SPOTLIGHT ON ELECTRIC VEHICLES



arlier this month, the Biden administration proposed the nation's most ambitious climate regulations to date, including plans designed to ensure two-thirds of new passenger cars and a quarter of new heavy trucks sold in the United States will be all-electric by 2032.

If these rules from the Environmental Protection Agency are enacted as proposed, they will put the world's largest economy on track to slash its planet-warming emissions at the pace that many scientists say is required of all nations in order to avert the most devastating impacts of climate change.

This, combined with an already continuous surge in popularity of EV cars, has led to a need for not only more auto manufacturing, but a distinct need for more charging infrastructure.

To explore some of the ramifications and challenges of this significant shift, we have compiled a collection of articles exploring the information consumers need to know about infrastructure, tax breaks, charging rules and information about purchasing cars and chargers...here in California and beyond.

California Moves to Accelerate to 100% New Zero-Emission Vehicle Sales by 2035

the California Air Resources Board earlier this year approved the trailblazing Advanced Clean Cars II rule that sets California on a path to rapidly growing the zero-emission car, pickup truck and SUV market and deliver cleaner air and massive reductions in climate-warming pollution.

The rule establishes a year-by-year roadmap so that by 2035 100% of new cars and light trucks sold in California will be zero-emission vehicles, including plug-in hybrid electric vehicles. The regulation realizes and codifies the light-duty vehicle goals set out in Governor Newsom's Executive Order N-79-20.

"Once again California is leading the nation and the world with a regulation that sets ambitious but achievable targets for ZEV sales. Rapidly accelerating the number of ZEVs on our roads and highways will deliver substantial emission and pollution reductions to all Californians, especially for those who live near roadways and suffer from persistent air pollution," said CARB Chair Liane Randolph. "The regulation includes ground-breaking strategies to bring ZEVs to more communities and is supported by the Governor's ZEV budget which provides incentives to make ZEVs

available to the widest number of economic groups in California, including low- and moderate-income consumers."

Many states and nations have set targets and goals to phase out the sale of internal combustion cars. California's is the most aggressive regulation to establish a definitive mechanism to meet required zero-emission vehicle (ZEV) sales that ramp up year over year, culminating in 100% ZEV sales in 2035. The timeline is ambitious but achievable: by the time a child born this year is ready to enter middle school, only zero-emission vehicles or a limited number of plug-in hybrids (PHEVs) will be offered for sale new in California. The regulation also includes provisions that enhance equity in the transition to zero-emission vehicles and provides consumers certainty about the long-term emission benefits, quality, and durability of these clean cars and trucks and the batteries they run on.

CLEAN AIR AND CLIMATE BENEFITS

Transportation is the single largest source of global warming emissions and air pollution in the state. This nation-leading regulation slashes emissions from cars and light trucks.

By 2037, the regulation delivers a 25% reduction in smog-causing pollution from light-duty vehicles to meet federal air quality standards. This benefits all Californians but especially the state's most environmentally and economically burdened communities along freeways and other heavily traveled thoroughfares. From 2026 through 2040 the regulation will result in cumulative avoided health impacts worth nearly \$13 billion including 1,290 fewer cardiopulmonary deaths, 460 fewer hospital admissions for cardiovascular or respiratory illness, and 650 fewer emergency room visits for asthma.

The regulation delivers multiple benefits that grow year by year. By 2030, there will be 2.9 million fewer new gas-powered vehicles sold, rising to 9.5 million fewer conventional vehicles by 2035. In 2040, greenhouse gas emissions from cars, pickups, and SUVs are cut in half, and from 2026 through 2040 the regulation cuts climate warming pollution from those vehicles a cumulative total of 395 million metric tons. That is equivalent to avoiding the greenhouse gases produced from the combustion of 915 million barrels of petroleum.

ELIGIBILITY AND CREDITS

The regulation applies to automakers (not dealers) and covers only new vehicle sales. Itdoes not impact existing vehicles on the road today, which will still be legal to own and drive.

Plug-in hybrid, full battery-electric and hydrogen fuel cell vehicles count toward an automaker's requirement. PHEVs must have an all-electric range of at least 50 miles under real-world driving conditions. In addition, automakers will be allowed to meet no more than 20% of their overall ZEV requirement with PHEVs.

Battery-electric and fuel cell vehicles will need a minimum range of 150 miles to qualify under the program, include fast-charging ability and come equipped with a charging cord to facilitate charging, and meet new warranty and durability requirements.

CARB's mission is to promote and protect public health, welfare, and ecological resources through effective reduction of air pollutants while recognizing and considering effects on the economy. CARB is the lead agency for climate change programs and oversees all air pollution control efforts in California to attain and maintain health-based air quality standards. Learn more at arb.ca.gov.

EV Infrastructure Creates a "Buy America" Opportunity

By MICHAEL BATTAGLIA

The White House recently implemented rules for various federal funding opportunities requiring companies to be Buy America compliant. This offers a major opportunity for the EV charging industry. The Buy America standards require that all steel and iron incorporated into a project must be produced in the United States. The assembly and manufacturing processes of certain products, including EV chargers, must also be done in the United States.

These requirements aim to not only promote US job growth, but also to ensure that industry supply chains are secure and stable. Supply chain concerns frequently were front page news during the COVID-19 pandemic when the cost and time to produce products skyrocketed. For supply chain resiliency, it is critical that these Buy America requirements are upheld for federal infrastructure projects such as the National Electric Vehicle Infrastructure (NEVI) Program that is being implemented this year across the country to build out our nation's EV charging infrastructure.

President Biden has set a goal of deploying a national network of 500,000 EV chargers along America's highways and transitioning new car sales to 50% EVs by 2030. To support this goal, his Administration has announced the Bipartisan Infrastructure Law that invests \$7.5 billion towards an EV charging infrastructure, \$10 billion in clean transportation and over \$7 billion in EV battery components, critical minerals and materials.

As the EV industry sees significant growth, this is the perfect opportunity for the Buy America concept to be put into practice. Well-paying manufacturing and installation jobs in the EV charging industry will help the United States reach net-zero emissions by 2050, and Buy America requirements will help ensure that they stay here.



WHY DOES THIS MATTER?

With Buy America compliance, a company is effectively investing its money and time into communities across the US, which creates jobs and drives economic growth for the surrounding areas for years to come. Investing in our national infrastructure, as well as in American companies, means that our citizens continue to benefit from the investment the federal government makes with taxpayer dollars.

Blink Charging (Blink), as an example, is a Buy America compliant EV charging company that follows the standards set by the federal government. This means:

• US-Based Manufacturing

Employing more than 250 people around the US, Blink manufactures EV charging stations and has deployed more than 66,000 chargers in 27 countries. Many of these chargers are man-

ufactured here in the United States at Blink's Bowie, Maryland facility, about 30 minutes outside of Annapolis. Blink assembles state-of-the-art Level 2 home and commercial EV chargers and employs more than 50 individuals in Maryland.

• Testing and Research

Blink conducts testing and configuration of its EV chargers in its 24,000 sq. ft. facility in Tempe, Arizona. While testing and configuration is not a requirement for Buy America compliance, Blink tests over 150 products daily. The Tempe facility is also home to a team that conducts technical and customer support services for chargers nationwide, ensuring that made-in-America products can also be serviced by a stateside workforce in a timely manner.

• Component Materials and Labor
In addition to manufacturing and testing in

the US, Blink sources materials for charger components from US-based companies. The steel and iron incorporated into any charger manufactured in the US is also produced in the US. By sourcing locally, Blink is supporting domestic industries and job creation across the country.

Buy America standards promote domestic economic growth and encourage companies to keep and grow their businesses at home. Blink is proud to play a part in revitalizing American manufacturing, help fulfil the nation's need for EV charging infrastructure, and contribute to the growing clean energy economy.

Michael Battaglia is chief revenue officer at Blink Charging, a global leading manufacturer, owner, operator and provider of electric vehicle (EV) charging equipment and services. Learn more at blinkcharging.com.

ELECTRIC VEHICLES

Clean Vehicles Purchased in 2023 or After May Qualify for Tax Credit

If you place in service a new plug-in electric vehicle (EV) or fuel cell vehicle (FCV) in 2023 or after, you may qualify for a clean vehicle tax credit.

HO QUALIFIES

You may qualify for a credit up to \$7,500 under Internal Revenue Code Section 30D if you buy a new, qualified plug-in EV or fuel cell electric vehicle (FCV). The Inflation Reduction Act of 2022 changed the rules for this credit for vehicles purchased from 2023 to 2032.

The credit is available to individuals and their businesses.

To qualify, you must:

- Buy it for your own use, not for resale
- Use it primarily in the US

In addition, your modified adjusted gross income (AGI) may not exceed:

- \$300,000 for married couples
- \$225,000 for heads of households
- \$150,000 for all other filers

You can use your modified AGI from the year you take delivery of the vehicle or the

year before, whichever is less. If your modified AGI is below the threshold in one of the two years, you can claim the credit.

The credit is nonrefundable, so you can't get back more on the credit than you owe in taxes. You can't apply any excess credit to future tax years.

CREDIT AMOUNT

The amount of the credit depends on when you placed the vehicle in service (took delivery), regardless of purchase date.

For vehicles placed in service January 1 to April 17, 2023:

- \$2,500 base amount
- Plus \$417 for a vehicle with at least 7 kilowatt hours of battery capacity
- Plus \$417 for each kilowatt hour of battery capacity beyond 5 kilowatt hours
 - Up to \$7,500 total

In general, the minimum credit will be \$3,751 (\$2,500 + 3 times \$417), the credit amount for a vehicle with the minimum 7 kilowatt hours of battery capacity.

For vehicles placed in service April 18, 2023

Vehicles will have to meet all of the same criteria listed above, plus meet new critical mineral and battery component requirements for a credit up to:

• \$3,750 if the vehicle meets the critical

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minerals requirement only

- \$3,750 if the vehicle meets the battery components requirement only
 - \$7,500 if the vehicle meets both

A vehicle that doesn't meet either requirement will not be eligible for a credit.

QUALIFIED VEHICLES

To qualify, a vehicle must:

- Have a battery capacity of at least 7 kilowatt hours
- Have a gross vehicle weight rating of less than 14,000 pounds
 - Be made by a qualified manufacturer.

(FCVs do not need to be made by a qualified manufacturer to be eligible.)

- Undergo final assembly in North America
- Meet critical mineral and battery component requirements (as of April 18, 2023).

The sale qualifies only if:

- You buy the vehicle new
- The seller reports required information to you at the time of sale and to the IRS. Sellers are required to report your name and taxpayer identification number to the IRS for you to be eligible to claim the credit.

In addition, the vehicle's manufacturer suggested retail price (MSRP) can't exceed:

- \$80,000 for vans, sport utility vehicles and pickup trucks
 - \$55,000 for other vehicles

MSRP is the retail price of the automobile suggested by the manufacturer, including manufacturer installed options, accessories and trim but excluding destination fees. It isn't necessarily the price you pay.

You can find your vehicle's weight, battery capacity, final assembly location (listed as "final assembly point") and VIN on the vehicle's window sticker.

Learn more at irs.gov.



New National Standards Emerge for EV Charging Networks

arlier this year, the Biden-Harris Administration announced its latest set of actions aimed at creating a convenient, reliable and Made-in-America electric vehicle (EV) charging network so that the great American road trip can be electrified. These steps are designed to help the United States meet President Biden's ambitious goals to confront the climate crisis, by building a national network of 500,000 electric vehicle chargers along America's highways and in our communities and have EVs make up at least 50% of new car sales by 2030, all while advancing an industrial strategy to continue to build-out the domestic EV and EV charging industry. The path to net-zero emissions by 2050 is creating good-paying manufacturing and installation jobs on the way.

President Biden's Bipartisan Infrastructure Law invests \$7.5 billion in EV charging, \$10 billion in clean transportation, and over \$7 billion in EV battery components, critical minerals, and materials. These flagship programs complement the Inflation Reduction Act's landmark support for advanced batteries and new and expanded tax credits for purchases of EVs and to support installations of charging infrastructure, as well as dozens of other federal initiatives designed to drive domestic manufacturing and build a national network of EV charging. The result is that the future of American transportation is on track to be cleaner, safer, more affordable, and more reliable than ever before. These announcements are a further demonstration of the President's industrial strategy, ensuring that the clean energy transition is powered by American manufacturing and good-paying

Because of this record federal investment, EV sales have tripled and the number of publicly available charging ports has grown by at least 40% since President Biden took office.



There are now more than three million EVs on the road and over 130,000 public chargers across the country. Further accelerating the buildout of a convenient, reliable charging network is critically important to make electric vehicle charging a seamless experience. Charging companies are announcing new commitments to expand their networks by thousands of public charging ports in the next two years, using private funds to complement federal dollars and putting the nation's EV charging goals even closer within reach.

The Department of Transportation, in

partnership with the Department of Energy, finalized new standards to make charging EVs convenient and reliable for all Americans, including when driving long distances. The new standards will ensure everyone can use the network – no matter what car you drive or which state you charge in. The standards also require strong workforce standards.

The Federal Highway Administration (FHWA) outlined its final plan for compliance with the Build America, Buy America Act for federally funded EV chargers. Effective immediately, all EV chargers funded through

the Bipartisan Infrastructure Law must be built in the United States. The plan requires that, effective immediately, final assembly and all manufacturing processes for any iron or steel charger enclosures or housing occur in the United States. By July 2024, at least 55 percent of the cost of all components will need to be manufactured domestically as well.

The new Joint Office of Energy and Transportation released a notice of intent to issue a funding opportunity for its Ride and Drive Electric research and development program. This program will advance the goal of building a national network of EV chargers for all Americans by supporting EV charging reliability, resiliency, equity, and workforce development;

The Department of Energy also announced \$7.4 million in funding for seven projects to develop innovative medium-and heavy-duty EV charging and hydrogen corridor infrastructure plans serving millions of Americans across 23 states.

FHWA announced details for its soon-to-launch Charging and Fueling Infrastructure (CFI) discretionary grant program. The program will make available more than \$2.5 billion over five years – including \$700 million in funding through the first round of funding available to states, localities, Tribes, territories, and public authorities – to deploy publicly accessible charging and alternative fueling infrastructure in communities across the country, including at schools, grocery stores, parks, libraries, apartment complexes, and everywhere else Americans live and work.

These announcements build on the well over \$100 billion that the private sector has invested in electric vehicle, battery, and EV charging manufacturing in the United States to date

Learn more at driveelectric.gov.

New Loan Option Offers Financing for Residential Electric Vehicle Chargers

his past February, Bank of America announced that it will offer consumers the option of financing their residential electric vehicle chargers alongside their auto loans. Based on growing client demand for streamlined solutions that make driving an electric car easier and more convenient, Bank of America now offers dealers and manufacturers the option of letting consumers finance the chargers as well as the cars.

Demand for the charging units, by which drivers charge their cars at home, is expected to grow in the US to nearly 27.5 million by 2030, up from just 1.3 million in 2021. At-home charging stations range in price from \$200 to \$2,000 in the US.

"We aim to help people 'go electric' by providing financing for this critical accessory, which allows clients to charge their vehicles in their own homes and at convenient times," said Fabien Thierry, head of consumer vehicle products for Bank of America.

The Inflation Reduction Act, signed into law in August 2022, "provided a significant

investment in clean energy and transportation technologies, including a broad array of EV incentives, and is expected to accelerate consumer demand," Thierry added. Electric vehicles (EV) on US roads are expected reach 26.4 million by 2030, substantially higher than the 2.4 million at the end of 2021.

Bank of America works with over 10,000 dealers and multiple EV manufacturers nationwide. Clients interested in financing the cost of their electric vehicle chargers should check with their dealer to see if this option is available.

Bank of America itself has set tangible sustainable finance goals and has made measurable progress towards them. In 2021, the bank set a goal to achieve net-zero greenhouse gas emissions in financing activities, operations and supply chain before 2050. As part of the company's commitment to deploy \$1.5 trillion in sustainable finance by 2030, the Bank mobilized and deployed approximately \$250 billion of capital aligned with the United Nations Sustainability Development Goals

'We aim to help people 'go electric'
by providing financing for this
critical accessory, which allows
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(UN SDGs) in 2021.

This financing initiative is the latest in a series of actions the Bank has taken to facilitate the transition to electric cars:

• In partnership with Electrify America, BofA plans to more than double the number of financial centers equipped with electric-vehicle (EV) charging stations by the end of 2023. (May 2022)

- BofA provides eligible teammates \$4,000 for a purchase or \$2,000 for a lease of a qualified new all-electric passenger car or truck. (July 2022)
- Created Lucid Financial Services with Lucid Group to provide a quick and easy digital financing to Lucid Air customers. (June 2022)
- Executed an agreement with Polestar Automotive USA Inc., the electric performance car brand from Sweden, to support the establishment of Polestar Financial Services, which provides a variety of consumer finance and lease offerings for Polestar customers.
- Celebrated World EV Day (September 9th) in 2021 and 2022 through EVolution, a public "virtual convention center" showcasing vehicles from various EV manufacturers, technology advancements and exclusive interviews with key industry leaders.

Learn more at bankofamerica.com.