



INTERNATIONAL UNION, UNITED AUTOMOBILE, AEROSPACE & AGRICULTURAL IMPLEMENT WORKERS OF AMERICA – UAW

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February 27, 2023

Andres Garcia, Internal Revenue Service, Room 6526
1111 Constitution Avenue NW
Washington, DC 20224

RE: Proposed Collection; Requesting Comments on Form 8936, Qualified Plug-in Electric Drive Motor Vehicle Credit and Revenue Procedure 2022-42 (OMB Control No. 1545-2137)

Submitted by Ray Curry, President, International Union, UAW

On behalf of the more than one million active and retired members of the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW), thank you for the opportunity to comment on the Department of the Treasury and the Internal Revenue Service Request for Comment on Qualified Plug-in Electric Drive Motor Vehicle Credit and Revenue Procedure 2022-42.

The UAW strongly supported passage of the Inflation Reduction Act of 2022 (IRA) and advocated for many of its provisions throughout the legislative process. The law makes critical, long overdue investments in U.S. manufacturing to help ensure new vehicles and emerging technologies are built in America for decades to come. The law contains prescription drug reforms including significant measures that promise to lower the costs of life-saving drugs and health care insurance, cracks down on wealthy tax cheats, and ensures big, profitable corporations pay taxes just like everyone else.

Since 1952, the share of revenue from corporate income taxes has precipitously fallen as a share of GDP. Corporate income tax accounts for about 7% of federal tax revenue. The long-term impact of the law will be in part determined by how effectively it is implemented and enforced. We urge Treasury to implement the eligibility requirements for the IRA's electric vehicle (EV) tax credits as Congress intended. We also urge Treasury to include comprehensive and transparent reporting from qualified manufacturers to ensure they are in compliance with domestic assembly and critical mineral requirements, where applicable.

Importance of the Auto Industry

The majority of UAW members and retirees work in or have retired from the auto industry. Over 900,000 people work in the auto and auto parts manufacturing sectors.¹ The economic impact of these jobs reaches far beyond the workers employed at the plants and their families. The domestic vehicle assembly and parts industries are critically important for communities across the country. Auto manufacturing

¹ Bureau of Labor Statistics, "Automotive Industry: Employment, Earnings, and Hours",
<https://www.bls.gov/iag/tgs/iagauto.htm>

drives \$1.1 trillion into the economy each year through the manufacture, sale, and servicing of vehicles. Every year, the auto industry raises more than \$272 billion in federal, state, and local tax revenues.

In order to be a leader in electric vehicle manufacturing in the decades ahead, it will be crucial to strengthen our entire EV domestic supply chain. Unfortunately, there are deeply troubling signs for workers in the developing battery supply chain. Auto companies, including union automakers, are often creating joint ventures or strategic partnerships with foreign-based battery companies. It remains to be seen whether EV battery jobs will be high road, union auto manufacturing jobs. This trend can be seen in battery cell production, material processing, and battery recycling. The 2021 White House report on critical supply chains found that the quality of new battery industry jobs is far below the automotive powertrain jobs they are replacing.² We have significant concerns about whether companies in the battery supply chain will respect workers' rights to a free and fair choice to join a union. Whether it is innovative technologies or new business models, the EV transition must not result in increased outsourcing or an erosion of job quality in the auto industry.

UAW Footprint

UAW members proudly work at 26 final assembly plants in 8 states building vehicles for a wide variety of applications – from sports cars to work pickups. Additionally, the UAW represents auto parts workers throughout the country making engines, transmissions, stampings, axles, drivelines, seats, interiors, and various other components. Clearly, the implementation of the qualified plug-in electric drive motor vehicle credit has a direct impact on the industries in which our members work in.

UAW-Represented Final Assembly Plants, Light Duty Vehicles (Updated as of February 27, 2023)

Automaker	Plant	City	State
Ford	Chicago	Chicago	IL
Ford	Dearborn	Dearborn	MI
Ford	Flat Rock	Flat Rock	MI
Ford	Kansas City	Kansas City	MO
Ford	Kentucky Truck	Louisville	KY
Ford	Louisville	Louisville	KY
Ford	Michigan Assembly	Wayne	MI
Ford	Ohio Assembly	Avon Lake	OH
GM	Arlington	Arlington	TX
GM	Bowling Green	Bowling Green	KY
GM	Factory Zero	Detroit-Hamtramck	MI
GM	Fairfax	Kansas City	MO
GM	Flint	Flint	MI
GM	Fort Wayne	Fort Wayne	IN
GM	Lansing Delta	Lansing	MI
GM	Lansing Grand River	Lansing	MI
GM	Orion	Lake Orion	MI

² The White House. June 2021. "Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth": <https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf>, p.120

GM	Spring Hill	Spring Hill	TN
GM	Wentzville	Wentzville	MO
Stellantis	Jefferson North	Detroit	MI
Stellantis	Mack Assembly	Detroit	MI
Stellantis	Sterling Heights	Sterling Heights	MI
Stellantis	Toledo North	Toledo	OH
Stellantis	Toledo Supplier Park	Toledo	OH
Stellantis	Warren Truck	Warren	MI
Stellantis	Belvidere	Belvidere	IL

Through policy advocacy and hard-fought gains made at the bargaining table, the UAW is working to secure the future for American autoworkers. The most recent round of collective bargaining is a case in point. In 2019, the UAW negotiated over \$20 billion in investment commitments from major automakers, including billions in investments for the domestic production of EVs, plug-in hybrids (PHEVs), and components. UAW members continue to work on cutting edge technology. UAW members are proud to be building the vehicles of the future, including hybrids, PHEVs, battery electric vehicles (BEVs), autonomous vehicles, and increasingly efficient gasoline vehicles. UAW members are building advanced technology vehicles across the country and many UAW plants are slated to add electrified vehicles in the future. Current UAW-made BEVs and PHEVs include:

- Ford F-150 Lightning - BEV Pickup (Dearborn, MI)
- Ford Escape – PHEV SUV (Louisville, KY)
- Lincoln Corsair – PHEV SUV (Louisville, KY)
- Lincoln Aviator – PHEV SUV (Chicago, IL)
- Cadillac Lyriq – BEV SUV (Spring Hill, TN)
- GMC Hummer Pickup – BEV Pickup (Detroit, MI)
- Chevy Bolt & Bolt EUV – BEV CUV (Orion, MI)
- Cruise Autonomous Vehicle – BEV CUV (Orion, MI)
- Jeep Wrangler – PHEV SUV (Toledo, OH)
- Jeep Grand Cherokee – PHEV SUV (Detroit, MI)
- Ford E-Transit – BEV Commercial Van (Kansas City, MO)
- Thomas Built Bus Saf-T-Liner C2 Jouley – BEV School Bus (High Point, NC)
- IC Bus Electric CE – BEV School Bus (Tulsa, OK)
- Mack LR – BEV Refuse Truck (Macungie, PA)
- Volvo Truck VNR – BEV Class 8 Truck (Dublin, VA)

Members of the UAW work on a wide range of vehicle components, including advanced technology components. This includes electric motors at Ford’s Van Dyke Electric Powertrain Center (Sterling Heights, MI),³ battery packs at Ford’s Rawsonville Components Plant (Ypsilanti, MI) and GM’s Brownstown Battery Assembly Plant (Brownstown, MI),⁴ plug-in hybrid transmissions at Stellantis’ Kokomo Transmission

³ Ford. “Van Dyke Electric Powertrain Center”: <https://corporate.ford.com/operations/locations/global-plants/van-dyke-transmission-plant.html>

⁴ Ford. “Rawsonville Component Plant”: <https://corporate.ford.com/operations/locations/global-plants/rawsonville-components-plant.html>; GM. “Brownstown Battery”: <https://www.gm.com/company/facilities/brownstown>

(Kokomo, IN),⁵ and power electronics at Stellantis' Toledo Machining Plant (Toledo, OH).⁶ Future investments announcements in UAW-represented plants include e-motor stator production in GM's Lockport Components (Lockport, NY)⁷ and electric drive units at GM's Toledo Propulsion Systems (Toledo, OH).⁸

EV Transition: Challenges and Opportunities

Manufacturing workers seeking better wages and working conditions have faced numerous obstacles over the past several decades. To give examples, weak labor laws that fail to protect workers' rights to join a union have weakened the power of workers, as have bad trade deals that favor investors over workers, and misguided tax incentives that allow corporations to pay fewer U.S. taxes on profits earned overseas than those earned within our borders.

Labor law reform, while outside the scope of the proposed rules, is desperately needed. In fact, the National Labor Relations Act (NLRA) has not been strengthened since becoming law over 85 years ago. We applaud the House for passing the Protecting the Right to Organize (PRO) Act in both the 117th and 116th Congresses on a bipartisan basis. If signed into law, the PRO Act will protect a worker's right to join a union by strengthening penalties against corporations that violate workers' rights, provide for mediation and arbitration of first contracts, eliminate so-called "right to work laws," prohibit captive audience meetings, and support workers' right to strike. Unfortunately, the PRO Act is unlikely to gain enough support in the House to pass this session. Incentives to help workers' rights are consistent with the goals of the PRO Act. Opposition to these commonsense incentives by some automakers, while not surprising, is disappointing. Every auto transplant has a unionized workforce in their home country and throughout the world. Sadly, all too often workers seeking to form a union have faced aggressive oppositions not only from the employer, but from anti-worker elected officials and outside anti-worker groups.

Unsurprisingly, over the past twenty years, U.S. automotive production workers' wages have fallen significantly. When adjusting for inflation, average hourly earnings for production workers in auto assembly have declined by 27%, while wages in the auto parts sector have declined by 19%.⁹ Note that these declined numbers do not account for the rise in inflation over the past couple of years. There is no disputing that, when adjusted for inflation, there has been a significant decline in wages. The harder question is what should be done about it. Fortunately, investments fueled by Inflation Reduction Act, Infrastructure Investment and Jobs Act (IIJA), and CHIPS and Science Act have spurred job growth that gives opportunities for workers, but investments alone will not create high quality jobs. That is why it is important for policymakers to ensure workers have the right to organize and collectively bargain. According to the Economic Policy Institute (EPI), unionized workers earn on average 10.2% more than

⁵ Stellantis. "Stellantis Announces \$229 Million Investment in Kokomo, Indiana, Operations to Accelerate Electrification Plans": <https://www.prnewswire.com/news-releases/stellantis-announces-229-million-investment-in-kokomo-indiana-operations-to-accelerate-electrification-plans-301395523.html>

⁶ Stellantis. "Toledo Machining Plant": <https://media.stellantisnorthamerica.com/newsrelease.do?id=338&mid=>

⁷ GM. "GM Investing Nearly \$154 Million in Western New York for Production of Electric Motor Components": <https://news.gm.com/newsroom.detail.html/Pages/news/us/en/2022/jan/0121-lockport.html>

⁸ The Detroit News. September 23, 2022, "General Motors invests \$760 million for EV-related work at Toledo transmission plant": <https://www.detroitnews.com/story/business/autos/general-motors/2022/09/23/gm-plans-ev-related-work-at-toledo-propulsion-plant/69511552007/>

⁹ BLS. "CPI Inflation Calculator": https://www.bls.gov/data/inflation_calculator.htm and Average Hourly Earnings of Production and Nonsupervisory Employees in Motor vehicles and Motor Vehicle Parts

their non-union counterparts.¹⁰ Union workers are more likely to have paid sick days and health insurance compared to non-union workers. 94% of union workers participate in a retirement plan compared with 67% of non-union workers. There is a striking difference in wages and benefits for workers who are in a union versus those who are not. The erosion of wages and benefits is directly linked to the decline in unionization rates in the industry.¹¹ Simply put, when workers join together, they have more power and are better able to win higher wages, good benefits, and improved working conditions at the bargaining table.

Employers should have an obligation to do right by their workers, especially if they are receiving federal grants, loans, and/or tax credits. Unfortunately, the IIJA and IRA do not incentive employers to use union labor in their federally backed projects.

In the face of multiple challenges, UAW is working to ensure that new battery plants are creating quality union jobs in the EV supply chain. In December 2022, workers at Ultium Cells in Lordstown, OH voted overwhelmingly (710 to 16) to join the UAW, sending a loud and clear signal that the EV future must be powered by union jobs.¹² Ultium did not wage an anti-union campaign that are highly prevalent in organizing drives. This lopsided result illustrates that when workers are not subject to anti-union propaganda and intimidation by their employers, they are more likely to join together and form a union.¹³ As the industry grows, it will be more important than ever to ensure battery workers have a voice on the job. Companies that receive taxpayers' money must maintain and create quality union jobs.

30D EV Tax Credit

The 30D regional final assembly and battery component content requirements of the IRA, when combined with new robust supply-side and infrastructure provisions passed into law by the last Congress under the leadership of President Biden, sends an important signal to the industry to produce domestically. Regulations implementing IRA requirements must be comprehensive and cannot be undermined by loopholes that allow manufacturers to access the credit while avoiding regional requirements.

Since the 30D Qualified Plug-In Electric Drive Motor Vehicle Credit was created under the Energy Improvement and Extension Act of 2008, the program has played a key role in the auto industries' introduction of EVs and PHEVs into the marketplace as drivers utilized consumer tax credits worth up to \$7,500. Since 2008, the program has helped facilitate sales of electrified vehicles and made credits available for the sale of up to 200,000 vehicles for each manufacturer. GM, Tesla, and other prominent automakers had already reached the 200,000-vehicle cap or were rapidly approaching it before the Inflation Reduction Act became law. Had Congress failed to eliminate the cap, a shrinking percentage of vehicles would have access to the credits. Proven automakers would have faced an unlevel playing field as new entrants would have had a clear advantage, since they had not fully utilized consumer tax credits.

¹⁰ Economic Policy Institute. Unions Help Reduce Disparities and Strengthen Our Democracy, April 2021.

¹¹ EPI. September 21, 2022. "The stakes for workers in how policymakers manage the coming shift to all-electric vehicles", see Figure E: <https://www.epi.org/publication/ev-policy-workers/>.

¹² *Detroit Free Press*. December 9, 2022. "Workers at New GM Joint Venture EV Battery Plant Vote to Join Union": <https://www.freep.com/story/money/cars/general-motors/2022/12/09/ultium-cells-general-motors-union/69714394007/>

¹³ UAW. September 22, 2022. "UAW and Forever Energy Announce Neutrality Agreement": <https://uaw.org/uaw-forever-energy-announce-neutrality-agreement/>

Eliminating the cap promotes EV sales but does not ensure, on its own, vehicles are manufactured in the United States nor create good union jobs. To improve the job quality in auto manufacturing, taxpayers' money should be utilized as much as possible to benefit companies that manufacture in the United States and respect workers' fundamental right to form a union. While the 30D tax credit, prior to the passage of the IRA, provided the auto industry with access to consumer credits, it did not include any conditions to incentivize building the vehicles specifically in the U.S., let alone ensure workers' rights are respected.

The EV tax credit provisions from the House-passed Build Back Better Act (BBBA) squarely addressed these challenges by requiring domestic assembly in the United States after five years and provided additional incentives for employers that provide quality union jobs by including a \$4,500 bonus tax credit for EVs assembled in the U.S. by unionized workers. We urge Congress to build on IRA's 30D provisions by passing the Kildee-Stabenow EV tax credit legislation in order to ensure consumer subsidies are spent supporting good union auto jobs in the United States. Ideally content provisions would be accompanied with direct incentives to buy cars built in the United States. Under the Kildee-Stabenow EV tax credit, every automaker would be eligible for the same tax subsidy as they were prior to passage of IRA. In our view, it is a more effective provision.

The North American assembly requirements from the IRA, as well as regional content requirements on batteries and critical minerals, could help promote investments in our domestic supply chain. The implementation of all other EV tax credit programs should be aligned with the 30D regional assembly and content requirements.

As the industry transitions to electrified vehicles, automakers and battery manufacturers can take advantage of a wide range of subsidies across federal agencies, including:

- The IRA's 30D Clean Vehicles Consumer Tax Credit extension (Sec. 13401), which provides up to \$7,500 per vehicle in savings on EVs and PHEVs.
- The IRA expands the Department of Energy's Advanced Technology Vehicle Manufacturing (ATVM) program by lifting the loan program cap and appropriating \$3 billion fund direct loans (Sec. 50142). With these changes, the ATVM program now has \$55 billion in loan authority for low-interest loans for clean vehicle manufacturing investments.¹⁴
- The IRA appropriates \$2 billion for Domestic Manufacturing Conversion Grants (Sec. 50143) to support domestic production of EVs, PHEVs, and fuel cell vehicles.
- The IRA's 45X Advanced Manufacturing Production Credit (Sec. 13502) provides battery manufacturers with tax credits of \$35 per kilowatt-hour for domestically produced battery cells and \$10 per kilowatt-hour for battery modules. These battery production tax credits are worth thousands of dollars per electric vehicle and covers approximately one-third the cost of producing an EV battery today. The program further reduces the cost of battery inputs through a 10% production tax credit on critical battery minerals and electrode active materials.
- The IRA's Extension of the Advanced Energy Project Credit (Sec. 13501) allocates \$10 billion for the 48C investment tax credit for advanced energy projects, including electric vehicles, components, and materials.

¹⁴ Department of Energy, Loan Program Office. "Inflation Reduction Act of 2022": <https://www.energy.gov/lpo/inflation-reduction-act-2022>

- The IIJA's Battery Material Processing Grants (Sec. 40207(b)) and Battery Manufacturing and Recycling Grants (Sec. 40207(c)) provides \$6 billion in grants to invest in domestic battery production.
- Outside of support from the federal government, state and local governments are offering generous incentives to support EVs, including additional state-level consumer incentives and billions in financial incentives from state and local governments competing to attract investments.¹⁵

The long-term impact of the law will be in large part determined by how effectively it is implemented and enforced. We urge Treasury to implement the eligibility requirements for the IRA's electric vehicle (EV) tax credits as Congress intended. We also urge Treasury to include comprehensive and transparent reporting from qualified manufacturers to ensure they are in compliance with domestic assembly and critical mineral requirements, where applicable

Credit Programs Must Align to Promote Domestic Manufacturing

It is essential that the three clean vehicle tax credit programs are aligned and avoid overlaps and loopholes that could undermine the goals of the program. If implementation of the 30D, 45W and 25E tax credits allow manufacturers to access the full tax credit without meeting a strong definition of regional final assembly and robust regional content requirements, too many manufacturers will choose to take advantage of the credits without investing in the U.S. In order for the 30D tax credit's regional requirements to have their intended impact of promoting domestic investment and job creation, manufacturers must not be allowed to access other credits while avoiding content and final assembly requirements.

Particularly troubling is the possibility that manufacturers will be allowed to take advantage of an overly broad definition of a "qualified commercial clean vehicle" to access the 45W tax credit for light-duty vehicles without meeting the regional assembly and content requirements found in 30D. If leases of light-duty vehicles to individual consumers for personal use are deemed to qualify for the 45W tax credit, manufacturers will be allowed to subsidize imported EVs through the 45W \$7,500 tax credit and they could have little incentive to meet the 30D regional requirements.

Not only could this likely result in less domestic investment, fewer jobs for American workers, and a greater dependence on imported technologies, but it will also undercut manufacturers who are committed to building EVs and components in the U.S. It will create a bifurcated program in which credits for light-duty sales of new vehicles would require regional production and provide credits directly to consumers, while light-duty leases would have no such requirements and provide indirect credits. Leased vehicles already make up around a quarter of the new light-duty vehicle market.¹⁶ If all leased EVs qualify for the 45W credit, one can expect some companies relying on imported EVs and batteries will push consumers towards vehicle leases in order to take advantage of the credit.

¹⁵ Automotive News. October 13, 2022. "EV battery plants create gold rush of competing state incentives": <https://www.autonews.com/manufacturing/why-states-spend-billions-attract-ev-battery-plants>

¹⁶ U.S. Department of Transportation – Bureau of Transportation Statistics. "National Transportation Statistics – Table 1-17: New and Used Passenger Car and Light Truck Sales": <https://www.bts.gov/content/new-and-used-passenger-car-sales-and-leases-thousands-vehicles>

In fact, industry analysts are already warning that this loophole could impact investments in the region. Bloomberg New Energy Finance (BNEF) forecasts that 2023 could see up to \$80 billion in investments in North America's battery supply chain, in part driven by IRA support. BNEF notes, however, that *"a new loophole allowing automakers to lease to private consumers and qualify for the commercial vehicle credit without complying with critical minerals and battery component requirements could change the investment appetite."*¹⁷ And Wolfe Research has projected that such an interpretation will "disincentive cost reduction" and provide "disproportionate advantages for non-US companies."¹⁸

Industry actors who utilize the EV transition to import vehicles in the United States should not be rewarded. This is particularly true of China, where the auto industry is facing significant overcapacity issues and is looking to use exports to soak-up excess capacity.¹⁹ Overseas shipments of Chinese-made cars have tripled since 2020 to over 2.5 million.²⁰ Expanding tax credit to subsidize vehicle imports will only accelerate these trends and could result in the U.S. market being flooded by imported EVs. We urge Treasury and Congress to closely monitor the impact of this loophole and take appropriate action as the implementation process continues.

Assembly Requirements

The IRA's 30D Clean Vehicle Credits includes the requirements that vehicles are assembled in North America and meet content thresholds for battery components and critical minerals. In combination with the significant supply-side incentives in the IIJA and IRA, these requirements promote investment in U.S. supply chains that are currently dominated by foreign countries, most notably China. Implementation of these requirements must include determinations of assembly and content sourcing that create incentives to invest domestically.

The 30D tax credit was amended under IRA to require that final assembly occurs in North America. In response to provisions like this, market trends, and the skill of American autoworkers, nearly every major automaker already makes or has plans to make BEVs and PHEVs in North America.²¹ Automakers that have committed to domestic manufacturing should not be undermined by competitors that may try to circumvent the North American assembly requirement by establishing small regional operations in which vehicles pass through with limited assembly in-region or through so-called knock-down kit assembly. Like the definition of "final assembly" found in the Automobile Parts Content Labeling (49 CFR Part 583.3), final assembly locations should include assembly of body panels, painting, chassis assembly, trim installation, and other assembly and fabrication processes that are currently found in established final assembly plants. Not only is a strong final assembly definition in-line with the intentions of the legislation,

¹⁷ Bloomberg New Energy Finance. January 11, 2023. "Battery Supply Chain Investments Surge After US Inflation Reduction Act": <https://blinks.bloomberg.com/news/stories/ROBMJVT0G1L0>

¹⁸ Wolfe Research. Jan 11, 2023. "EV Cost Parity – The Opportunities and Challenges Ahead". Presented at the Federal Reserve Bank of Chicago's 29th Annual Automotive Insights Symposium": <https://www.chicagofed.org/events/2023/ais-2023>

¹⁹ Wards Auto. February 14, 2020. "U.S. Squarely in Chinese Auto Industry's Sights": <https://www.wardsauto.com/nada-convention-and-exposition/us-squarely-chinese-auto-industry-s-sights>

²⁰ Bloomberg. January 25, 2023. "The US Hasn't Noticed That China-Made Cars Are Taking Over the World": <https://www.bloomberg.com/news/articles/2023-01-26/how-china-is-quietly-dominating-the-global-car-market>

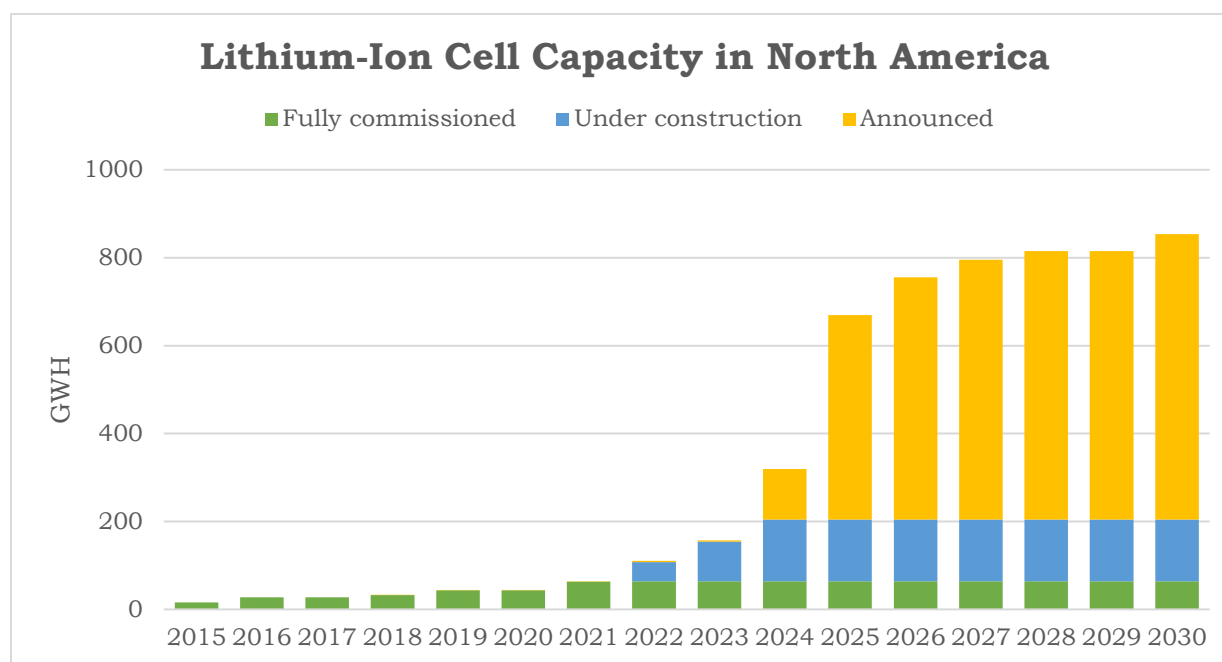
²¹ Alliance for Automotive Innovation. September 2022. "The Future is Electric: Let's Drive Together": https://www.autosinnovate.org/committees/communications/The%20Future%20Is%20Electric%20Infographic_copy_1

but final assembly plants also have strong economic impacts that generate business and jobs in local economies.

In fact, 76% of the EVs sold in the U.S. in the first half of 2022 would qualify for the North American assembly requirement, according to an analysis by Bloomberg New Energy Finance.²² IHS Markit forecasts significant increases in North American BEV and PHEV production over the next decade, reaching 3.6 million vehicles in 2025 and 6.5 million vehicles by 2029.²³

IRA Battery Component Requirements Must be Meaningful and Feasible

Regional battery production is projected to grow significantly over the next decade (see chart below). While ramping up domestic battery production will take time, nearly every major automaker has announced plans to either produce battery cells domestically or source battery cells domestically in the next few years. To ensure that the U.S. auto industry does not fall behind and automakers follow through on these investment announcements, we must continue to push policies forward to build strong domestic supply chains. Bloomberg New Energy Finance projects that North America will represent just 8% of total lithium-ion battery manufacturing capacity in 2030.²⁴



Source: Bloomberg New Energy Finance²⁵

In order to develop a strong domestic supply chain, battery component determinations must account for the location of battery cell production, not just module or pack assembly. Battery cell production represents most of the value in an EV battery. Domestic cell production is a much bigger driver of investment and job creation than the pack or module assembly, with typical battery cell production plants

²² Bloomberg New Energy Finance. September 20, 2022. "US Climate Law Shifts EV Race to Warp Speed", p.12

²³ IHS Markit. "Light Vehicle Powertrain and Alternative Propulsion Forecast"

²⁴ Bloomberg New Energy Finance, September 15, 2022. "North America Catches Up in the Battery Race".

²⁵ Bloomberg New Energy Finance. September 2022. "Data for US Climate Law Shifts EV Race to Warp Speed"

requiring multi-billion investments and can result in thousands of jobs. Battery component content should include all phases of battery cell production, such as mixing of materials, coating, drying, slitting, calendaring, electrolyte filling, degassing, and aging, and packaging of cells. A comprehensive definition of battery cell production is essential to avoid companies claiming regional battery production with minimal assembly work.

In determining the value of content produced in North America, these calculations should reflect actual value of regional content in the battery supply chain and should not be based on significant rounding that increases the calculated value of content. The calculations must reward companies as they shift a greater share of their supply chains to the region. Excessive rounding can undermine this incentive by equally rewarding companies that have fully committed to localized production and those that do so partially. Calculations should be structured to fully incentivize domestic production of battery content and reward companies that are fully investing in local production. Any rounding or averaging of content value should be reported transparently to the public and verified by the relevant agencies.

To help the industry meet these targets, the IRA provides substantial financial support for domestic battery production. In addition to a variety of investment incentives, the IRA's 45X Advanced Manufacturing Production Credit (Sec. 13502) provides battery manufacturers with tax credits of \$35 per kilowatt-hour for domestically produced battery cells and \$10 per kilowatt-hour for battery modules. These savings account for around one-third of total battery production costs and will save thousands of dollars per vehicle.

While the U.S. has seen large battery cell investment announcements, domestic investments in the production of the anodes and cathodes, material processing, and battery recycling remain limited.²⁶ According to Benchmark Mineral Intelligence, China continues to dominate these supply chains, including 78% of global cathode production and 91% of global anode production, as well as significant shares in all of the key minerals required for lithium-ion battery production.²⁷ If the U.S. does not also invest in the upstream battery supply chain, the domestic economy will continue to be reliant on Chinese imports, even as we build up battery cell production capacity. Our dependence could increase as EV production increases over time.

While China is home to battery supply chains, the European Union holds a prominent position and is responsible for over one-quarter of global EV production while the U.S. lags behind with only 10% of EV production and 7% of battery production capacity.²⁸ China has prioritized EV technology for a long time, as early as 2001, when it was introduced as a priority science research project in China's Five-Year Plan, the country's highest-level economic blueprint.²⁹

²⁶ Michael D. Plante and Jessica Rindels of the Federal Reserve Bank of Dallas. October 11, 2022. "Automakers' Bold Plans for Electric Vehicles Spur U.S. Battery Boom": https://www.dallasfed.org/research/economics/2022/1011?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosgenerate&stream=top

²⁷ <https://www.benchmarkminerals.com/membership/chinas-lithium-ion-battery-supply-chain-dominance/>

²⁸ <https://www.iea.org/reports/global-ev-outlook-2022/executive-summary>

²⁹ <https://www.technologyreview.com/2023/02/21/1068880/how-did-china-dominate-electric-cars-policy/>

The IJIA's battery supply chain grants are an important first step in this process, with the majority of the first \$2.8 billion in funding focused on cathode and anode production.³⁰ These and other investment incentives will be supplemented by the IRA's on-going 45X Advanced Manufacturing Production Credit that provides a 10% tax credit on the costs of producing electrode active materials – including cathode material, anode material, anode foils, solvents, additives, and electrolytes (Sec. 13502). Implementation of these policies must also prioritize high-road employers and union jobs.

Critical Mineral Requirements

While the opportunity to develop domestic mining operations will vary based on the mineral and its geographic distribution, there is no reason the U.S. cannot become a central hub for mineral processing and recycling as part of an overall EV supply chain strategy. One must only look at China's dominance in battery material processing and refining. Besides graphite, China is hardly the primary source for mined raw materials for batteries. Yet, it has come to dominate lithium, cobalt, nickel, and graphite processing globally.³¹ Rather, China's current dominance in EV battery manufacturing is primarily the result of significant public investment and creating partnerships.

The IRA's 45X Advanced Manufacturing Production Credit will make domestic mineral production more financially feasible by providing a 10% tax credit for costs incurred in the production of critical minerals (Sec. 13502). And trading partners are ramping up production to take advantage of the opportunities.³² It will take time to scale up these operations, the combination of supply-side incentives, content requirements, and market demand provides opportunities to build up a more resilient EV supply chain.

The critical mineral content requirement includes both North America and countries with free trade agreements (FTA). Predictably, many foreign governments and multinational corporations are advocating for the most expansive definition possible, thereby seeking to directly undermine the intent of the provisions. We urge Treasury to not deviate with the law's intent.

Under IRA, access to tax subsidies for imported minerals is based on whether we have a free trade agreement. In our view, this is far from an ideal way to evaluate eligibility.

We appreciate that this was Congress' decision, and you have an obligation to implement the law as intended. At a bare minimum, we urge Treasury to ensure that the 30D FTA requirements have their intended effect and that the definition of FTA should be limited to **comprehensive free trade agreements**. If the definition of an FTA is expanded to include *any* type of trade-related agreement, it will severely diminish the impact of the requirement and result in the subsidizing of foreign products, which clearly contradicts the intent of the law.

³⁰ Bloomberg New Energy Finance. October 20, 2022. "Biden's \$2.8 Billion Battery Projects Grant Is First Step": <https://www.bnef.com/shorts/15027>

³¹ Benchmark Mineral Intelligence. October 3, 2022. "China's Lithium-Ion Battery Supply Chain Dominance": <https://www.benchmarkminerals.com/membership/chinas-lithium-ion-battery-supply-chain-dominance/>

³² Bloomberg New Energy Finance. October 19, 2022. "Battery Metals Monthly: US Steps Up Lithium Play"

Some of the working conditions in the global automotive supply chain are unacceptable and must be addressed, whether it is forced labor in the auto supply chain in China's Uyghur region³³ or reports of the use of child labor in the supply chain right here in the United States.³⁴ Without strong labor standards and increased unionization, these types of violations will continue to undermine the creation and maintenance quality manufacturing jobs. Incentives to boost domestic production and provide quality jobs will be especially crucial to the communities across the country relying on engine and transmission plants for quality union jobs now and in the years ahead. To improve the job quality in auto manufacturing, taxpayers' money should be utilized as much as possible to benefit companies that manufacture in the United States and respect workers' fundamental right to form a union.

The more clarity on a "foreign entity of concern" the better. It will also be important to closely monitor the international EV market, including the supply chain. Non-market economies and nations that have poor human rights records should be identified as "foreign entity of concerns" and thus not benefit from U.S. taxpayer dollars.

Transparency

Transparency in reporting and implementation will be critical to ensuring stakeholders understand how vehicles are deemed to qualify. The legislation addresses this by requiring "qualified manufacturers" to make periodic written reports to the government and sellers to provide information to consumers. Qualified manufacturer reports should include assembly location, battery component sourcing, and critical mineral sourcing to the greatest extent possible. To fully assess the economic impacts of the program, qualified manufacturers should also report:

- Sales of eligible vehicles estimated tax credit utilization by customers, and total job and collective bargaining status at the North American final assembly plants of eligible vehicles.
- To ensure that consumers can make informed decisions about the EV purchases and understand how vehicles become eligible for the tax credit, consumers should be provided with information on final assembly location, battery cell assembly location, battery cell manufacturer, regional battery component content percentages, critical mineral content percentages, union status of final assembly and cell assembly locations, as well as information already required under the American Automobile Labeling Act. They should provide a clear explanation of how the credit amount was determined and, if applicable, how it is applied to the purchase or lease agreement.
- In addition to requiring VIN numbers, automakers should be required to report information on whether vehicles, batteries, or components are built by a unionized workforce. Automakers have a responsibility to ensure suppliers are respecting workers' ability to join a union and are in compliance with laws and regulations that protect workers from exploitation.

Content value calculation should be transparently reported to include all relevant data, including details on rounding or averaging of content value. Waivers and exceptions for OEMs should be used sparingly on a case-by-case basis and the public should have the ability to weigh in before waivers are granted.

³³ Murphy, Laura, et al. December 2022. "Driving Force: Automotive Supply Chains and Forced Labor in the Uyghur Region": <https://www.shuforcedlabour.org/drivingforce>

³⁴ Reuters. December 16, 2022. "Child workers found throughout Hyundai-Kia supply chain in Alabama": <https://www.reuters.com/investigates/special-report/usa-immigration-hyundai/>

Conclusion

The UAW is highly supportive of President Biden's economic agenda, which strongly supports industrial policies that builds up domestic supply chains and creates jobs for American workers. But public support for the industry must also create quality union jobs. The financial benefits of this broad set of industry subsidies would most likely far exceed any additional costs to employers of providing workers with family-supporting wages, benefits, and safe workplaces. There is simply no excuse for subsidy recipients to not provide quality union jobs.

UAW members have a long history of building advanced technologies and look forward to building the vehicles of the future. Thank you for the opportunity to share our views and recommendations.

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