respect to the transferred credit, but it is not allowed to deduct the cash payment.
- Other tax attributes with respect to the property, such as depreciation, are not transferable under section 6418.
- Applicable entities can choose Transfer Election for 13 of the IRA's tax credits.





WHAT QUALIFIES FOR ELECTIVE PAYMENT AND CREDIT TRANSFERABILITY?

APPLICABLE CREDITS Which elections are available to which tax entities?				
Section	Credit Name	Taxable Entity	Tax Exempt Entity	
30C	Alternative Fuel Vehicle Refueling Property Credit	Т	EP	
45(a)	Renewable Electricity Production Credit	Т	EP	
45 U	Zero Emission Nuclear Power Production Credit	Т	EP	
45Y	Clean Electricity Production Credit	Т	EP	
45Z	Clean Fuel Production Credit	Т	EP	
48	Energy Credit	Т	EP	
48C	Qualifying Advanced Energy Project Credit	Т	EP	
48E	Clean electricity Investment Credit	Т	EP	
45W	Commercial Clean Vehicle Credit	-	EP	
45Q	Carbon Oxide Sequestration Credit	EP or T	EP	
45V	Clean Hydrogen Production Credit	EP or T	EP	
45X	Advanced Manufacturing Production Credit	EP or T	EP	
48D	Advanced Manufacturing Investment Credit (CHIPS)	EP	EP	



IRS RESOURCES FOR ELECTIVE PAYMENT

MIRS =

Elective @ **Pay Overview**

What is elective pay?

the the tay allow applying entres, including the events and interiormental another that adoubt athenaise he usually to their ontail credits because they do not use tedesti income tax, t beneft from some clean anergy tax credits. By choosing this enclose. The amount of the orealit is breated as a payment of tax and any surepayment will result is a return.

For example, because of the Inflation Reduction Act, a local government that makes is share wireign transport that quatters to Re-investment too credit can the an annual tax elsen with the PRI to claim electric pay for the fail value of the meetiment builcedit. an careful tensore pay on the set payments in the setting, at long an it meets all of the requirements rackading a per-Wing implicitly in requirements. As the total government isolatiling a use affine technic insume tax, the IRD united their mode a reflect payment is the animat of the could to the local powersment.

Who is eligible?

Applicable entities plot use excitive pay. Applicable entities include tax-exempt segarizations, states and political subdivisions such as local prominents, today Vilar promoters, Adaba Native Carporations, the Territoria Iddey Authority, next Mechinic competations, U.S. Imittones, and their particul sub-division, and genoies, and inde-unsertabless of state, tocal, trikel and U.S. estimate operativities

What types of businesses are eligible?

Denseuby only "applicable entries" are eligible for Medine pay However, there are special idea to five of the citizh arienge las credits. Specifically, other tasjonyes that are not "applicable entities," may make an electricit to be treaded as an applicable withy to elective pay with respect to the approache creat presents griving rise to 1. The section MQ used? simility on the make security hadron

2. The section KW cents great to productor of dear hydrogen, or 2 The textury 407 owill below out rest-starting prediction great Town are additional subs if the taigaper is a partient/up or S Corporation.

How do I make the elective payment election?

lighte entries would claim and mome an elective payment by rations an electric payment electrics on their semual tax return along with any farm required to stain the relevant tax and t However, there are depail leading up to the such as a required pre-thing regulation process. An EM or TM is required to date the pre-kting registration po Electronic return filling is strongly encouraged.

MIRS =

Tax-Exempt Organizations

What is elective pay? What will I need to Decise pay allow applicable entries, including the evening and a payment?

governmental entities that would attenuise be usable to stary etait coults bein on they do not one beliefs score his, to second from anyter clean amongy law credits. By choosing the eechas. The amount of the centre is treated as a payment of tax and any averpayment will result is a return. For example, because of the inflation Reductors Act, a local

titul materia a clear winey investment that quality for the investment tay peeds can the incompatible return with the IRS to claim elective jusy for the full value of the manufaces the credit, if it meets all of the requirements including a pre-filing tool blacky transmost A The local government would not own other bedevid income tax. The POI would then make a rehard ent to the anisound of the credit to the local government

Are tax-exempt organizations eligible? Organizations that are everyal transities by § MC(a) are eligible for

elective pay. This would instacte all organizations described in § 107(0), such as public charities, pruste foundations, social webs imparticulture, before respectationers, incomessionspaces and officers. If indules relate or sportals organization states § 60738

How do I make the elective

payment election? Electron another second classic and residues an electric subscreet for making an electrice pagement also have an electric pagement by making an electrice pagement also have an Form 1950 T along with any form required to claim the stewart tax cerdit. However, there are steps leading up to this, such as a required pre-tling reprinters process. An Erit or Tits is required to

IRS.gov/ElectivePay





Local Governments

What is elective pay? Enclose pay above applicable or thes, including has essenge and goverynertal erddies, that would athen use be unable to claim centary credits because they do not save technic incurve law, to benefit from some clean energy law or edits. By choosing this relation. The propert of the credit is treated as a concreat of tax and any independent will result in a related

The support is have used the inferior factories and is included generative to that makes a stage energy investment that qualities to the investment tax creats can be an annual tax extens with the (H) to claim elective pay for the fail value of the investment tax undit. as here as it meets at of the requirements including a pre-fitting contrainer to the applicable of requirement. As the local generatively would not Upon completing this provi regelitudion counties for each

popularities the amount of the credit to the haust government. read to provide that reged part of making the electron Are state and local governments eligible? + Campieto pre filing regio Ves. States, pathod scherologies and their agencies and instrumentation are at eligible for emotion pay. This includes the valut repetution run More information about Dedivid al Columbia, it also includes cities, countries and other will be available by late political subdivisions. Mathe Entricits, school districts, economic

 Satisfy all eligibility require any applicable bonus cre-pear. For example, to claim development agencies, public universities and hospitals that are agenties and metrumentatives of instea or political substitution generating project, you will pendia before making at r How do I make the elective You will need the docu substantiste any underty EXcitive existing out company exciting to the ast annual has return antiments increased the o



Resource 2 Elective Put

Publication 2017 4 (0.0023). Catalog Rutchine MICEA. Department of the Treasury. Informatifier

> Dealers Pay and Transferdable

1. Identify and pursue like

2. Determine your las year.

3. Complete pre-filling regi

meet to break what apple staction pay fac

of determine The due date

providing internation also you internation and we

contribute to the applicate

Upon completing this proce registration munities for each

need to provide that registry part of routing the mechani-

Clamphote pro-filing ringle

· Many information about

will be available by late

any applicative bound day

peak For Assertable, 16-con

- You sell used the docut

substantiale any underly

amounts increased the

. File Form IND-T by Die d

What tax credits of

be used for?

for electric page

Resources

penaesting propert, you service before making

valid impiditation r

4. Satisfy all eligibility record

are start included.

payment election?

Addination (\$117-0-0-0023) Ending Namion (\$1222⁴ Experiment of the Treasury Internal Research Revine more in pr

MIRS Indian What will I need a payment? Tribal 1. Identify and parmar the

reed to know what opp encouve pay fail. Governments 2. Determine your tim you ad determine the due do 2 Canadate une fillen nen you intend to earn, and ear

What is elective pay?

For example, because of the inflation field-state Add a local

garwinnert that makes a clean energy morphiest that qualities to the investment has credit can file an annual has ensure with the PD to claim electrice pay ha the full value of the investment has credit.

shahor requirement. As the local government would not other tederal massive tax, the PDI would if we make a ethics

as tong as it must all of the minutements including a use those

payment in the amount of the useful to the local government

Are Indian Tribal Governments Eligible?

Ves. An Indian billed government, sufativities: Trievest, or any agency or instrumentality of a Tribal government or subdivisio

a eligible for elective pay. For this purpose, the term "Indian Idaal government" means the recognized governing loody of

any Sodiah or Alaska Yathys follow, Sand, Ischori, Jourdan, Ultige-

How do I make the elective

the Fouris 880-1, along with any fairs required to

Council There are these finding of the first work

It is required pre-thing registration process. An It is TRUE is expand to complete the gre-thing

Electronic return filing is strangly encouraged

payment election?

are branchespel too

itty, component hand, as component receivation

light indian Wast Boreninetts and then subdivisions etsuid

Elective pay allows applicable wittles, soluting tax-exempt and governmental wittees that would off-environ be unable to class. a payment? 1. Identify and pursue the smallving preject or activity. You will ertain credits because they do not once federal income tax, to need to know what applicable a elective pag far. enett ham agree clean energy tax condits. By chapping the electrics. The annual of the credit is beated as a parameter of tax and any conversion over soil weather a reduced

2. Ontermine your las year, if not already known. Your las year will determine the due date for your las estant

What will I need to do to receive

3. Complete pre-filling registration with the IRS. This will reduch rouding internation about stunnel, which applicable people you intend to earn, and each eligible project/property that with contribute to the applicable credit and other internation require Upon completing this process, the IPO will provide you with a registration current for each applicative credit property. You will need to provide that wayed allow number on your tax retain an part of making the electrice pay electron. + Complete pre-filing regulation in sufficient time to have a valid record status' munities at the time way the your big return

 More internation about this pre-filing registration process with the available by tars 2023.

 Satisfy all eligibility requirements for the tax setsilt and any applicable toness credits, if applicable. For a given tax year, For example, to claim an energy credit on a solar energy. industrially identified (inclusion) parentheticate/, is the stort security but published by the Department of the fold shows but published by the Department of the Interior published in the Frederic Program of Part of The Last Aut of The Last penetating project, you would reed to place the project or sensor before making an electric payment electrics. • You will need the documentation necessary to property substaidate any underlying tax usedit, including if taxes

3. File the required around law relars by the due date and sheating

5 Blacks Pay and Banch 2 84.84

amusite increated Vir Londit.

What tax credits can elective pay be used for?

the Publication SETTy for a list of bia seeith that can be used for electric pay. Resources

Rationales 1811 F (\$ 2023), Causing Number \$113.2. Organization of the Tensory, Internal Revenue Review, monotogen

D

incollering the boundary, Richard Rey Highler So. Could 3.1.9 IRS THE PROVINCE Destando Per personalises of control by how a lightly recovery a second point of the second point of the second seco Control Annual State 2020 C.M. Samuel & Providing Tange and Control Reveals and Providing and Control and Control and Providing and Control and Providing and Providing and Control and Providing and Tenne stage manual as avails for presidential strategies in statewidy (hydrogen) at the institute the mag-meterization of any one space in summaring 2003. The Great Protocol (1971) and the second second second all more than the second of the Per investment in successible energy projects including had set, estar performance whill of all energy sizes Conditionness del si qualitati continue dance 2018 749, contactore con continue The temperature of the second device the temperature of the process of the second sector of the temperature of the second secon these back-objects that he out to make the site to have going and when the generation Her CMP of each as the first halo is addition with a first company investor to company Acceled instance and the company in the Institution of the Acceled instance additional and the company institution of the addition of the company addition of the company institution of the company is a state of the company institution of the company institution of the company is a state of the company institution of the company institution of the company is a state of the company institution of the company is a state of t Bross Credit II (Stat Estimate development importante encode anti-contrar part and the contract from. Confidences (1.2.1) per more to al qualitat according in particular important, such a disting-mente, causes, systeming includes per per college (1.1.1) and the rest important such. Book to Calordan Repetition () - 13 Per elevations from reachest schere has littles. You little in approximation in the respect 12 (2021) Candid Amountains (RES) CS (and AVM) (induced the for larger institute). To an AMM in 1999 and provi-Annual Strengt Property na santampata e persona a sange projekti, n min ar (ni mun min) analami, person men na mani a primi ki un almana na projekti a panali de prasi testimates de les et sujoyer locates et la rate de la result Proceeding the resolution of the second Instructional Manufacturing Provided into Contril (), 1027 Per periodesen af somerendo alexe verbinen Casilly ap obties insteads someren en testen born, annotanese, and analysiske velbler beste republik someren verbine fraktigen. Casillo Analysis (La Sci Califordi y and 1920 ber verbiner (1920 ber). Brook by Manhad For exercises, the action interval and verying papelity constructions and do not construction transition between the second restoring in the second s Allowanders from With the Reduction of France in Concil (1) 475 reactions reaction to the test state of a local state of the second state of the secon Case Sydney // Their Articles (M. Yong, S. Roserto, Rosepheron periodics) (2000). Millio, Specing in Micros pol-meter per interface, investigation in 2006 a rate of Networks were to avoid to denote ended to of deer transmistic balance and a submitte Date had Roberts Ball Conditioners in 2015 parties 2015 parties for instance for installand for 2017 sectors and index", 21 Coloration 20 March 20 address for all installands by COC "enfortune tasks" ("Pilo" target")

Q1. Who is eligible to use elective pay? What is an applicable entity? (added June 14, 2023)

A. Applicable entities can use elective pay. Applicable entities include tax-exempt organizations, States, and political subdivisions such as local governments, Indian tribal governments, Alaska Native Corporations, the Tennessee Valley Authority, rural electric co-operatives, U.S. territories and their political subdivisions, and agencies and instrumentalities of state, local, tribal, and U.S. territorial governments. See Q10 for information about other taxpayers.



ELECTIVE PAYMENT ELECTIONS

What will I need to do to qualify for elective 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
- **3. Placed in service**: The applicable credit property must be placed in service BEFORE a registration number will be issued
- 4. Complete pre-filing registration with the IRS

- 5. Satisfy all eligibility requirements for the tax credit and any applicable bonus credits, if applicable, for a given tax year
 - You will need the documentation necessary to properly substantiate any underlying tax credit, including if bonus amounts increased the credit
- 6. File the required annual tax return by the due date (or extended due date) and make a valid elective payment election.



PUBLICATION 5724-B

Credit for Commercial Clean Vehicles

What is the credit for **commercial clean vehicles**?

If you are interested in claiming the commercial clean vehicle credit for purchasing a commercial clean vehicle or vehicles, beginning in 2023, a tax credit is available for each qualifying commercial clean vehicle purchased each year through Dec. 31, 2032.



Here is what you should know:

- The credit is available for businesses and certain tax-exempt entities; tax-exempt entities can receive the credit as an elective payment.
- There is no price limit on the cost of the commercial vehicle.
- No commercial clean vehicle credit will be allowed if a taxpayer already claimed the new clean vehicle credit for the same vehicle.
- The vehicle manufacturer must be a Qualified Manufacturer. A Qualified Manufacturers list is on IRS.gov.

What is the **amount** of the credit?

- The maximum credit amount is **\$7,500** per vehicle with a gross weight rating of less than 14,000 pounds or **\$40,000** for all other vehicles.
- The credit is limited to the lesser of 15% of the vehicle's cost (30% for vehicles not gasoline or diesel powered) or the incremental cost of the vehicle, as compared to vehicles powered with a gasoline or diesel internal combustion engine.

What **commercial vehicles** qualify for the credit?

To qualify, a vehicle must be subject to a depreciation allowance, with an exception for vehicles placed in service by a tax-exempt organization and not subject to a lease.

- Vehicle Type: Clean vehicles and mobile machinery
- Battery: Vehicles that have a battery capacity of at least 7 kilowatt hours or 15 kilowatt hours for vehicles with a gross vehicle weight rating of 14,000 pounds or more, or a fuel cell vehicle (hybrid vehicles).

WWW.IRS.GOV/CLEANVEHICLES

Publication 5724-B (Rev. 2-2023) Catalog Number 93695T Department of the Treasury Internal Revenue Service www.irs.gov

PUBLICATION 6029



Tax-Exempt Entities and the Alternative Fuel Vehicle Refueling Property Credit

This credit applies to eligible property placed in service beginning January 1, 2023, through December 31, 2032.

Tax-exempt and governmental entities, such as states, Tribes, religious organizations, and certain non-profits may install electric vehicle charging and clean fuel refueling property to meet energy transition goals, support clean vehicle fleets, or save money on refueling costs. This tax credit can offset some of the costs associated with the purchase and installation of qualified refueling and recharging equipment.

How can a tax-exempt entity utilize the § 30C Alternative Fuel Vehicle Refueling Property Credit?

Eligible tax-exempt and governmental entities can claim the § 30C Alternative Fuel Vehicle Refueling Property Credit for qualified property, including electric vehicle charging equipment, through a new mechanism called <u>elective pay</u> (also known as "direct pay").

How much is the credit for a single item of qualified refueling or recharging property?

> 6% of the cost including labor, up to a maximum of \$100,000 per item of property; or

- 30% of the cost including labor if prevailing wage and apprenticeship (PWA) requirements are met, up to a maximum of \$100,000 per item of property.
- The per item limit includes certain property associated with the single item(s) if it is directly attributable and traceable to the single item(s), such as a pedestal.

What refueling property qualifies?

To qualify, an entity must install property used to (1) recharge electric motor vehicles (including certain electrical energy storage technology) or (2) store or dispense clean-burning fuel (such as hydrogen fuel for fuel cell vehicles).¹ In addition, the property must:

- > be placed in service during the tax year,
- > have original use that began with the taxpayer,
- > be depreciable property,² and
- > be placed in service in an eligible census tract.

Who claims the credit - the seller or my organization?

Your organization or the seller installing the property could claim the credit, and the choice is up to you to determine which path is more beneficial. In order to claim the credit yourself, you must notify the seller in writing that you intend to claim the credit via elective pay. Otherwise, the seller can claim the credit if they clearly disclose to you the amount of the credit allowable. If the seller will claim the credit, they may be willing to install the eligible property at a lower upfront cost to you (by passing tax savings to your organization).

How do I find out if my tax-exempt entity's property is in an eligible census tract?

Your entity's refueling property must be placed in service in an eligible low-income community census tract or non-urban census tract. Approximately <u>two-thirds</u> of Americans are in eligible census tracts.

To determine if your entity's property is in an eligible census tract

In general:

- Determine your 11-digit census tract geographic identifier (GEOID) under the 2020 census tract boundaries by using the <u>Census Bureau mapping tool.</u>³
- > See if your identified GEOID is included in the IRS-provided list here: Appendix B.
- If your entity's refueling property is placed in service prior to January 1, 2025, in addition to the directions above, you may alternatively
- Determine your 11-digit census tract geographic identifier (GEOID) under the 2015 census tract boundaries by using the <u>Census Bureau mapping tool</u>.
- See if your identified GEOID (using the 2015 census tract boundaries) is included in the IRS-provided list here: <u>Appendix A.</u>⁴

The IRS will periodically publish lists of specific census tracts that meet the requirements, along with instructions on how taxpayers may determine their census tract identifying numbers, in the Federal Register or Internal Revenue Bulletin.

¹ To see further details on what is considered a § 30C eligible clean burning fuel, visit irs.gov/credits-deductions/alternative-fuel-vehicle-refueling-property-credit.

² For purposes of § 30C, property used by a tax-exempt or government entity is treated as of a character subject to an allowance for depreciation.

³ Eligible census tracts are described in Notice 2024-202 as modified by Notice 2024-64.

⁴ You may also use the Department of Energy's Argonne National Laboratory mapping tool to help determine if your entity's property is located within an eligible census tract (regardless of if your recharging or refueling property is placed in service before or after January 1, 2025). However, it should be viewed as a tool and cannot be relied upon as tax guidance. See the tool here: anl.gov/esia/refueling-infrastructure-tax-credit.

IRS ECO PRE-FILE REGISTRATION TOOL OVERVIEW VIDEO





IRS ECO PRE-FILE REGISTRATION TOOL USER GUIDE



Inflation Reduction Act (IRA) and CHIPS Act of 2022 (CHIPS)

Pre-Filing Registration Tool

User Guide and Instructions

au will be able to find the IRA/CHPS Pre-Filing Registration tool at wo	The rest step to authorize an entity is to provide your pera your latest personal income tax return. See Figure 4. Figure 4: Authoriting a Clean Energy Business Account –	sonal name and address a Step 2	s they appeared on	
In IRS uses ID.me, a technology provide, to provide identity verification in ID.me account, just sign in. Don't create a new ID.me account for the wave your photo identification ready. Verify your personal identity – not with ID.me.	Create Your Clean Energy Business	Account		
lote: ID.me has its own help site and assists faxpayers having cititoult he Frequently Asked Questions at the links on the ID.me page for mon 45 customer account service telephone number for help with ID.me.	ADDRESS CONT. Ma Mercelan re-resort 1g	3 Contraction of the second se	RA/CHIPS Pre-Filing Registration	on Tool User Guide and Instr
Igure 1: Sign-In or Create a New Account	Personal Information		agure 8: Clean Energy Online	
Sign In or Create a New Account	(c) indicates a required field indicates the constraints account, we receive the site of advances patheating user.	Type of Allan	ØIRS	ana amin'ny 🕹 ranka 📔 ndy 18 - ag
IFS now offers a sign-in epition with Durne, which offers access to IFS and no convicts with a secure of		O Finip	Date Box gr	
Etarwis an account created, waintained, sectors, wells, a technology provides.	Lad Marte Down	Secret Interve		
$\mathbf{F}_{2}(\mathbf{x})$ de têt invester lik me account, yea ment create o new account.	Demonst Disease Hamilton 1	Antonina service	Welcome to IRS Clean Energy	
Sign in with an axisting eccount	(1) (fight a 20 set optimizer optimizer (an anti-set)) in state of the state of the set of the s	1204 First S	The following field due to ($ 00\rangle$ and the Disp. 1- Chinese Ad K ± 0.2 for the	endiate data surge estimated at ingressionals.
Siphin with IDuse		25°		
C4			Clean Energy and Semiconductor Manufacturers	Vehicle Hanufacturers
Create a new account		toms *	Childre and Bar Condition	suscenteers and store is an initial or (100) and ping in lightly
BLUE COMPANY		5667.010	Register generatives in a walk an electric payment of the other electrics has may hope a registration example. So de anon example second second	existing (PEPA) may apply bitly further with the transmission from matching of default for much 12 year manufacture.
Frequently Asked Questions		28 Code * Liligin (forwar)		
(1) How do Evenity repidentity?			OTIMITED	40000
(P) Mind if transferred was identified.				
			Vehicle Dealers and Sellers	
🛞 Watis Dree?			Chan fabile Cruits	
			Repetting wand and which as that we wight a form that	

FORM 990-T FOR ELECTIVE PAYMENT ELECTION







THANK YOU STACHA DUFFY AND JEFF LATESSA IRS STAKEHOLDER LIAISONS

DIRECT PAY

Clean Vehicle Grants and Incentives

Fleet Manager Roundtable hosted by the Southern Nevada Clean Cities Coalition

December 2, 2024





About the Nevada Clean Energy Fund

The Nevada Clean Energy Fund (NCEF) is a 501(c)3 nonprofit organization.

THE MISSION

Support a thriving, affordable, and accessible clean energy economy in Nevada



THE NEED

Nevadans lack the resources necessary to access clean energy opportunities, reduce energy costs, and live in a healthy environment and climate

THE SOLUTION

Provide access to capital and technical assistance to residents, affordable housing, schools, local businesses, nonprofits, and others in Nevada for building efficiency and electrification, clean vehicles, renewable energy, and storage

THE IMPACT

Tackle climate change Reduce energy insecurity Advance energy justice Improve air quality & health Create quality jobs

NCEF's \$8 Million Clean School Bus Program



- EPA selected NCEF for a \$8 million Clean School Bus (CSB) grant to deploy 25 electric school buses.
- Electric school buses provide significant co-benefits: our children's health, cost savings, grid resilience.
- NCEF partnered with several Nevada school districts on the grant, as well as NV Energy, the Nevada Division of Environmental Protection (NDEP), and the World Resources Institute (WRI).





Bus Incentive Stack

Why go electric? Economic benefits





Source: Bloomberg NEF Sustainable Energy in America 2024 Factbook, data from US Department of Energy Alternative Fuels Data Center

* Includes EV charging infrastructure; does not account for other potential federal incentives

Why go electric? Health, climate, & environmental benefits

- The transportation sector is the largest source of GHG and NOx emissions in the US, and also contributes to VOC, PM, and SO2 emissions. Exposure to NOx, VOCs, PM, and SO2 can cause severe asthma and other negative health impacts.
- EVs have no tailpipe emissions and emit half the GHG emissions of a gas car over its lifetime.
- Renewables make up ~33% of Nevada's electricity mix, and Nevada has a state-mandated goal of sourcing all of its electricity from zero-carbon sources by 2050.



Source: Argonne National Laboratory. GREET 2 (2021). Assumptions: 300-mile range EV;; 30.7 MPG gas car; vehicle lifetime of 173,151 miles; U.S. average grid emissions.



Source: Energy Information Administration (EIA). 2022

More and more people are buying EVs

- EV sales currently make up over 8% of US passenger vehicle sales and are growing quickly
- Every major vehicle manufacturer has one or more EV offerings



Source: Bloomberg New Energy Finance. Sustainable Energy in America 2024 Factbook

Source: McKinsey & Co (2022)

Examples of EV options on the market or coming soon



Logos shown are for illustrative purposes only and do not indicate an endorsement by NCEF.

Sedan Unsubsidized Economics – An Example

EV vs. Gasoline Sedan Costs

Vehicle	Base MSRP	Annual Gasoline or Electricity Cost	Annual Maintenance Cost
2025 Toyota Camry LE/SE Gasoline	\$28,400	\$1,401	\$3,658
2025 Nissan Leaf	\$28,140	\$393	\$2,498
Delta (Gasoline minus EV costs)	\$260	\$1,008	\$1,160

ANNUAL ESTIMATED SAVINGS FOR THE EV: <u>\$2,168</u>

Sedan Fleet Economics – An Example

EV vs. Gasoline Cargo Van Fleet Vehicle Economics

	Low End	High End
Vehicle Cost Delta	\$260	\$260
Section 45W Commercial Clean Vehicle Tax Credit	\$7,500	\$7,500
Level 2 EV Charger Cost	(\$1,000)	(\$6,000)
Section 30C Alternative Fuel Infrastructure Tax Credit	\$0	\$1,800
Estimated Incremental Upfront Cost/Savings After Tax Credits	\$6,760	\$3,560
Annual Fuel & Maintenance Cost Savings	\$2,168	\$2,168
Payback Period (years)	0	0

Light-Duty Truck Unsubsidized Economics – An Example

EV vs. Gasoline Light-Duty Vehicle Costs

Vehicle	Base MSRP	Annual Gasoline or Electricity Cost	Annual Maintenance Cost
2024 Ford F150 XLT Gasoline	\$47,830	\$2,165	\$4,422
2022 Ford F150 Lightning 4WD EV	\$62,995	\$693	\$2,798
Delta (Gasoline minus EV costs)	(\$15,165)	\$1,472	\$1,624

ANNUAL ESTIMATED SAVINGS FOR THE EV: \$3,096

Light-Duty Truck Fleet Economics – An Example

EV vs. Gasoline Cargo Van Fleet Vehicle Economics

	Low End	High End
Vehicle Cost Delta	(\$15,165)	(\$15,165)
Section 45W Commercial Clean Vehicle Tax Credit	\$7,500	\$7,500
Level 2 EV Charger Cost	(\$1,000)	(\$6,000)
Section 30C Alternative Fuel Infrastructure Tax Credit	\$0	\$1,800
Estimated Incremental Upfront Cost/Savings After Tax Credits	(\$8,665)	(\$11,865)
Annual Fuel & Maintenance Cost Savings	\$3,096	\$3,096
Payback Period (years)	2.8	3.8

Cargo Van Unsubsidized Economics – An Example

EV vs. Gasoline Cargo Van Costs

Vehicle	Base MSRP	Annual Gasoline or Electricity Cost	Annual Maintenance Cost
2025 Ford Transit Cargo Van Gasoline	\$52,000	\$1,818	\$4,067
2025 Ford E-Transit Cargo Van EV	\$52,000	\$662	\$2,767
Delta (Gasoline minus EV)		\$1,156	\$1,300

ANNUAL ESTIMATED SAVINGS FOR THE EV: \$2,456

Cargo Van Fleet Economics – An Example

EV vs. Gasoline Cargo Van Fleet Vehicle Economics

	Low End	High End
Vehicle Cost Delta		
Section 45W Commercial Clean Vehicle Tax Credit	\$7,500	\$7,500
Level 2 EV Charger Cost	(\$1,000)	(\$6,000)
Section 30C Alternative Fuel Infrastructure Tax Credit	\$0	\$1,800
Estimated Incremental Upfront Cost/Savings After Tax Credits	\$6,500	\$3,300
Annual Fuel & Maintenance Cost Savings	\$2,456	\$2,456
Payback Period (years)	0	0

Federal Commercial Clean Vehicle Tax Credits – Summary

- Commercial Clean Vehicle Tax Credit:
 - Up to \$7,500 for vehicles <14,000 lbs
 - Up to \$40,000 for vehicles >14,000 lbs.
- EV charging stations and other alternative fuel vehicle refueling stations in eligible census tracts can access a tax credit of up to 30% of the cost of the station, not to exceed \$100,000.
- Both tax credits are directly accessible to tax-exempt entities.

The following is intended to provide a summary of selected provisions in the Inflation Reduction Act, and should not be interpreted as tax or legal advice. Federal and state agencies will be issuing final guidance and regulations related to these provisions.

Federal Commercial Clean Vehicle Tax Credit

- aka IRC Section 45W
- Available: January 1, 2023 through December 31, 2032
- Eligible vehicles:
 - Type: clean vehicles and mobile machinery
 - Drive train: fully electric (EV), plug-in hybrid electric vehicles (PHEVs), and fuel cell electric vehicles (FCEV)
 - Battery size minimums: ≥7 kWh for GVWR <14,000 lbs and ≥15 kWh for GVWR >14,000 lbs
 - Domestic content requirements: None
 - Other requirements: vehicle must be subject to a depreciation allowance (i.e., for business use), except in the case of vehicles used by tax-exempt entities
- Eligible recipients: businesses & tax-exempt entities (the latter can receive "direct pay" of the credit from the IRS)
- Tax credit amount is the lesser of:
 - 15% of purchase price for PHEV
 - 30% of the purchase price for EVs and FCEVs
 - The incremental cost of the vehicle compared to an equivalent internal combustion vehicle
 - Not to exceed \$7,500 for vehicles <14,000 lbs and \$40,000 for vehicles >14,000 lbs

Federal Alternative Fuel Infrastructure Tax Credit

- aka IRC Section 30C
- Available: January 1, 2023 through December 31, 2032
- Eligible fueling equipment: natural gas, propane, hydrogen, electricity, E85, or diesel fuel blends containing a minimum of 20% biodiesel
- Eligible census tracts:
 - Either
 - low-income as defined under §45D(e) (poverty rate >20% or median family income is less than 80% of state median family income); OR
 - not urban as defined by the most recent decennial census
 - Mapping tool: <u>https://experience.arcgis.com/experience/3f67d5e82dc64d1589714d5499196d4f/page/Page/</u>
- Eligible recipients: businesses, tax-exempt entities, and individuals
- Tax credit amount for commercial infrastructure:
 - If prevailing wage & apprenticeship requirements are <u>not</u> met: lesser of 6% of infrastructure costs or \$100,000
 - If prevailing wage & apprenticeship requirements are met: lesser of 30% of infrastructure costs or \$100,000
- Tax credit amount for residential infrastructure: lesser of 30% of costs or \$1,000

Federal Alternative Fuel Infrastructure Tax Credit Eligibility



Other Potential Funds for EVs & EV Charging

- Nevada Division of Environmental Protection (NDEP) Clean Trucks and Buses Incentive Program
- Federal Highway Administration's Charging and Fueling Infrastructure Grants
- U.S. Environmental Protection Agency (EPA) Clean Heavy-Duty Vehicle Program
- Federal Transit Administration's Grants for Buses and Bus Facilities
- NV Energy Incentives
- Financing!

Performance Considerations

"As the primary driver for our electric bus, I am impressed by its power climbing the long and steep Gore Pass on my route...I have been in the school bus transportation industry for almost 25 years, and have never been as impressed with any bus to this extent. My students feel extremely safe and are proud to be in a bus that "doesn't pollute". As the operator, I also feel very safe driving a vehicle that handles adverse weather with icy and snow packed roads so securely. "

- Bethany Aurin, Transportation Director, West Grand School District, Colorado

EV Ranges of a Selection of 2022 US Models (Base price, unsubsidized = MSRP + DST)

Lucid Air Dream Range 21" (\$140,500) Tesla Model S LR AWD 19" (\$103,690) Tesla Model 3 Long-Range AWD 18" (\$59,690) GMC Hummer EV Pickup (1st ed.) (\$117,795) 2022 Rivian R1S (Large pack, 21") (\$71,075) Tesla Model 3 Perf. AWD 20" (\$67,690) BMW i4 eDrive40 18" (\$56,395) Ford F-150 Lightning Lariat ER 20 (\$79,169) Ford Mustang Mach-E GT ER AWD 20"... Volkswagen ID.4 Pro 19" (\$41,955) Chevy Bolt EV (\$39,495) Kia Niro EV (\$41,165) Nissan LEAF e+ SV (62 kWh) (\$38,375) Porsche Taycan (79 kWh) 19" (\$84,050) Nissan LEAF S (40 kWh) (\$28,375) MINI Cooper SE (\$30,750) Mazda MX-30 (\$34,645)



Source: InsideEVs (February 11, 2022), based on EPA ranges

EV Charging Infrastructure

- Depot charging is the least cost option for EVs with a range less than their typical route.
- Where depot charging is not possible due to route length or infrastructure constraints, over-the-road, public charging is available.





Source: PlugShare (November 2024)

Real-World Examples

Federal Shipping V Tracking V Design & Print V Locations V Support V Sign Up or Log In 🙆 🔍

FedEx Continues Advancing Fleet Electrification Goals with Latest 150 Electric Vehicle Delivery from BrightDrop



BP and Hertz to build EV fastcharging stations across the US

The companies will collaborate using Hertz locations and BP's electric vehicle charging business.

Published Oct. 27, 2022









alternative-fuel buses. The RTC had originally planned to meet this goal in 2035

RTC leads national hydrogen fuel cell initiative





Biden-Harris Administration Announces \$9,875,000 from EPA's Clean School Bus Program for Nevada Schools

Historic investment from President Biden's Bipartisan Infrastructure Law headed to all 50 states in effort to transform America's school bus fleet

Contact: EPA Press Office (press@epa.gov)

SAN FRANCISCO — Today, the Biden-Harris Administration announced the Fiscal Year 2022 recipients of the U.S. Environmental Protection Agency's (EPA) Clean School Bus Program rebate competition, awarding nearly \$9,900,000 from President Biden's Bipartisan Infrastructure Law to schools in Clark County, Nevada. The grants will help Clark County purchase 25 clean school buses that will accelerate the transition to zero emissions vehicles and produce cleaner air in and around schools and communities.

Lessons Learned from NCEF's Clean School Bus Program

- Understand Total Cost of Ownership (lifetime costs and benefits)
 - Reach out to NCEF for free technical assistance here
- Consider financing, in addition to grants, to unlock the benefits of clean fleets (and tax credits)
- Start charging infrastructure planning—and engage your utility—early
- Be strategic about operations and maintenance
 - Staff training + potential partnerships with other fleet managers



Thank You

Jacob Brinkerhoff jacob@nevadacef.org