

Looking Into Electric Cars

Session 6 : Alphabet Soup



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This is the last official session and I want to thank you . Reading and research only goes so far. With people in the room I get to see from another point of view. Hopefully you learn things from me - but I do also learn from you.

As I mentioned - I will be here next week - and I will have some things

But even if only one person shows up next week - a one on one over a topic of their choice. And I will appreciate the feedback. It will help tweak the presentation so more people in the future will get what they want out of it.

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Session 6 : Alphabet Soup

A recent OLLI email mentioned summer study groups. After the session last fall I told them that I would leave it up to them to repeat it. And it became this spring session. I have no interest for the summer (Its too soon/I need a break). But would consider it for the fall if OLLI decides it would want to again.

Please fill out an evaluation. Information will help the OLLI decision to offer this study group again or not. And any extra information you put in the evaluation is appreciated and can help me continue to improve the sessions, wherever they are used.

Looking Into Electric Cars

Breaking news

Session 6 : Alphabet Soup

Ford to re-open F-150 Lightning orders on May 9th – no reservation needed

Peter Johnson



I didn't explain "just order 3 cars" last week; This might not be a valid approach as time passes. BUT it is worth checking into . My order for a Canoo pickup (won't buy) is 100% risk free. The order for my VW was also 100% risk free. If you change your mind, 100% of the money is refunded. A friend wanted a VW. Waited a couple months and delayed its arrival at least or more time than that. I could have refused my VW because the tires were black.

Some of this no risk is going away - so read the fine print first. Manufacturers did this because somebody will buy the car. And a long wait list might be good publicity. (??). RAM is the first - making dubious promises about capabilities - the first \$100 to get in line is NOT refundable.

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Breaking news

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Ford to re-open F-150 Lightning orders on May 9th – no reservation needed

Peter Johnson



Future update.

Starting soon I plan to attempt a risk free order on as many models as possible.

It will be a nice thing to know.

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Breaking news

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Illinois lawmakers pass EV Charging Act

Measure requires new homes to be built with electric vehicles in mind



The “Electric Vehicle Charging Act,” passed by the state House Thursday on a party-line 69-38 vote after earlier approval by the Senate, requires that new single-family or small multifamily homes offer at least “one EV-capable parking space for each residential unit that has dedicated parking.” A large multifamily residential building must “have 100% of its total parking spaces EV-capable.”

On Pritzker desk for signing. Single homes part very reasonable. Multi-family structures part could be deemed a little aggressive. Bill is only about the wiring conduit, which can be both more difficult and a lot more expensive to retrofit later.

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Breaking news

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The Ram 1500 REV: Ram's Electric Pickup Is Here

Matt Hardigree



No - it is not here.

Battery will be too big ?

Range extender loophole - its can be a hybrid but still claim BEV

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Breaking news

A Massive E-Fuel Plant Is Coming to Texas

E-fuels are a fledgling energy source, but the production of a reliable well could enhance their potential.

By [Emmet White](#) May 3, 2023

So they capture the carbon out of the air and use electricity to make “carbon 0” gasoline that will not go as far as the electricity used to make it ????????

won't work. Warnecke's primary concerns around e-fuels, which [he shared at a European e-fuels summit](#) late last year, were its decades-long scalability timeline, high electricity and water need for production, and low energy efficiency compared to electric propulsion.

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Breaking news

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FINALLY !!! The Electrify America has the main electrical boxes in place and all of the charger cabinets in place. Opening depends on when the transformer arrives from Ameren.

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BIB

CEJA

IRA

NEVI

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V2G

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EV < 2

IDOT

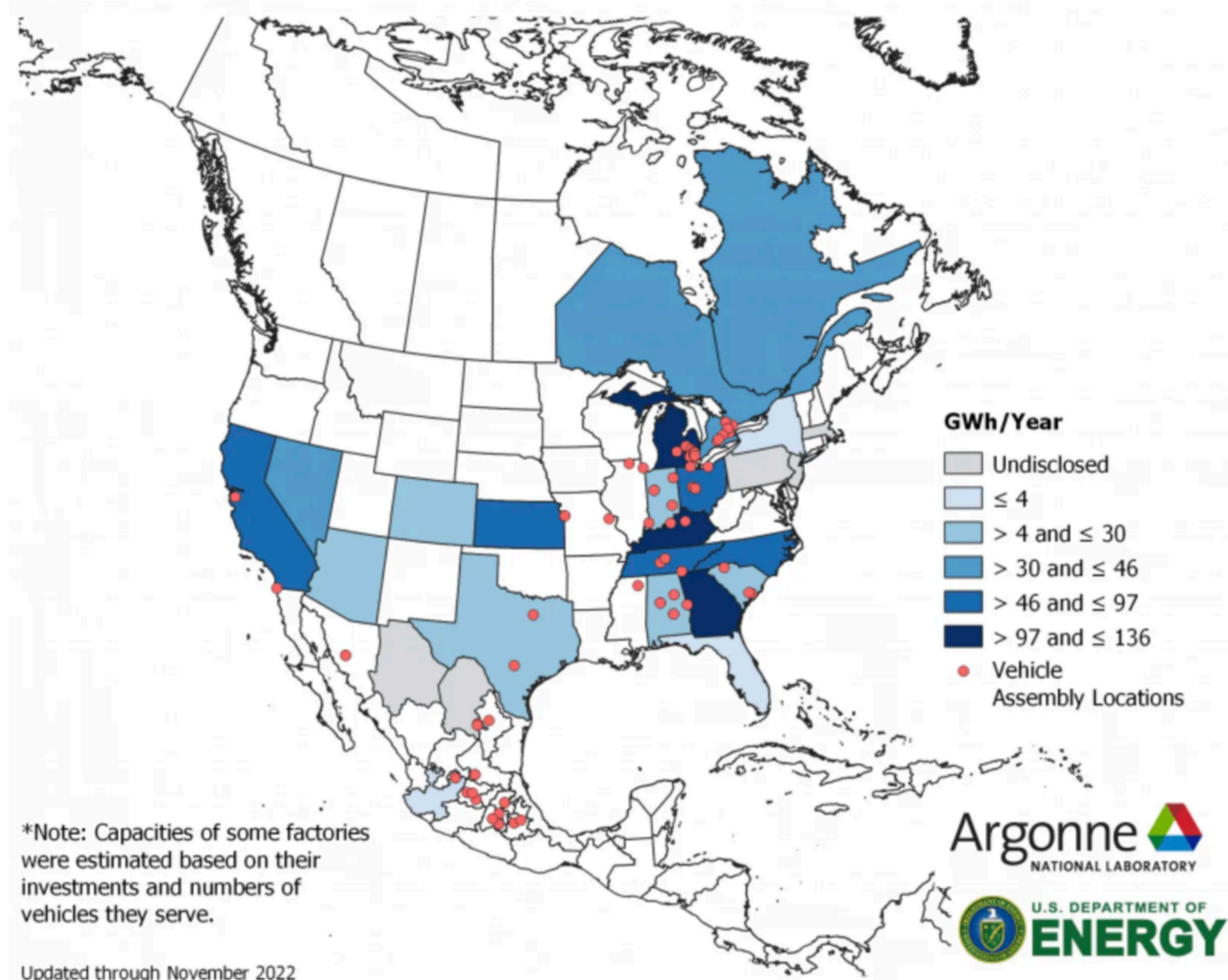
NAFTA

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These states will dominate EV battery manufacturing in 2030

Planned Battery Plant Capacity in North America by 2030



As mentioned last week the Inflation Reduction Act has led to lots of construction to make critical materials less dependent on foreign sources. This is a more graphical representation of it.

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Session 6 : Alphabet Soup

- **46** announcements of new, expanded, or reopened utility-scale manufacturing facilities:
 - **26** solar manufacturing facilities
 - **10** battery storage manufacturing facilities
 - **8** wind manufacturing facilities
 - **2** offshore wind manufacturing facilities
- **18,000** new American manufacturing jobs
- Nearly **96,000 MW** of announced clean energy capacity
- **\$4.4 billion** in announced consumer savings
 - **24 million** Americans served by utilities that announced consumer savings
- States that will see new or expanded factories include **Alabama, Arizona, Colorado, Georgia, Iowa, Michigan, Minnesota, New Mexico, New York, Ohio, Tennessee,** and **Texas**, while other locations remain undetermined.

Looking Into Electric Cars

Some EVs will miss all of the Tax Credit because they aren't assembled in the US. Some EVs will miss some or all of the Tax Credit because they fall short on one or both of the battery requirements. But commercial vehicles are not subject to those rules. If you lease instead of buy a car, it is a commercial vehicle and the retail price the lease is based on is lowered. This "loophole" does not allow purchase of the vehicle by the lessee at the end of term.

Kia To Offer \$7,500 Discount To EV Shoppers Opting To Lease One Of Its Models

A provision in the Inflation Reduction Act allows Kia to offer the discount despite not being eligible for the tax credit

by Brad Anderson

May 4, 2023 at 08:36



Looking Into Electric Cars

The reason for the loophole is not about cars but to allow more small delivery trucks to go electric.

Those small amazon delivery and some other not quite as small trucks for UPS and FedEx drive so much farther than the average car, it is important for them to go electric. And by writing the commercial vehicle exemption let some cars get the credit.

(But as noted in the previous slide, lessee can't buy vehicle at end of lease.)

How to bypass nearly every restriction of the EV tax credit by leasing

Jameson Dow



Last week, the IRS [updated the EV tax credit](#) with new battery sourcing requirements set to go into place on April 17, with the effect of lowering purchase credit amounts for many new EVs.

But since the law defines individual and commercial credits differently, those requirements – along with MSRP and income requirements – can be bypassed on consumer-leased vehicles.

Illinois Rebate

A big difference between Federal Tax Credit and Illinois Rebates is the funding.

The Federal Tax credit is a “swap”. You bought a car - your tax credit comes from what you owe in taxes. It is a great deal - but the money comes from you. So they always have the money.

The Illinois rebate - you get it even if you owe no taxes. The state budget pays for it.

Currently the money for the state rebates has run out and needs additional funding going forward. The structure to apply and get the rebate remains in place. But waits for the new state budget to know if there will be money for the program.

Illinois Rebate

A \$4,000 rebate for the purchase of an all-electric vehicle that is not an electric motorcycle.

A \$1,500 rebate for the purchase of an all-electric motorcycle.

==> EV can be new or used

- The purchaser must reside in Illinois at time of vehicle purchase and at the time the rebate is issued.

==> this and other rules prevent out of state sales getting Illinois rebate money.

- The vehicle must be purchased from a dealer located in Illinois and licensed by the Illinois Secretary of State.

==> Rebates to only benefit Illinois residents and businesses

IEPA - www2.illinois.gov

Illinois Rebate

- The vehicle cannot have been the subject of a previous EV rebate under this new program in Illinois.

====> EV Vin # can only receive one rebate

- Only individuals can receive a rebate and can only receive one rebate.

====> One rebate per person

- The rebate amount cannot exceed the purchase price of the vehicle.

====> likely to only apply to used vehicles

- The purchaser must retain ownership of the vehicle for a minimum of 12 consecutive months immediately after the vehicle purchase date.

====> not sure why - maybe to avoid a straw buyer for someone wanting 2 EVs and 2 rebates.

IEPA - www2.Illinois.gov

Illinois Rebate

Electric Vehicle Rebates in Illinois.

Electric Vehicle Rebate from Illinois

Beginning July 1, 2022, and continuing as long as funds are available, an Illinois resident that purchases an all-electric passenger vehicle in Illinois will be able to apply for a rebate, in the amounts set forth below. A rebate amount cannot exceed the purchase price of the vehicle. The purchaser must retain ownership of the vehicle for a minimum of 12 consecutive months immediately after the vehicle purchase date. Only one rebate will be issued to a purchaser in any 10-year period.

Beginning July 1, 2022, a \$4,000 rebate for the purchase of an electric vehicle.

Beginning July 1, 2026, a \$2,000 rebate for the purchase of an electric vehicle.

Beginning July 1, 2028, a \$1,000 rebate for the purchase of an electric vehicle.

Purchasers must apply for the rebate within 90-days after the vehicle purchase date.

(this does include used vehicles) (no vehicle can receive rebate twice)

(first link is general info : second link is FAQ : 3rd link is the application)

<https://www2.illinois.gov/epa/topics/ceja/Pages/default.aspx>

<https://www2.illinois.gov/epa/topics/ceja/Pages/Electric-Vehicle-Rebates.aspx>

<https://www2.illinois.gov/epa/topics/ceja/Documents/Application%20and%20Instructions.pdf>

2022-07-01

This PDF that will be on the OLLI download site has the web links for documents you need to submit to get the rebate.

Illinois changed there webpages. Links still work but differently. (Image is from last falls PDF - explanation notes differences on new PDF.)



Illinois Rebate

The Clean Energy Jobs Act

There are Illinois rebates for Public
EV chargers not private homes.

As I understand this section - but try if you want. But it never hurts to apply.

Illinois NEVI

State Plan	Actual FY 2022 Funding	Estimated FY 2023 Funding	EV Charging Corridors	NEVI Planning
Illinois State Plan  Approval Letter 	\$21,998,178	\$31,655,626	1,562 miles	Illinois NEVI Planning

Illinois IDOT NEVI funding

Illinois NEVI

August 2022

IDOT submits NEVI Plan to the Joint Office

Fall 2022

IDOT continues public and stakeholder outreach

FHWA finalizes regulations setting minimum standards and requirements for projects funded under the NEVI Formula Program

FHWA approves Illinois NEVI plan

2023

IDOT finalizes procurement method for program implementation

IDOT conducts procurement for first round of program

IDOT announces awards of first round of NEVI Implementation

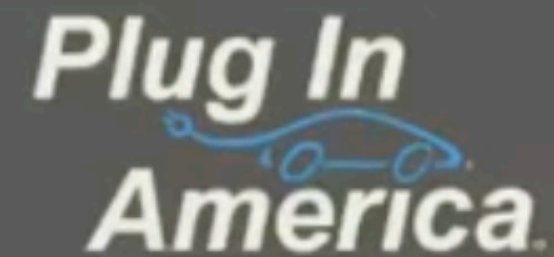
IDOT begins annual update of NEVI plan

Certain contracting requirements are needed for federal contracts. Buildout will be slower than most private expansion. Like EA.

California's 50-mile requirement

Furthermore, the tighter regulations from California—adopted by at least nine other states—are another factor. They require that PHEVs deliver **50 miles of electric range**, starting with the 2026 model year, to earn the full ZEV credit amounts from the state's Air Resources Board.

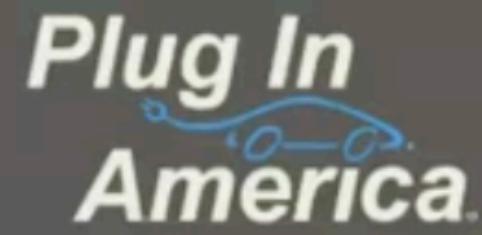
Not currently an Illinois thing, but Illinois is one of the states that often follows California transportation initiatives.



Inflation Reduction Act

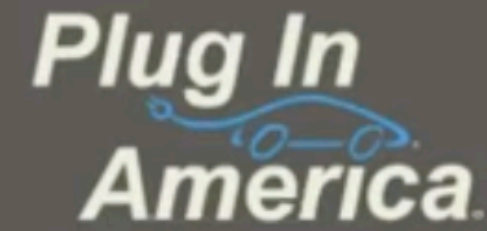
- Signed into law by President Biden on August 16, 2022
- [Inflation Reduction Act](#) features a package of climate and energy provisions
- EV provisions include:
 - **Consumer credits for new and used vehicles**
 - Alternative fueling refueling stations credit
 - Commercial and manufacturing credits
 - Other EV support (eg. USPS funding assistance)

This series of slides is from the Plug In America zoom webinar in August. It is the best rundown of the IRA that I have found and all in one place.



Previous EV Tax Credit

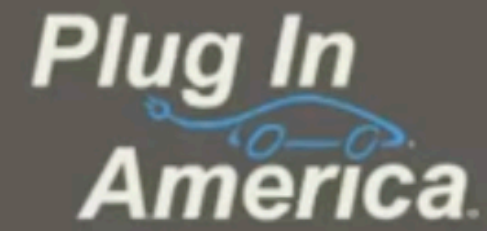
- Provided up to \$7,500 for the purchase of an electric vehicle
 - Battery electric vehicles (BEVs) were generally eligible for the full \$7,500
 - Plug-in hybrid vehicles (PHEVs) may have been eligible for less, depending on their battery size
- Each manufacturer can only sell up to 200,000 eligible vehicles under the previous credit
- Previous credit can only be claimed on a consumer's taxes for that year
- Now that the IRA is law, the previous credit no longer applies in the same way
 - Details on applicability and transition period will be provided



New EV Tax Credit

- Now called the “**Clean Vehicle Credit**” and includes plug-in electric vehicles and fuel cell vehicles
- **\$7,500 credit split into two equal parts which have different eligibility requirements:**
 - Critical minerals (\$3,750)
 - Battery components (\$3,750)
- **Vehicles must meet overall eligibility requirements to receive either half (or both halves) of the credit:**
 - MSRP caps
 - Final assembly provision
 - Income caps
- Eliminates manufacturer cap
- Applies to new purchased, financed and leased vehicles
- 2- and 3-wheel vehicles are **not** eligible
- One credit (up to \$7500) allowed per vehicle

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Vehicle Eligibility: Critical Minerals

If vehicles meet the following provision, they are eligible for **one half** of the \$7,500 credit

- \$3,750 credit for qualifying critical minerals sourcing
- **A minimum percentage of critical minerals must be extracted or processed in the US or [free trade partner countries](#) OR recycled in North America**
(percentage increases each year)
- *Critical minerals include, but are not limited to, lithium, graphite, nickel and cobalt*

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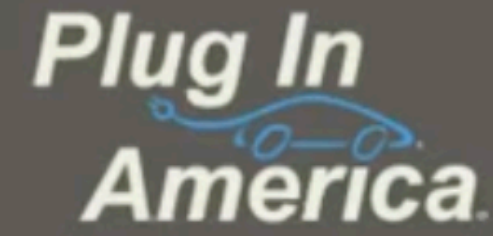


Vehicle Eligibility: **Battery Components**

If vehicles meet the following provision, they are eligible for the second half of the \$7,500 credit

- \$3,750 credit for qualifying battery components sourcing
- **A minimum percentage of battery components must be manufactured or assembled in North America** (percentage increases each year)
- *Think of this like a “Made in America” provision*

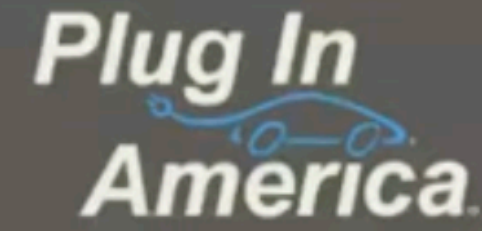
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Vehicle Eligibility: MSRP Caps

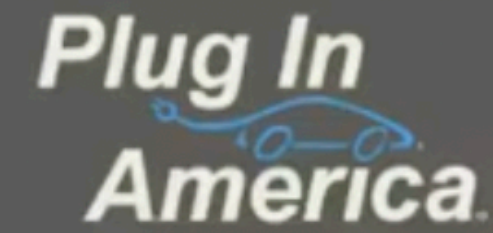
Eligible vehicles must fall at or below the following manufacturer's suggested retail price (MSRP) caps:

- **\$80,000** for vans, SUVs and pickup trucks
- **\$55,000** for other vehicles (including average sedans and other light-duty passenger vehicles)



Vehicle Eligibility: Other Provisions

- **Final assembly required to be in North America** (applies now that IRA is signed into law)
- No parts of the supply chain value can come from “foreign entities of concern” (includes China and Russia)
 - For critical minerals, ban on foreign entities of concern takes effect starting after December 31, 2024
 - For battery components, ban on foreign entities of concern takes effect after December 31, 2023



Consumer Eligibility

Eligible consumers must fall at or below the following **income caps** (determined by taxes for the applicable year):

- **\$300,000** for joint filers or surviving spouse
- **\$225,000** for head of household
- **\$150,000** for single filers (and others not included in joint filers or head of household)

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Federal IRA EV info

Married filing separately, \$12,950	7	Capital gain or (loss). Attach Schedule D if required. If not required, check here <input type="checkbox"/>	7	
• Married filing jointly or Qualifying surviving spouse, \$25,900	8	Other income from Schedule 1, line 10	8	
• Head of household, \$19,400	9	Add lines 1z, 2b, 3b, 4b, 5b, 6b, 7, and 8. This is your total income	9	
• If you checked any box under <i>Standard Deduction</i> , see instructions.	10	Adjustments to income from Schedule 1, line 26	10	
	11	Subtract line 10 from line 9. This is your adjusted gross income ←=====	11	
	12	Standard deduction or itemized deductions (from Schedule A)	12	
	13	Qualified business income deduction from Form 8995 or Form 8995-A	13	
	14	Add lines 12 and 13	14	
	15	Subtract line 14 from line 11. If zero or less, enter -0-. This is your taxable income	15	

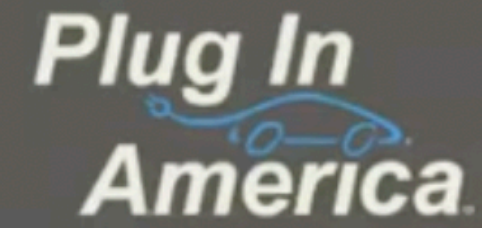
For Disclosure, Privacy Act, and Paperwork Reduction Act Notice, see separate instructions. Cat. No. 11320B Form **1040** (2022)

It is generally considered that those income levels are “adjusted gross income” or line 11 on the IRS 1040 form.

Federal IRA EV info

Form 1040 (2022)		Page 2		
Tax and Credits	16	Tax (see instructions). Check if any from Form(s): 1 <input type="checkbox"/> 8814 2 <input type="checkbox"/> 4972 3 <input type="checkbox"/> <input type="checkbox"/> . . .	16	
	17	Amount from Schedule 2, line 3	17	
	18	Add lines 16 and 17	18	
	19	Child tax credit or credit for other dependents from Schedule 8812	19	
	20	Amount from Schedule 3, line 8	20	
	21	Add lines 19 and 20	21	
	22	Subtract line 21 from line 18. If zero or less, enter -0-	22	
	23	Other taxes, including self-employment tax, from Schedule 2, line 21	23	
	24	Add lines 22 and 23. This is your total tax 	24	

In order receive the full \$7500 the amount of “total tax” or line 24 on the IRS 1040 form needs to be above \$7500.



Point of Purchase Option

- Consumers can transfer the credit to a registered dealer to apply the credit at point of purchase
 - Allows the credit to “take money off the hood”
- Dealer must make a payment of the full credit amount the vehicle and customer are eligible for to the consumer (in cash, in the form of a partial payment or down payment for the purchase of such vehicle)
- Transfer of credit is not allowed until 2024

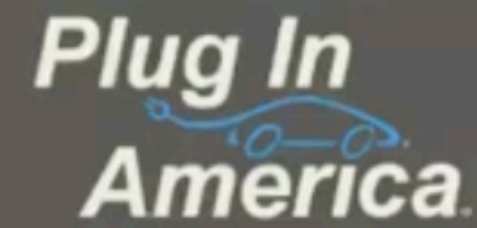
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New EV Tax Credit

	Overall Criteria	Sourcing Criteria	Credit Amount
Critical Minerals	<ul style="list-style-type: none">MSRP caps: \$80,000 for vans, SUVs and pickup trucks; \$55,000 for all other vehiclesIncome caps: \$300,000 for joint filers, \$225,000 for head of household, \$150,000 for single filers	Minimum percentage of critical minerals must be extracted or processed in the US or free trade partners OR recycled in North America	\$3750
Battery Components	<ul style="list-style-type: none">Final assembly must take place in North AmericaOne credit per vehicle	Minimum percentage of battery components must be manufactured or assembled in North America	\$3750

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Transition Period for 2022

While there is confusion on what will happen through the transition period, this is what we know so far, **through 2022:**

Previous \$7,500 EV tax credit is still available, with some caveats:

- **Final assembly provision applies** as of August 16, 2022; vehicles now must have final assembly in North America to be eligible for the credit
- **Manufacturer cap is still active.** Tesla and GM are not eligible and Toyota is expected to begin its phase out on October 1, 2022, which means that its vehicles would only be eligible for 50% of the credit beginning on that date
- MSRP and income caps do not apply yet
- Battery components and critical minerals provisions do not apply yet

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Transition Period for 2023

Starting in 2023:

- The new federal tax credit will be available for all manufacturers and eligible vehicles and consumers through 2032
 - Battery components and critical minerals provisions apply
 - MSRP and income caps apply
 - Final assembly provision applies
- *The used EV tax credit will also be available for eligible vehicles and consumers.*



Applicability Timeline

Previous EV tax credit available

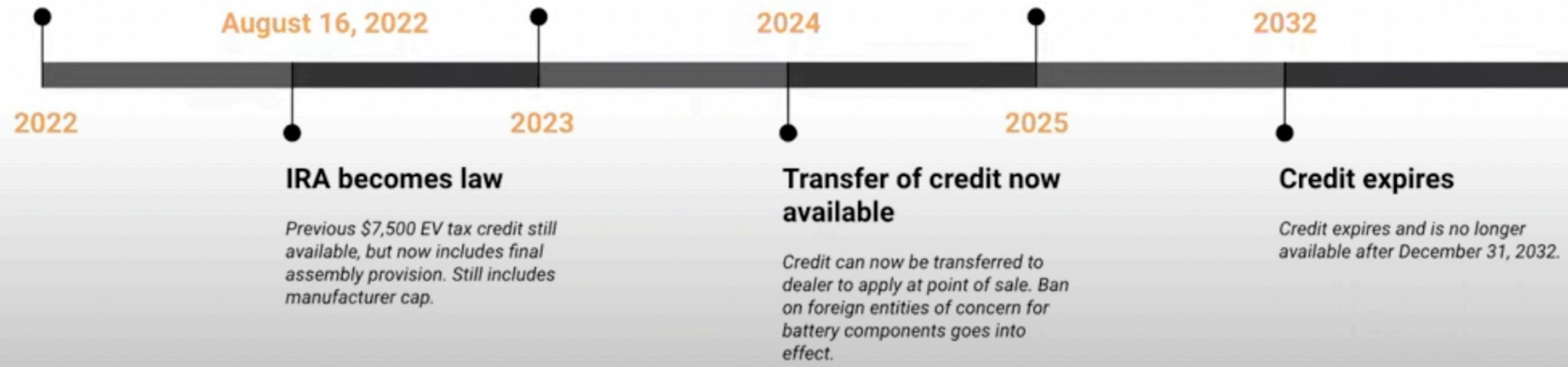
Previous \$7,500 EV tax credit including manufacturer cap. GM and Tesla are not eligible. Toyota in sunset period (only eligible for partial credit.)

New EV tax credit replaces previous tax credit

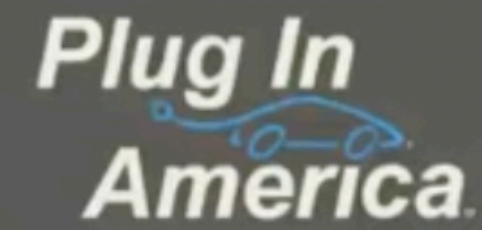
Critical minerals, battery components and final assembly provisions apply. MSRP and income caps apply. Manufacturer cap is eliminated.

Ban on foreign entities of concern for critical minerals now active

Ban on foreign entities of concern for critical minerals sourcing goes into effect.



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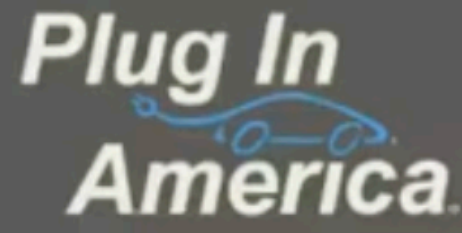


Overview

- Unprecedented tax credit for used vehicles that **provides either \$4000 or 30% of the sale price** of the eligible used vehicle (whichever is smaller)
- Used EV tax credit will be available in 2023
- Point of purchase “money off the hood” (transfer of credit) will be allowed after December 31, 2023
- Eligible consumers must fall at or below the income caps
- Vehicle must also meet additional price and sale requirements (details to come)

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Federal Used Car Credit



Used EV Tax Credit

Vehicle Requirements	Income Caps	Credit Amount
<ul style="list-style-type: none">● Vehicle must be at least 2 years old● Under \$25,000● Sold by a dealer● No additional sourcing requirements (eg. critical minerals, battery components, final assembly)	<p>Eligible consumers must fall at or below the income caps:</p> <ul style="list-style-type: none">● \$150,000 for joint return or surviving spouse● \$112,500 for head of household● \$75,000 for others	<p>\$4,000 or 30% of the price of the vehicle (whichever is less)</p>

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Federal EV Charger Credit



EVSE/EV Charger Credit

- The federal tax credit for charging equipment has been extended through 2032
- For individual/residential uses, the tax credit covers 30% (up to \$1,000 per unit) of the cost of the equipment
- For commercial uses, the tax credit covers 6% (up to \$100,000 per unit) of the cost of the equipment
- Bidirectional charging equipment is eligible
- 2 and 3 wheeled equipment is eligible
- Starting after 2022, equipment must be placed in a low-income community or non-urban area

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NOTE: expires on Dec 31, 2022.

If you're serious about an EV - consider buying a charger now.

Oooooops



Helpful tips and resources

Tips

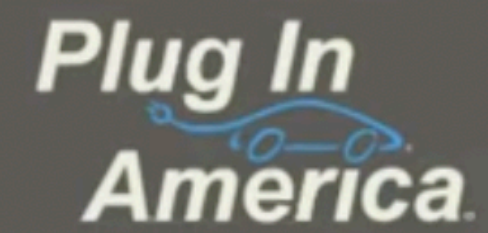
- **Confirmed information on eligible vehicles for the new credit is not yet available**
 - If you are planning purchasing decisions, the manufacturer is best source of information
- Manufacturers are racing to meet the new requirements, eligibility will likely change rapidly for each vehicle - keep checking!
- Configure your vehicle order to fall under MSRP caps
- Consider purchasing a charger for your home this year to ensure you can use the EV charger credit!

Resources

- **Federal resources**
 - Breakdown of the credit and transition period rules ([Internal Revenue Service](#))
 - List of vehicles with final assembly in North America ([Department of Energy](#))
 - VIN decoder for build location information ([Department of Energy](#))
- **Plug In America resources**
 - Visit [PlugStar.com](#) to find the right vehicle for you
 - Contact the [EV Support Program](#) with any questions

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Most of these links are on a download on the OLLI website



Potentially Eligible Vehicles

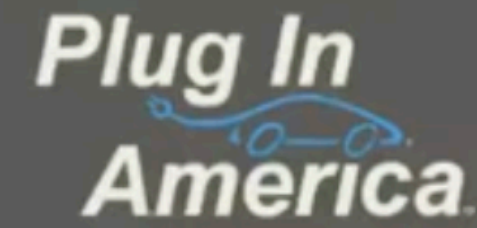
(Potentially) eligible in 2022	(Potentially) eligible in 2023	(Likely) not eligible
Nissan LEAF	Nissan LEAF	Audi E-Tron
Ford Mustang Mach-E	Ford Mustang Mach-E	Hyundai Ioniq
Rivian R1T	Ford F-150 Lightning	Fisker Ocean
Rivian R1S	Chevrolet Bolt EUV	Kia EV6
Lucid Air	Tesla Model 3	Subaru Solterra
Jeep Wrangler PHEV	Tesla Model Y	Toyota bZ4x
BMW 330e	Volkswagen ID.4	Jaguar I-Pace

Note: This is not a comprehensive or confirmed list. Plug In America does not guarantee its accuracy or that what we have shared will ensure a consumer or vehicle will be eligible for any tax benefit.

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Basically a good list - but it is best to check the federal website for model listing and then check the VIN

Most of these links are on a download on the OLLI website



Potentially Eligible Vehicles

- **Eligible vehicles are still being confirmed, especially for 2023 and beyond**
- For potentially eligible vehicles through 2022, refer to the [Department of Energy](#) list of vehicles with final assembly in North America
- For potentially eligible vehicles beyond 2022, refer to this [Consumer Reports](#) list on current and upcoming EVs with final assembly in North America that fall below the MSRP caps
 - *Does not include which vehicles will meet the battery components and critical minerals requirements*

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The Consumer Reports link is too old and of little to no use.

Links that are still useful are included on the Illinois Rebate PDF.

Federal IRA EV info

Critical Minerals: To be eligible for the \$3,750 critical minerals portion of the tax credit, the percentage of the value of the battery's critical minerals that are extracted or processed in the United States or a U.S. free-trade agreement partner or recycled in North America, must increase according to the following schedule:

Year	Critical minerals minimum percent value requirement
2023	40%
2024	50%
2025	60%
2026	70%
2027 and later	80%

The phasing in of the minerals and battery components was not in the Plug In America presentation. Added from a different source.

Federal IRA EV info

Battery Components: To be eligible for the \$3,750 battery components portion of the tax credit, the percentage of the value of the battery's components that are manufactured or assembled in North America must increase according to the following schedule:

Year	Battery components minimum percent value requirement
2023	50%
2024 and 2025	60%
2026	70%
2027	80%
2028	90%
2029 and later	100%

The phasing in of the minerals and battery components was not in the Plug In America presentation. Added from a different source.

List of eligible cars as of May 7, 2023

Federal IRA EV info

	Blazer	2024	EV	\$7,500	\$80,000	✓
	Bolt	2022-2023	EV	\$7,500	\$55,000	✓
	Bolt EUV	2022-2023	EV	\$7,500	\$55,000	✓
	Equinox	2024	EV	\$7,500	\$80,000	✓
	Silverado	2024	EV	\$7,500	\$80,000	✓
Chrysler						
	Pacifica PHEV	2022-2023	PHEV	\$7,500	\$80,000	✓
Ford						
	E-Transit	2022-2023	EV	\$3,750	\$80,000	✓
	Escape Plug-in Hybrid	2022-2023	PHEV	\$3,750	\$80,000	✓

The dollar amount listed (e.g. \$80,000) is the price you must stay under in order to receive tax credit. Tax credit can be lost by adding to many options.

List of eligible cars as of May 7, 2023





Federal IRA EV info

	F-150 Lightning (Extended Range Battery)	2022-2023	EV	\$7,500	\$80,000	✓
	F-150 Lightning (Standard Range Battery)	2022-2023	EV	\$7,500	\$80,000	✓
	Mustang Mach-E (Extended Range Battery)	2022-2023	EV	\$3,750	\$80,000	✓
	Mustang Mach-E (Standard Range Battery)	2022-2023	EV	\$3,750	\$80,000	✓
Jeep						
	Grand Cherokee PHEV 4xe	2022-2023	PHEV	\$3,750	\$80,000	✓
	Wrangler PHEV 4xe	2022-2023	PHEV	\$3,750	\$80,000	✓
Lincoln						
	Aviator Grand Touring	2022-2023	PHEV	\$7,500	\$80,000	✓
	Corsair Grand Touring	2022-2023	PHEV	\$3,750	\$80,000	✓

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List of eligible cars as of May 7, 2023

Federal IRA EV info

Rivian						
	R1S	2023	EV	\$3,750	\$80,000	✓
	R1T	2023	EV	\$3,750	\$80,000	✓
Tesla						
	Model 3 Long Range All-Wheel Drive	2023	EV	\$3,750	\$55,000	✓
	Model 3 Performance	2022-2023	EV	\$7,500	\$55,000	✓
	Model 3 Standard Range Rear Wheel Drive	2022-2023	EV	\$3,750	\$55,000	✓
	Model Y All-Wheel Drive	2022-2023	EV	\$7,500	\$80,000	✓
	Model Y Long Range All-Wheel Drive	2022-2023	EV	\$7,500	\$80,000	✓
	Model Y Performance	2022-2023	EV	\$7,500	\$80,000	✓

The dollar amount listed (e.g. \$80,000) is the price you must stay under in order to receive tax credit. Tax credit can be lost by adding to many options.

List of eligible cars as of May 7, 2023

Federal IRA EV info

Volkswagen						
	ID.4 AWD PRO	2023	EV	\$7,500	\$80,000	✓
	ID.4 AWD PRO S	2023	EV	\$7,500	\$80,000	✓
	ID.4 AWD PRO S PLUS	2023	EV	\$7,500	\$80,000	✓
	ID.4 PRO	2023	EV	\$7,500	\$80,000	✓
	ID.4 PRO S	2023	EV	\$7,500	\$80,000	✓
	ID.4 PRO S PLUS	2023	EV	\$7,500	\$80,000	✓
	ID.4 S	2023	EV	\$7,500	\$80,000	✓
	ID.4 STANDARD	2023	EV	\$7,500	\$80,000	✓

The dollar amount listed (e.g. \$80,000) is the price you must stay under in order to receive tax credit. Tax credit can be lost by adding to many options.

End of session.

Session 4 : Range

Talking Points



Inductive (commonly Wireless) charger is apparently cost effective for buses, keeping them on the route longer.

Also some possibilities at taxi stands.

Session 4 : Range



Talking Points

Inductive
(commonly called
Wireless) charging
for cars would
probably not get
approval on UI
campus due to trip
hazard.



Inductive (commonly Wireless) charging for cars at home. Costly installation. I was surprised that energy loss is about the same as plugin charging.



Inductive (commonly Wireless) charging for highways. A nice idea but maintaining roads is already costly and time consuming without this.

Talking Points

This 100% solar community endured Hurricane Ian with no loss of power and minimal damage

Rachel Ramirez



A hurricane kills your power. How do you charge your electric vehicle? FPL has a solution.



Two changes in Florida in response to hurricanes

Session 4 : Range

Talking Points

Disney World now lets you charge your EV faster than you can get through one roller-coaster ride

Peter Johnson



Disney World is stepping up its efforts to assist the growing population of EV drivers on the road today with new charging solutions that will easily “fill up” your ride quicker than you can get through one roller coaster at the park.

What’s wrong with this picture ?

Well it says it in the headline.

Actually its not a Disney world - its at Disney Springs, tent in the background is Cirque du Soleil

Session 4 : Range

Talking Points

TRANSPORTATION • EDITORS' PICK

The Future Of EV Charging May Be At 50KW, Not The 'Gasoline Thinking' of 250KW

Brad Templeton Senior Contributor 

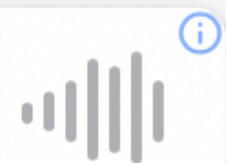
I cover robocar technology & previously worked on Google's car team.

Follow

Jul 9, 2020, 08:00am EDT



Listen to article 13 minutes



 This article is more than 2 years old.

This is SOOOO wrong

There is no way the person writing this ever charged an EV on a trip.

Session 4 : Range

Talking Points

Placebo on Wheels: AAA Charging Trucks Seek to Remedy EV Range Anxiety, Prove Mostly Unneeded

Published: Aug 15, 2016



EV Out Of Juice? AAA's Mobile Charger Will Come To The Rescue

AAA's solution for dead electric vehicles? A Ford F-350 with a generator

by Michael Gauthier

April 6, 2023 at 18:02



AAA first had a mobile recess charger in 2016 - which I believe failed.
They are starting the service up again.

Session 4 : Range

SparkCharge's Currently Enables Affordable Mobile Fast Charging For The Masses

By Kyle Field • 3 mins ago



Talking Points

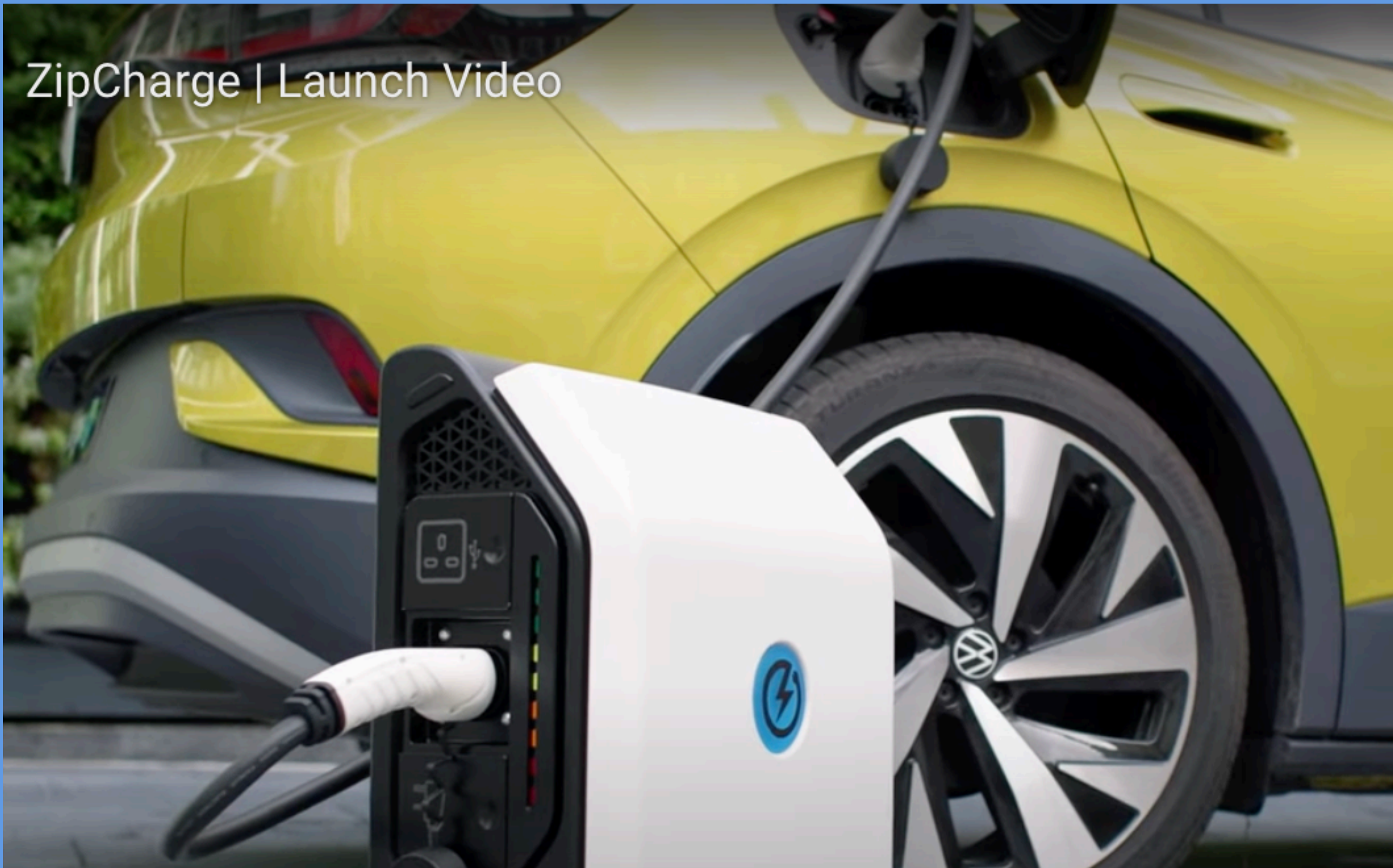
May have started as a rescue service and changed to subscription where there are few chargers.

Article says affordable, but seems expensive to me. Mostly a subscription service. I'm not aware of any highway service.

SparkCharge monthly fee about \$25 plus \$6 per delivery. Up to 50 miles max. Maybe nice for apartments and work locations.

Session 4 : Range

Talking Points



**ZipCharge GO -
Gives you 25 miles.
\$2000 or \$70 a month
50 pounds**

**How much would you
pay ?**

The end for now.