THIRD WAY

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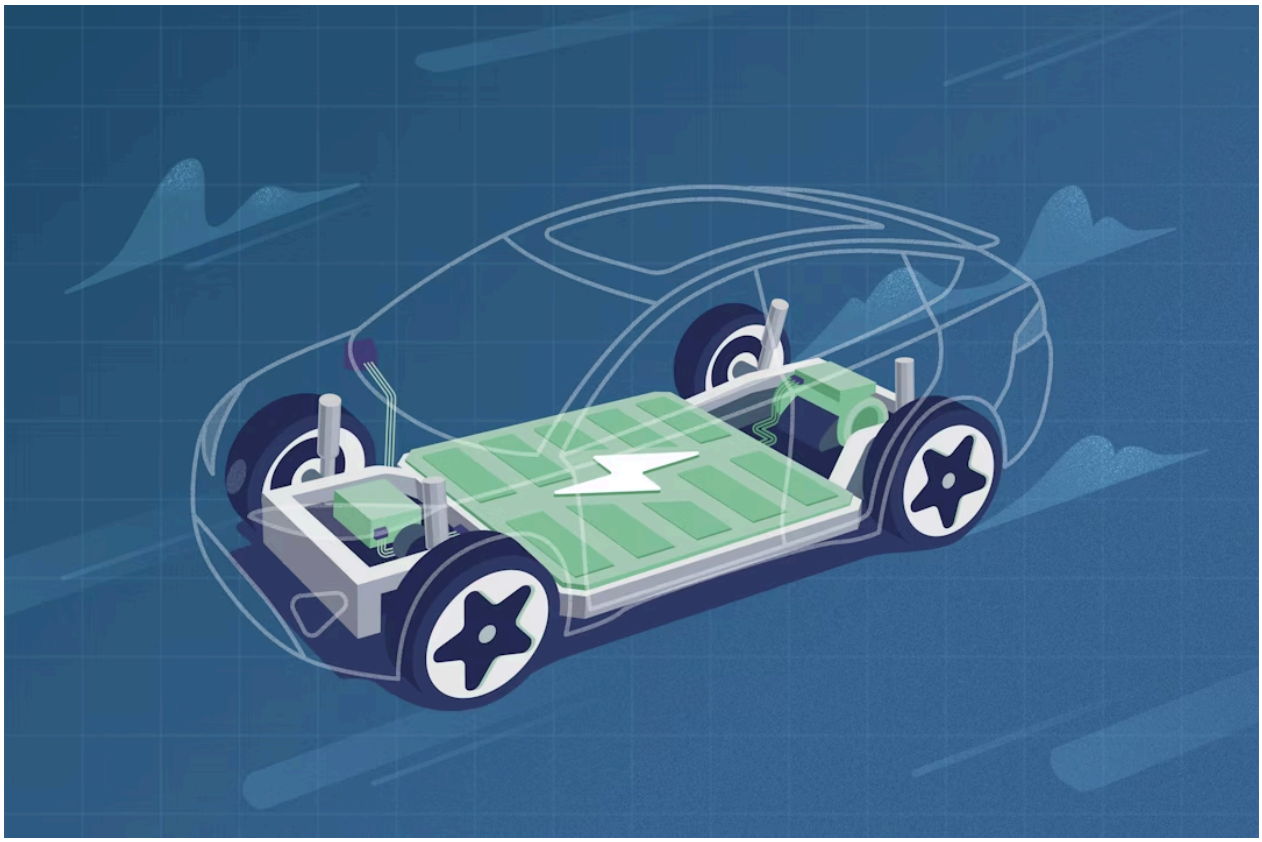
Recharging America's Electric Vehicle Strategy to Leapfrog China



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Takeaways

- The impending loss of the electric vehicle (EV) tax credits and other supportive policies risk putting the US auto industry at a global disadvantage—but also offers us an opportunity to reframe our EV policy around innovation and making the US a leader on the development and manufacture of the next generation of EVs and batteries.
- The US should execute a two-pronged strategy for becoming a global EV leader: First, we need to make the right investments to become world's leading innovator and manufacturer of battery technologies. Second, we need to use strategic partnerships to take back control of the supply chain.
- Absent federal leadership, there are actions state governments and industry can take now to get us on the path to competing with, and ultimately leapfrogging, China and other global competitors.

An Industry, If You Can Keep It

During the Biden Administration, Democrats helped launch a manufacturing renaissance around building a domestic industry for electric vehicles (EVs), enacting tax credits and other policies to grow a market for clean vehicles and help our auto industry and workforce remain globally competitive. However, implementation of these policies took too long and often came with too many strings attached. We also failed to make a compelling case with voters for the economic and security importance of these policies, nor did we make the benefits of these policies visible to the American people beyond those with the means to buy a new car. As a result, Democrats came off as out-of-touch with Americans who could not afford or did not want an EV, and when Republicans swept into office in January 2025, they quickly got to work dismantling nearly all these policies.

At a time when the barriers to EV adoption are still high, the loss of these supportive policies poses an existential threat to the US auto industry and, by extension, the US manufacturing sector. As global demand for EVs continues to rise, we need to figure out how to compete in this market successfully, or we'll be left in the dust and domestic companies and workers will suffer. So where do we go from here?

There are two dominant schools of thought on EVs in Washington now. One, the conventional Democratic position, is that Biden-era policy was good enough and Democrats should be focused on

restoring that status quo to protect America's auto industry. The other, the typical Republican position, suggests China is simply too far ahead on EVs and therefore the US should give up, letting China remain the global standard-bearer on EVs and battery development.

Below, we present an alternate frame: yes, China is too far ahead for us to compete on this generation of EVs. But that doesn't mean the US should capitulate. Instead, the US should focus on its long-standing competitive edge in science and technology and look to leapfrog the competition, focusing on developing and scaling next-generation solutions that offset China's current advantage and put us ahead of the curve on EVs.

A Two-Pronged Strategy for Becoming a Global EV Leader

To regain our competitive edge, the US needs to focus on a two-pronged strategy of reclaiming our title as the world's innovator and taking back control of the supply chain. Below, we provide recommendations for reorienting federal EV policy around this strategy. Democrats should champion these ideas as tools for beating China on EVs and making sure auto and battery jobs are created here, not overseas. While some of these policies could get bipartisan support at the federal level, we also recommend actions state governments and industry can take right now in the absence of federal leadership.

Reclaiming our title as the world's innovator

The Problem: The US used to be a leader in innovation, including on battery technologies: some of the most critical early inventions underpinning the lithium-ion battery were made at US firms and universities. [1] But due to a lack of support in the US for innovation beyond early R&D in the 1980's and 90's, these inventions ended up in countries that were willing to take big bets on new technologies and put real money behind them—Japan in the case of the lithium-ion battery, and China in the case of lithium-iron-phosphate (LFP) batteries. China now leads the manufacture of battery technologies that we invented and has a possibly insurmountable lead on the current generation of EVs running on these batteries. This is a gigantic missed opportunity for the US: the global market for lithium-ion batteries is currently valued at over $100 billion and is expected to reach nearly $300 billion by the end of the decade, with LFP batteries accounting for more and more of that market.

The Solution: We can't just keep chasing China on today's batteries: they are too far ahead of us, and we may never be able to compete with China on this generation of EVs. Instead, the US should go big on developing the next generation of battery chemistries that perform better and cost less than today's—and we must provide continued support across the full innovation lifecycle, from early-stage R&D through to pilot-scale production and ultimately commercialization. Innovation and scaling are both key to unlocking cost-effective battery manufacturing. This support should be made available for

new lithium-ion chemistries as well as alternatives to lithium-ion that can achieve longer range, faster charging, and scalability in manufacturing.

Congress should establish a Next-Generation Battery Prize to provide cash awards to companies that develop and validate new chemistries that leapfrog current technologies on performance and cost. Batteries eligible for prize funding would need to meet ambitious performance targets for energy density, charging speed, and cost, with bonus awards provided for batteries that don't require sourcing materials from China. In addition to prize funding, these companies should be prioritized for usage of pilot lines at the National Labs and other federal support so they can scale their inventions rapidly. Prizes should come with rigorous IP leakage protections to ensure technologies that are invented here, stay here.

States should fund their universities to establish or expand their materials science programs, which produce foundational research that leads to breakthroughs in battery technologies. The University of Texas at Austin, for example, houses the Texas Materials Institute which has achieved recent breakthroughs on low-cost sodium batteries; researchers at the Georgia Institute of Technologies' Institute for Materials has worked with Korean company SK Innovation on solid-state batteries and have seen promise in sodium-ion and potassium-ion battery chemistries.

Industry should continue finding opportunities to enter joint R&D ventures with South Korean, Japanese, and other countries' companies that are currently outpacing us, with a focus on technology transfer so we can gain knowledge and produce next-generation batteries here in the US. These efforts can be modeled after successful partnerships like GM and Korean battery company LG Energy Solution, which brought together LG's expertise in battery cell development and GM's Ultium platform architecture to establish the joint venture Ultium Cells; they are now working together to develop lithium manganese-rich (LMR) batteries, which rely on cheaper and more abundant materials than their current nickel-cobalt-manganese-aluminum (NCMA) batteries. Companies should also continue partnering with universities and the National Labs on R&D, with a bias towards getting new chemistries into pilot scale quickly.

Taking back control of the supply chain

The Problem: China invested heavily over many years in gaining ownership and control over the battery supply chain, particularly raw materials (upstream) and cathode and anode active materials and precursors (mid-stream). They are now weaponizing this control, including by limiting exports of materials needed for national defense and by manipulating the price of raw materials to make it uneconomic for American companies to invest in domestic production. Even as we onshore newer, cheaper chemistries like lithium-ion-phosphate (LFP), our continued reliance on Chinese cathode active materials will make it extremely difficult to compete with Chinese LFP batteries on cost.

The Solution: To combat Chinese market manipulation, we need a full-court press to onshore and friend-shore the battery supply chain, focused on ensuring American dominance over the raw and processed materials needed for the next generation of batteries. The US has engaged in a decades-long and often bipartisan effort to weaken OPEC's ability to set oil prices by boosting domestic oil and gas production: it's time to do the same for the critical materials we rely on now. The good news is that some promising chemistries, like sodium-ion, use raw materials that the US already produces in abundance. For others, we'll need to turn to our allies and trading partners, with many of the necessary trade frameworks already in place or in development.

Congress should codify and provide funding for the Minerals Security Partnership to finance critical mineral processing and recycling infrastructure, with a goal of securing the supply of raw and processed materials needed for new battery chemistries being developed in the US. [2] They should also authorize and provide appropriations through the Defense Production Act for the Department of Defense to continue taking equity stakes in critical mineral and rare earth companies to ensure a strong demand signal and help them compete with Chinese-backed enterprises. To build out the 'missing midstream,' Congress should expand the Advanced Technology Vehicles Manufacturing (ATVM) loan program at the Department of Energy to finance facilities producing anode and cathode active materials and precursors; they should also enable DOE to use innovative financing mechanisms, such as contracts for differences or advanced market commitments, to support domestic projects. [3]

States should develop place-based strategies for building or expanding industries around the EV and battery supply chain, making use of their unique natural and human resources. Some states have obvious advantages, such as Nevada's abundant lithium resource or Michigan's existing auto workforce. They should develop Battery Economy Strike Teams that bring together relevant state agencies and other in-state stakeholders (such as major employers, labor groups, and local workforce development agencies) to develop near-term action plans for attracting in-state investment to grow the industry. As part of this mission, states may need to update their permitting laws to accelerate the building of battery and related factories; California recently passed a law to exempt advanced manufacturing facilities being built in industrial zones from environmental reviews under the California Environmental Quality Act.

Industry is already working to secure the battery supply chain, and they need to continue and accelerate these efforts even with the loss of the tax credits. Specifically, US businesses should use licensing agreements and other arrangements with foreign companies to invest in US production so they can gain knowledge of midstream processing, with a goal of getting more American companies into this segment of the supply chain. They should also partner with universities and workforce development agencies in the communities where these facilities are being constructed to train workers for midstream jobs. In the meantime, OEMs and battery makers should continue entering into direct offtake agreements and strategic partnerships with non-Chinese raw material and midstream producers, which will enable new companies to scale production. These types of contracts have picked

up over the past few years, with GM increasing its investment in Lithium Americas' Thacker Pass lithium mine in Nevada and entering a multi-year agreement with Noveon for American-made rare earth magnets; and Tesla signing a binding offtake agreement for anode active material from Australian company Magnis Energy Technologies, among others.

Conclusion

Electric vehicles are slated to exceed one-quarter of global car sales this year. We simply cannot opt out of EV manufacturing, as that will risk our auto industry becoming irrelevant beyond our borders. Nor can we try to outcompete China on today's EV technologies, as they are simply too far ahead of us and have weaponized their control over the supply chain to make it virtually impossible to match them on price. But if we can't beat them at their own game, we can switch to a new playing field.

The repeal of the EV tax credits offers us a moment of clarity: we need to look beyond the policies we're losing and pursue a strategy that will enable the US to leapfrog today's technologies and reclaim a leadership position in the global EV market. This is a massive undertaking that would benefit from federal leadership—but just as importantly, state governments and industry must play their part to advance innovation and grow the domestic supply chain even if the federal government will not. With or without action by the current president or Congressional majority, we can move the ball forward now and create the environment for our auto industry to stay globally competitive well into the future.

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ENDNOTES

1. M. Stanley Whittingham created the first rechargeable lithium-ion battery while working at Exxon Research and Engineering Company in Linden, New Jersey; John B. Goodenough further refined lithium battery technologies while at UT Austin (using the cobalt oxide cathode, which he'd developed previously while at Oxford University). But while US firms and universities supported early-stage R&D, companies didn't have the risk appetite and universities didn't have industrial partners or government support to help get them into mass production. So it was Akira Yoshino who commercialized the lithium-ion battery in a partnership between Sony and Asahi Kasei, benefiting from Japan's stronger industrial ecosystem and more risk-tolerant companies.

   A similar story has played out with lithium-iron-phosphate (LFP) batteries: Goodenough laid the foundation for this chemistry at UT Austin, but North American automakers preferred nickel- and cobalt-based batteries due to the higher energy density. Chinese companies were the first to go big on LFP and China is now the source of nearly all LFP batteries and the cathode powders required to make them. As US automakers like Ford, GM, and Tesla start looking towards LFP to bring down costs, they're starting at a big disadvantage to Chinese companies that have benefited from years of government support. The IRA would have helped them overcome the cost disparity.

   See: Blois, Matt. "Lithium iron phosphate comes to America." Chemical & Engineering News, 29 Jan. 2023. https://cen.acs.org/energy/energy-storage-/Lithium-iron-phosphate-comes-to-America/101/i4. Accessed 23 Jul. 2025.

2. Legislation has been introduced in both chambers that would codify and authorize funding for the Minerals Security Partnership.

   In the Senate, the Critical Minerals Partnership Act of 2025, co-led by Senate Foreign Relations Committee Ranking Member Jeanne Shaheen (D-NH) and Sen. John Curtis (R-UT), would codify and authorize $50 million for implementation of the Biden-era Minerals Security Partnership (MSP). See: "Senators Shaheen, Curtis Introduce Bipartisan Legislation on Critical Minerals Supply Chains." Senate Foreign Relations Committee, 30 Jul. 2025. https://www.foreign.senate.gov/press/dem/release/senators-shaheen-curtis-introduce-bipartisan-legislation-on-critical-minerals-supply-chains Accessed 6 Aug. 2025.

   In the House, the Minerals Security Partnership Authorization Act, co-led by Reps. Ami Bera, M.D. (D-CA), Young Kim (R-CA) and James Moylan (R-GU), would authorize $75 million for the MSP. See: Rep. "Ami Bera Leads Bipartisan Legislation to Strengthen American Leadership in Global Mineral Supply Chains and Counter China's Dominance." Office of U.S. Representative Ami Bera, M.D., 15 Jul. 2025. https://bera.house.gov/news/press-releases/rep-ami-bera-leads-bipartisan-legislation-to-strengthen-american-leadership-in-global-mineral-supply-chains-and-counter-china-s-dominance Accessed 12 Aug. 2025.

3. The Critical Materials Future Act, introduced by US Senators John Hickenlooper (D-CO), Lindsey Graham (R-SC), Chris Coons (D-DE), and Todd Young (R-IN), would establish such a program. See: "Hickenlooper, Graham, Coons, Young, Reintroduce Bipartisan Bill to Advance Domestic Critical Materials Production." Office of Senator John Hickenlooper. 13 Feb. 2025. https://www.hickenlooper.senate.gov/press_releases/hickenlooper-graham-coons-young-reintroduce-bipartisan-bill-to-advance-domestic-critical-materials-production/ Accessed 29 Jul. 2025.