APRIL 2025

How the Inflation Reduction Act is driving U.S. job growth across the electric vehicle industry

ANH BUI, LOGAN PIERCE, PETER SLOWIK, AND STEPHANIE SEARLE
(International Council on Clean Transportation)
AND ROBBIE ORVIS
(Energy Innovation Policy & Technology)

ACKNOWLEDGMENTS

This work is generously supported by the Heising-Simons Foundation and the Energy Foundation. We thank Aaron Isenstadt who provided key input on the analysis and Josh Miller and Dale Hall for their critical reviews on an earlier version of this report. Any errors are the authors' own.

International Council on Clean Transportation
1500 K Street NW, Suite 650
Washington, DC 20005

communications@theicct.org | www.theicct.org | @TheICCT

EXECUTIVE SUMMARY

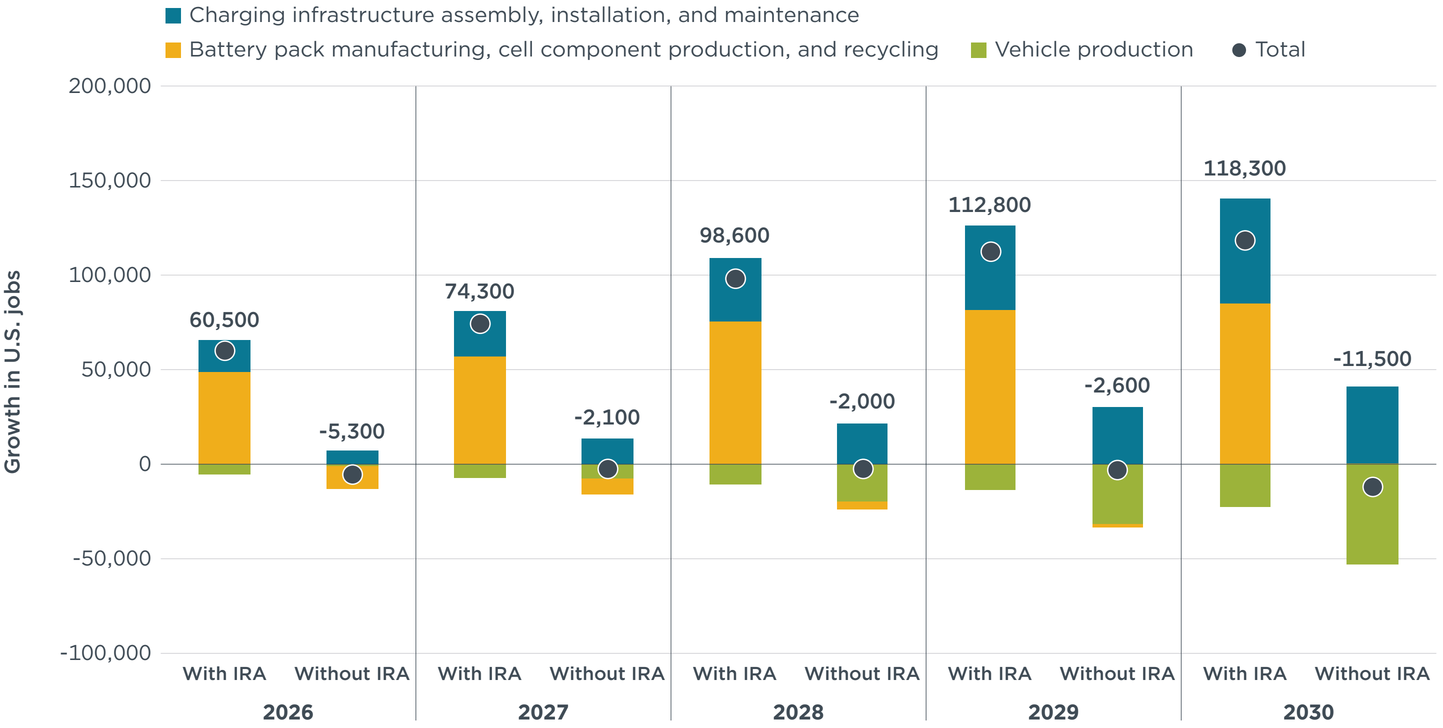
Industry investments and consumer incentives from the Inflation Reduction Act (IRA) are strengthening American leadership on cars and trucks, driving job creation across the U.S. transportation sector, and expanding consumer choice and economic benefits. Since the passage of the IRA in 2022, the automotive industry has announced investments of about $125 billion in electric vehicle (EV) and battery manufacturing in the United States. These investments will support hundreds of thousands of jobs while promoting the competitiveness of the American auto industry amid the global transition to EVs. These jobs and the global industrial competitiveness of the U.S. auto industry are at risk, however, with the recent interest in Congress in repealing EV-related provisions in the IRA.

This report assesses the impact of a repeal of key EV-related IRA tax credits on jobs in the United States through 2030. First, we project the number of new U.S. jobs that would be created under the IRA from 2026 through 2030. We then analyze the impact that an IRA repeal would have on EV sales in the United States through 2030. We next estimate the net change in the manufacture of EVs and internal combustion engine vehicles (ICEVs), as well as the loss in battery manufacturing and charging infrastructure installation and maintenance. From this, we quantify the net change in employment that would result directly in each of these industries from IRA repeal.

Figure ES1 summarizes our findings on the job growth that would occur from 2026 through 2030 (compared with 2024) with and without the EV-related provisions in the IRA. Each bar shows the impacts in the vehicle production, battery manufacturing, and charging infrastructure industries, with the net impact across all three sectors indicated by a gray circle. We project that the IRA would drive a net creation of more than 118,000 new direct jobs across the U.S. vehicle, battery, and charging industries from 2026 to 2030. The repeal of the IRA would lead to a net loss of approximately 130,000 jobs in 2030 compared with a case with the IRA. We find that, if the IRA were repealed, there would be a net loss of jobs that exist today, starting in 2026.

Figure ES1

Projected growth in U.S. jobs compared with 2024 under the With IRA and Without IRA scenarios

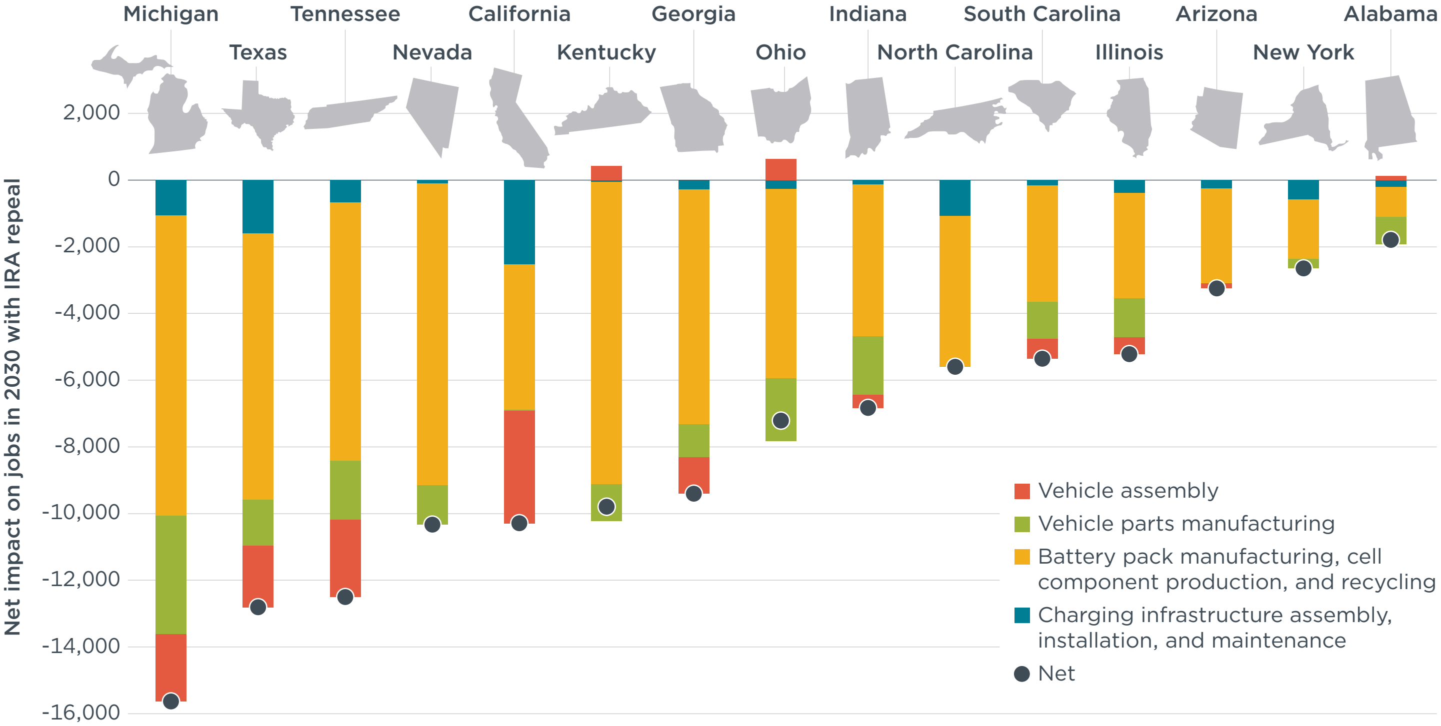


THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

Figure ES2 breaks down the net employment changes resulting from IRA repeal in each industry for the top 15 affected states in 2030. IRA repeal would lead to a loss of between 10,000 to 16,000 jobs in each of the top 5 states most affected, with 14 states projected to experience losses of more than 2,000 jobs by 2030.

Figure ES2

Net impact on jobs in 2030 with IRA repeal in the most impacted 15 states



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

From this analysis, we find that:

Inflation Reduction Act repeal could cause up to 130,000 net direct jobs to be lost across the U.S. EV industry by 2030, and about 440,000 jobs lost when considering indirect effects. There would be direct job losses of about 30,600 jobs in vehicle production, 85,000 jobs in battery manufacturing, and 14,200 jobs in charging infrastructure. Reduced EV sales and domestic battery production could also lead to depressed growth in indirect and induced jobs, such as in the mineral processing, retail, and hospitality industries; we estimate that an additional 310,000 indirect jobs could be lost with IRA repeal.

Inflation Reduction Act repeal would jeopardize progress in onshoring vehicle production. The consumer EV tax credit and battery manufacturing tax credit specifically incentivize domestic vehicle and parts manufacturing. Investments stemming from these tax credits will contribute to increased onshoring of auto and battery industry jobs. Without those provisions, we do not expect the same volume of U.S. vehicle and parts manufacturing capacity, though we do not specifically assess the effects of potential changes to tariffs. While EVs and non-battery parts generally require fewer assembly and manufacturing jobs than ICEVs, we find that this effect is more than offset by the onshoring effect of the IRA; with IRA repeal, the United States would lose auto assembly and parts manufacturing jobs overall. This is additional to the large job losses that would occur in the battery and charging infrastructure industries.

Most of the job losses associated with IRA repeal are in the Midwest and southern states, where significant EV supply chain investments have been announced as a result of the IRA. The 15 states where we project the greatest number of jobs not materialized are Michigan, Texas, Tennessee, Nevada, California, Kentucky, Georgia, Ohio, Indiana, North Carolina, South Carolina, Illinois, Arizona, New York, and Alabama. Twelve of these 15 states are in the Midwest and South. Inflation Reduction Act repeal would lead to 10,000 to 16,000 jobs lost in each of the top 5 states most affected, with 14 states projected to experience more than 2,000 job losses by 2030. Many of these states already have well-established light-duty vehicle manufacturing industries, which make them prime candidates for investment in new EV-related industries, or are expected to have large populations of EV drivers requiring significant charging deployment throughout the next decade. We expect corresponding negative economic impacts in these states. Should the IRA be repealed, these states are likely to feel the greatest impact.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION AND BACKGROUND

The 2024 U.S. elections marked a significant shift for the future of environmental policy in the United States. President Trump has announced plans for substantial rollbacks of the environmental policy achievements of the Biden administration. In March, the Administrator of the U.S. Environmental Protection Agency (EPA) announced that the agency will reconsider the multi-pollutant emissions standards for model years 2027 and later light-duty and medium-duty vehicles finalized in April 2024 (EPA, 2025). A previous Executive Order indicated that the Administration plans to rescind California's waiver authority to set its own standards (The White House, 2025).

The Trump administration also has announced plans to undermine key provisions of the Inflation Reduction Act of 2022 (IRA), which provides a range of tax credits and subsidies to support the transition to clean energy and the domestic production and adoption of clean technology (Inflation Reduction Act of 2022). The law includes tax credits for electric vehicles (EVs), batteries, and charging infrastructure. Since the law's passage, the automotive industry has announced EV-related investments of about $129 billion—representing nearly two-thirds of the total announced EV investments over the past decade—and nearly 200,000 EV-related jobs (Environmental Defense Fund [EDF], 2025). Numerous automakers and battery companies have publicly pointed to the IRA tax credits as a major factor in their U.S. business investments (Nigro et al., in press). However, some Members of Congress are now considering repealing the IRA (Israel, 2025).

If the government rolls back these policies, it could undercut demand for EVs. This in turn could lead private companies to reverse course on their investments in the clean vehicle technology sector, thereby reducing job creation (Renshaw et al., 2024; Castañeda, 2024). Indeed, several industry stakeholders have acknowledged that federal policy uncertainty risks hindering industrial competitiveness while hurting economic and national security and jobs (Alliance for Automotive Innovation, 2024; Noble, 2025; Lutz, 2025). For example, concerns over the potential elimination of federal tax credits have reportedly prompted global battery manufacturing companies to reconsider $54 billion worth of investments in the Midwest and southern regions of the country (Kim, 2024). After three years of historically high investment in the clean energy and technology industries, with announced financing totaling over $200 billion, there has been a net reduction in announced investment in 2025 (Atlas Public Policy, n.d.).

Repeal of the IRA could also affect the global competitiveness of the U.S. auto industry. In 2024, the EV sales share in the United States was about 10%, compared with 20% globally. The United States also lags behind other leading vehicle markets, including China (47% EV sales share as of 2024), Europe (21%), and Canada (14%; EV Volumes, n.d.). Looking ahead, countries that incentivize EV uptake and domestic EV production could see a rise in auto market dominance, with corresponding economic and job benefits. For example, the Chinese company BYD now employs nearly twice as many people as Toyota, the automaker with the highest light-duty vehicle (LDV) sales globally (Doi, 2024). The EV and battery tax credits in the IRA are designed specifically to support domestic vehicle manufacturing and supply chain development. Whether the United States falls behind or pulls ahead in the global race to produce EVs could depend on their fate.

This report projects EV-related job creation from 2026 through 2030 with and without the IRA to assess the impact of rolling back the EV-related tax credits. Employment impacts are quantified across four sectors—vehicle assembly, vehicle parts manufacturing, battery manufacturing and recycling, and charging infrastructure—at the national and state levels. We first analyze light-duty EV market growth, battery production, and charging infrastructure demand under the scenarios considered. We then quantify the number of jobs that would be required. We compare projected employment in the two scenarios to estimate direct jobs not materialized if the EV-related provisions in the IRA are repealed. We then consider potential indirect job losses that could occur from IRA repeal outside the main vehicle supply chain. Finally, we identify which U.S. states would experience the greatest job losses from IRA repeal.

PROJECTIONS OF ELECTRIC VEHICLE MARKET GROWTH

This analysis of U.S. EV sales—including battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs)—follows the methodology of a 2022 Energy Innovation Policy & Technology study of the IRA's impacts on the transportation sector (Baldwin & Orvis, 2022). It uses a customized model based on the open-source Energy Policy Simulator, which projects sales of new vehicles from a choice function (Energy Innovation, n.d.).[1] The model is updated to include the most recent data on U.S. combustion and electric vehicle purchase and ownership costs from Slowik et al. (2023). In this study, the model is updated to include the most recent estimates of the average IRA incentive values for electric vehicles based on the latest guidance from the U.S. Department of Treasury and the U.S. Department of Energy, along with estimates of the share of new U.S. EVs that meet eligibility requirements for domestic battery assembly, critical minerals sourcing, final vehicle assembly, foreign entities of concern, manufacturer's suggested retail price eligibility, and adjusted gross income (AGI). We analyze the value of the tax credits, factoring in the various provisions and eligibility restrictions to model how the pace and scale of U.S. EV sales would change if the IRA was repealed. The projected changes in EV demand are used to project the net change in domestic jobs, from vehicle assembly and parts manufacturing to battery production and charging infrastructure.

ANALYSIS OF ELECTRIC VEHICLE COSTS AND IRA INCENTIVES

Average new U.S. LDV prices for 2026 through 2030 are key inputs to the consumer choice model. Purchase price data for new cars, crossovers, sport utility vehicles (SUVs), and pickups were taken from the International Council on Clean Transportation (ICCT)'s 2022 study of conventional and electric vehicle costs (Slowik et al., 2022).[2] The assumed sales-weighted average electric range increases from 250 miles in 2022 to 300 miles by 2030 for new BEVs and from 30 miles in 2023 to 50 miles in 2030 for new PHEVs. We assumed that the class breakdown of EVs resembles that of all new LDVs in the United States in 2020: 27% cars, 35% crossovers, 23% SUVs, and 15% pickups (National Highway Traffic Safety Administration, 2022). Figure 1 shows the resulting sales-weighted average conventional and electric vehicle prices.

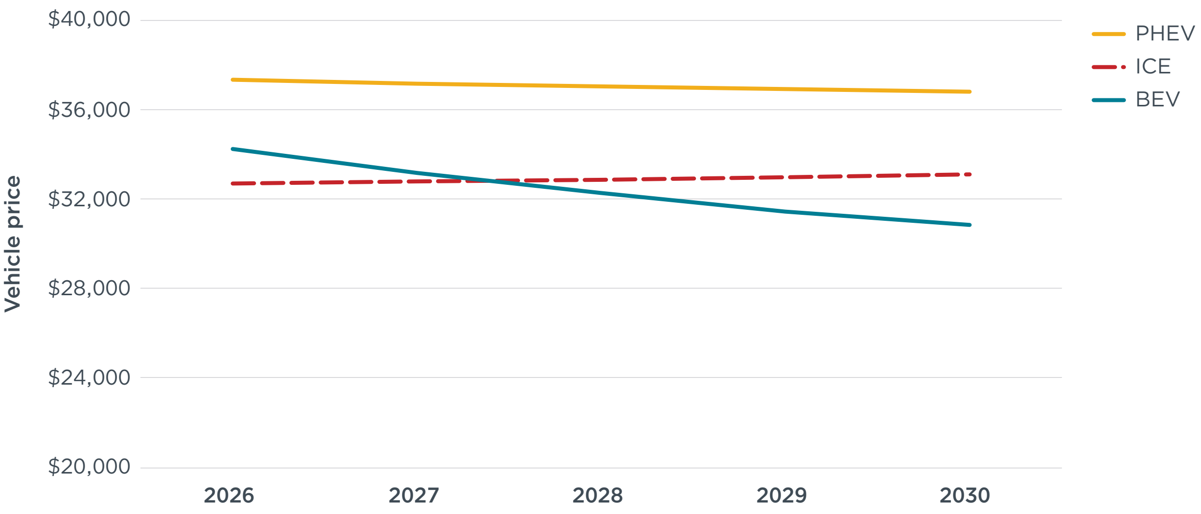
---

[1] The choice function uses a logit model as outlined in the Global Change and Analysis Model. The logit computes sales shares using technology-specific shareweights and ownership costs and a common exponent. For more information, see https://jgcri.github.io/gcam-doc/choice.html. The original Energy Innovation® analysis also modeled vehicle fleet turnover, vehicle stock, and energy consumption and emissions. See Baldwin and Orvis (2022).

[2] The vehicle purchase price data from the 2022 study were adjusted for inflation but not adjusted for tariffs due to uncertainty about relative impacts on electric and combustion vehicle costs.

Figure 1

Sales-weighted average conventional and electric vehicle prices applied in this analysis



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

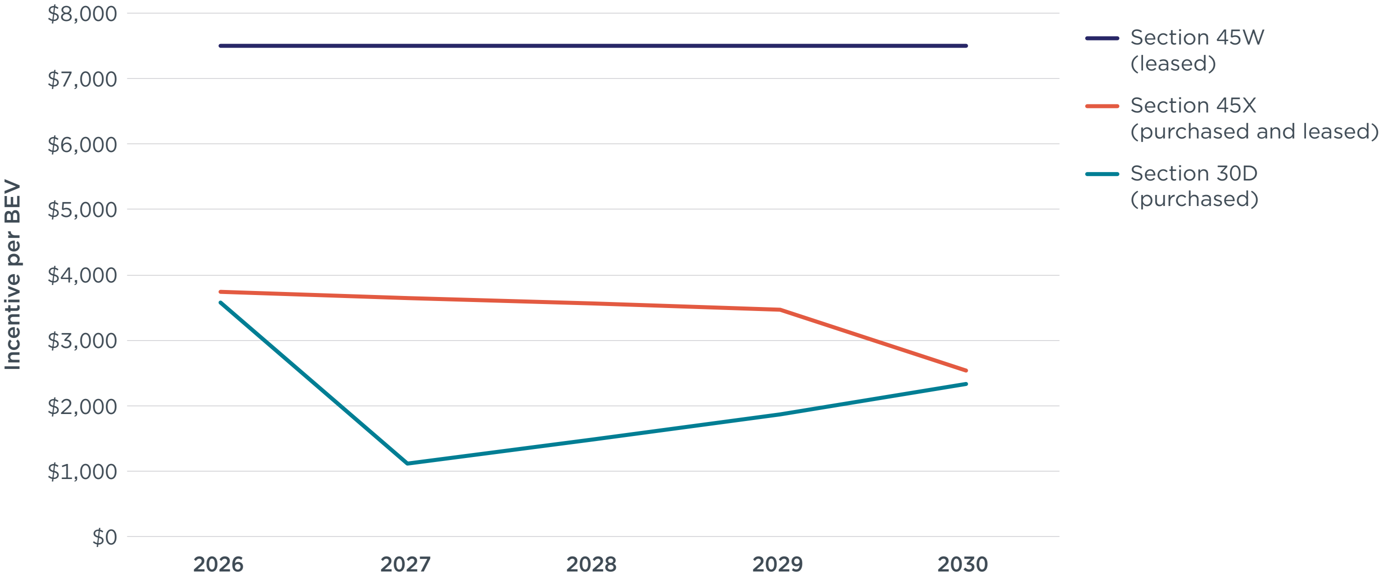
Consistent with the approach in Slowik et al. (2023), several additional cost components were applied to assess the 6-year first-owner cost of ownership for electric and combustion vehicles and used in the consumer choice model logit function. These include costs of electricity and gasoline, maintenance, insurance, parking, licensing, and registration, in addition to monetized consumer barriers including range anxiety and charging time for electric vehicles.

We then applied IRA tax credits to the consumer choice model by reducing the ownership costs for EVs. We considered the Passenger Clean Vehicle Tax Credit (§30D) for electric vehicle purchases, the Clean Commercial Vehicle Credit (§45W) for electric vehicle leases, and the Advanced Manufacturing Production Tax Credit (§45X) for battery production. The §30D and §45W credits allow taxpayers and businesses or organizations that purchase a qualifying EV to claim up to $7,500 for a personal or commercial clean LDV (Congressional Research Service, 2024). The §45X credit subsidizes the domestic production of components and critical minerals needed for EV batteries by up to $45/kWh of battery capacity (U.S. Department of Energy, n.d.-b).

We next estimated the share of new EVs that comply with IRA eligibility requirements related to domestic battery assembly, critical minerals sourcing, final vehicle assembly, foreign entities of concern, manufacturer's suggested retail price eligibility, and AGI, making them eligible for the Passenger Clean Vehicle Tax Credit (§30D). We estimated that the share of new EVs that comply with the eligibility requirements will initially decrease through 2027 as requirements tighten, but increase after that as changes in supply chains take effect. More details are provided in the appendix. The analysis considered that 58% of new EV registrations are purchased vehicles and 42% are leased, based on data from Cox Automotive (2024). We assumed that all of the Advanced Manufacturing Production Tax Credit (§45X) is passed down to consumers in the form of reduced vehicle price. For BEVs, the resulting IRA incentive values applied to new vehicle prices are shown in Figure 2. PHEVs, not shown, receive a lower credit under §45X due to their relatively smaller battery pack size, and a lower §30D credit due to the relatively lower share of new PHEVs that qualified for the credit in 2025 based on the U.S. Department of Energy (n.d.-a).

Figure 2

Summary of IRA incentive values applied to battery electric vehicle prices



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

ELECTRIC VEHICLE UPTAKE WITH AND WITHOUT THE IRA

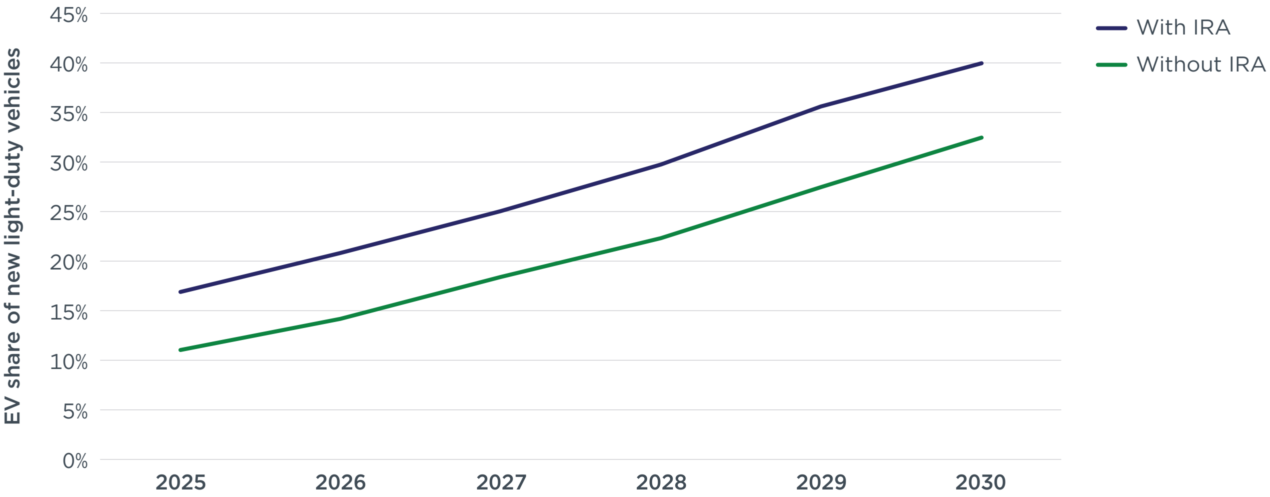
We considered two policy scenarios for light-duty EV market growth in our analysis—With IRA and Without IRA—with the corresponding projected EV sales share trajectories developed by EI. These sales shares were used to model the light-duty fleet transition using the ICCT's Roadmap Model (ICCT, 2024a).

We assumed the same regulatory context under both scenarios. As noted above, the Trump administration has directed federal agencies to undo key EV policies, including the multi-pollutant emissions standards for model years 2027 and later light-duty and medium-duty vehicles (2024) and California's waiver to implement its Advanced Clean Cars II program (The White House, 2025). While the EPA multi-pollutant standards and California Advanced Clean Cars II programs have not yet been affected as of March 2025, we anticipate that further actions will likely be taken in the coming months in an attempt to undo, rollback, or render them ineffective. We thus assumed in both scenarios that these policies are not in place.

In the With IRA scenario, we assumed the Passenger Clean Vehicle Tax Credit (§30D) for electric vehicle purchases, the Clean Commercial Vehicle Credit (§45W) for electric vehicle leases, and the Advanced Manufacturing Production Tax Credit (§45X) for battery production remain in place. In the Without IRA scenario, we assumed these three tax credits are repealed in 2025. Figure 3 shows the EV sales share trajectory from 2024 through 2030 for the With IRA and the Without IRA scenarios. Sales of EVs increase from 10% of LDV sales in 2024 to 40% in 2030 under the With IRA scenario; under the Without IRA scenario, EV sales are depressed, increasing to 32% of LDV sales in 2030, representing an 8-point decrease or 20% reduction in EV sales by comparison. BEVs represent about 85% of the EV sales and PHEVs represent about 15%. Full details are shown in Table A1 in the appendix.

Figure 3

Electric vehicle sales share trajectory for the With IRA and Without IRA scenarios, 2026–2030



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

The continued, albeit slower, growth of EV sales in the Without IRA scenario in our modeling is largely a result of declining EV prices over time. Even without the IRA, we projected BEVs to reach cost parity with ICEVs by 2028 on average (Figure 1). Thus, technological progress and economics are the main factors driving EV uptake, while the IRA has an accelerating effect on top of that trend.

The sales shares for each scenario were then used as inputs to the ICCT's Roadmap Model to model the light-duty fleet transition to EVs from 2024 to 2030 and the associated charging infrastructure demand. The fleet transition analysis largely maintains the assumptions from the ICCT's national analysis of charging infrastructure needs (Pierce & Slowik, 2024). However, we updated the historical and projected absolute LDV sales from MOVES3 with newer data from MOVES4 (EPA, 2023). We also updated the EV efficiency assumptions using data underlying the ICCT's battery jobs analysis (Bui & Slowik, 2025) combined with historical and projected EV sales data from Argonne National Laboratory and MOVES4, respectively, to estimate the age-weighted fleet efficiency by powertrain (Argonne National Laboratory, n.d.; EPA, 2023).

In the With IRA scenario, EV sales increase from about 3.2 million in 2026 to 6 million by 2030. In the Without IRA scenario, EV sales increase from 2.2 million in 2026 to about 4.9 million in 2030. This is a difference of about 1.1 million in annual EV sales in 2030. In terms of EV stock, about 30 million EVs would be on U.S. roads in 2030 with the IRA, compared to about 23.7 million without the IRA, a difference of about 6.3 million vehicles. The year-by-year evolution of LDV sales and stock between 2026 and 2030 for all the scenarios analyzed are shown in Table A1 and Table A2 in the appendix.

ANALYSIS OF JOB IMPACTS

The following section describes our methodology and the results of the national-level direct job estimates for vehicle production, battery and cell component manufacturing and recycling, and charging infrastructure assembly, installation, and maintenance. Job impacts at the state level follow the national-level analysis. In this section, job impacts refer to direct jobs—permanent long-term positions created by the activities themselves—and do not include additional indirect jobs (supplier and induced jobs) or temporary jobs such as those associated with construction of manufacturing plants. Indirect job impacts in these industries are discussed further below.

NATIONAL ANALYSIS

Vehicle production

Vehicle production jobs include roles in both vehicle assembly plants and parts manufacturing. This covers components specific to each powertrain, such as transmissions, crankshafts, and cylinders for ICEVs, as well as electric motors and inverters for EVs. It also encompasses shared components across vehicle types, such as interior parts (e.g., instrument panels, glove boxes, air conditioning, and carpeting), exterior parts (e.g., door handles, roof rails, and window glass), chassis components (e.g., suspension and steering systems, wheels and tires, and brake systems), and body structures (e.g., bumpers, door frames, and roofs).

To analyze the number of ICEV and EV production jobs in each year, we first determined the labor ratio in jobs per thousand vehicles produced separately for battery electric, plug-in hybrid electric, and internal combustion engine vehicles. The ratios of jobs per thousand vehicles produced were then multiplied by our estimates of the number of domestically produced vehicles each year with and without the IRA.

To determine the amount of labor required for vehicle production, we used data from the U.S. Bureau of Labor Statistics (BLS; BLS, n.d.) and FEV Consulting, Inc. teardown (2023). According to BLS North America Industry Classification System (NAICS) codes 3361, 3362, and 3363, which cover motor vehicle and parts manufacturing, this sector employed an average of 1.02 million direct jobs in 2024 (BLS, n.d.). After adjusting for estimates of employment for medium- and heavy-duty motor vehicle and parts manufacturing, we estimated approximately 1.0 million direct jobs in light-duty motor vehicle and parts manufacturing.[3]

Using FEV Consulting (2023) teardown data on labor demand for the Volkswagen Tiguan (ICEV) and ID.4 (BEV), we found that the BEV requires approximately 26% less labor than the ICEV for everything outside of the battery. The FEV data also show that the ID.4 has more non-powertrain labor demand than the Tiguan due to the increased complexity of the ID.4 for parts like the vehicle body, thermal system (including HVAC circuit, cooling loop for powertrain, and radiator install), and seats. Because these additional non-powertrain labor requirements are not required for electrification, we reduced the ID.4 non-powertrain labor demand to be equal to that of the Tiguan. With this change, the difference in total labor increases from 26% to 34%.

---

[3] IBIS World reported that in 2024, there were approximately 40,000 employees in the truck and bus manufacturing sector in the United States. We assumed this number for medium- and heavy-duty vehicle manufacturing assembly and parts manufacturing (IBIS World, 2025).

Combining the FEV and BLS data with U.S. BEV and ICEV production volumes in 2024, we estimated that ICEV production requires about 96 jobs per thousand vehicles per year, while BEV production, with 34% lower labor requirements, requires approximately 64 jobs per thousand vehicles per year, not including the battery. We address batteries in the next section.

PHEVs have both combustion and electric powertrains and thus require more labor per vehicle. For PHEVs, the labor for assembly is 20% higher than for the ICEV (Barrett & Bivens, 2021), which was then added to the remaining non-powertrain labor from the Tiguan. We then included the labor requirements for production of the Tiguan and the ID.4 powertrains (excluding the battery). The resulting labor requirement for the PHEV is 24% higher than for the ICEV (excluding the PHEV battery pack), or about 119 jobs per thousand vehicles per year.

The per-vehicle labor findings were multiplied by the total annual production of ICEVs and EVs in the United States based on historical production and sales data from Marklines and EV Volumes, respectively (Marklines, n.d.; EV Volumes, n.d.). In 2024, the United States was a net importer of both combustion and electric vehicles. Between 2021 and 2024, the average ratio of the number of ICEVs that were produced in the United States to the number of ICEVs that were sold was 63%. Meanwhile, in 2024, the ratio of the number of EVs that were produced in the United States to the number of EVs that were sold was 74%. These ratios were applied to the projections of annual U.S. ICEV and EV sales to analyze the number of vehicles produced domestically with and without the IRA.

For the With IRA scenario, we kept these ratios constant through 2030. For the Without IRA scenario, we assumed a reduction in the share of EV sales that are domestically produced due to the removal of the §30D and §45X tax credits. Specifically, the ratio of EVs that are produced in the United States to the number that are sold was assumed to decline from 74% to about 63% by 2030, which is consistent with the historical average ratio of domestic production to sales for ICEVs and reflects slower growth in domestic EV production resulting from IRA repeal. Removal of §30D was assumed to weaken the motivation for domestic production by eliminating incentive eligibility requirements such as those related to final assembly in North America, clean mineral sourcing, and foreign entities of concern. Removal of §45X reduces the incentive and cost-effectiveness of domestic battery production; historically, growth in battery production has occurred in unison with growth in EV production (Bui et al., 2022). From this, we estimated that there are about 630,000 more LDVs produced domestically with the IRA than without the IRA in 2030, a difference of about 6.5%.

This approach results in domestic EV assembly volumes that align with estimates from other studies. The EDF estimates that U.S. EV manufacturing facilities will have the capacity to produce around 4.5 million light- and heavy-duty vehicles by 2028 (EDF, 2025). However, assembly capacity does not necessarily equate to actual assembly volumes. A previous ICCT study (Bui et al., 2021) indicated that actual output could be about 75% of assembly capacity, suggesting a potential production of around 3.4 million vehicles in 2028. Under the With IRA scenario, our projected number of domestically produced light-duty EVs in 2028 is approximately 3.3 million vehicles.

Battery pack manufacturing, cell component production, and battery recycling

Our analysis of battery sector jobs builds upon our previous U.S. battery jobs study (Bui & Slowik, 2025), the EV sales projections in this analysis, and assumptions related to the impacts from the loss of the §45X tax credit.

For battery packs, the total national job count was determined by multiplying the annual GWh of production capacity by the 95 jobs-per-GWh ratio identified in Bui & Slowik (2025). The annual GWh in the With IRA scenario is based on industry announcements of battery production capacity. Specifically, the annual GWh is based on the midpoint between the Announcements from LDV-Only Facilities scenario and the Additional Battery Announcements scenario from Bui & Slowik (2025) through 2030. The use of the midpoint is based on the fact that the additional battery facilities in the Additional Battery Announcements scenario produce batteries for multiple applications in addition to LDVs. Announcements of battery production capacity exceed the projected demand from light-duty EV battery packs with the IRA (Figure 3), indicating that the §45X Advanced Manufacturing Production Tax Credit has made U.S. battery production globally cost-competitive and that the industry may choose to increase the share of battery packs that are exported. For the Without IRA scenario, the annual GWh was based on the number of EVs produced each year in the United States, which is consistent with the EV sales share in Figure 3 and the domestic production ratios from the previous section.

The modeled GWh of battery production under the With IRA scenario is about 1,050 GWh in 2030, compared with about 250 GWh in 2030 under the Without IRA scenario. This is a reduction of about 75%. Although our analysis of GWh in the With IRA scenario is based on facility announcements and industry investments, it is uncertain whether all that battery capacity will come online, nor is it clear whether additional battery facilities will be announced. Recent analysis indicates that battery manufacturers have built substantial excess capacity globally in preparation for expected growth in EV adoption and energy storage deployment (Bloomberg New Energy Finance [BNEF], 2024). At the same time, our analysis of U.S. battery production under the Without IRA scenario is conservative in that it assumes that all domestically produced EVs will use domestically produced battery packs: in this scenario, there is no longer an incentive for automakers to use domestically produced battery packs, so they may choose to increase the share of battery packs that are imported if that reduces costs. If some of these EVs use battery packs produced outside of the United States, the GWh, and therefore the number of jobs, without the IRA would be lower than what we estimate here.

Demand for critical minerals and raw materials for batteries in the With IRA scenario amounts to more than 100 kilotons (kt) of lithium, 446 kt of nickel, 28 kt of manganese, and 49 kt of cobalt in 2030; in the same year, demand in the Without IRA scenario is about 24 kt of lithium, 108 kt of nickel, 7 kt of manganese, and 12 kt of cobalt. Known reserves of lithium and manganese, if exploited, would provide enough supply to meet domestic demand in either scenario (ICCT, 2024b). There is also evidence that the supply from lithium mining and refining projects that are underway exceeds the demand for lithium from LDV batteries in the With IRA scenario (Shen et al., 2024). More details on critical mineral and raw material demand estimated in this analysis can be found in Figure A1, Table A3, and Table A4 in the appendix.

For cell components, specifically cathodes, anodes, and separators, the national job count in the Without IRA scenario was determined by multiplying the estimated GWh based on facility announcements by the jobs-per-GWh ratio as calculated in Bui and Slowik (2025). We applied the same approach for battery recycling. The announced GWh of U.S. cathode, anode, and separator production is lower than the announced GWh of battery production by a factor of about four, indicating that absent additional developments, U.S. battery manufacturers would likely need to import a substantial share of components. For electrolytes, announced capacity exceeds announced battery pack production capacity, so we reduced the GWh to not exceed the pack production in each scenario (Bui & Slowik, 2025). In the With IRA scenario, we increased the domestic capacity of manufacturing for each cell component except electrolytes, as well as battery recycling, by 10% to reflect the effect of the §45X tax credit on investments in the manufacturing and recycling industries to support the growing EV and battery demand. We estimated that battery pack production contributes about 88% of these jobs, followed by cell components production at about 10% of jobs and recycling at about 2% of jobs (see Bui & Slowik, 2025).

Charging infrastructure

The analysis of charging infrastructure jobs is based on our previous study (Bui et al., 2024). Jobs related to new charger assembly and installation—including electrical installation, general construction labor, planning and design, and administration and legal—were calculated by multiplying person-days by the annual growth in charger deployment. Person-days represent the amount of days needed by one individual to perform a task. For example, four person-days means that a task would take one person four days to complete. The person-day jobs for each job type and charger type were taken from Bui et. al. (2024). Software and electrical maintenance and repair jobs were scaled based on the cumulative number of chargers installed in a given year. Based on estimates of domestic charger assembly announcements and consistent with Bui et al. (2024), the shares of new chargers assumed to be assembled in the United States were 100% for DC fast chargers and 33% for Level 2 chargers.

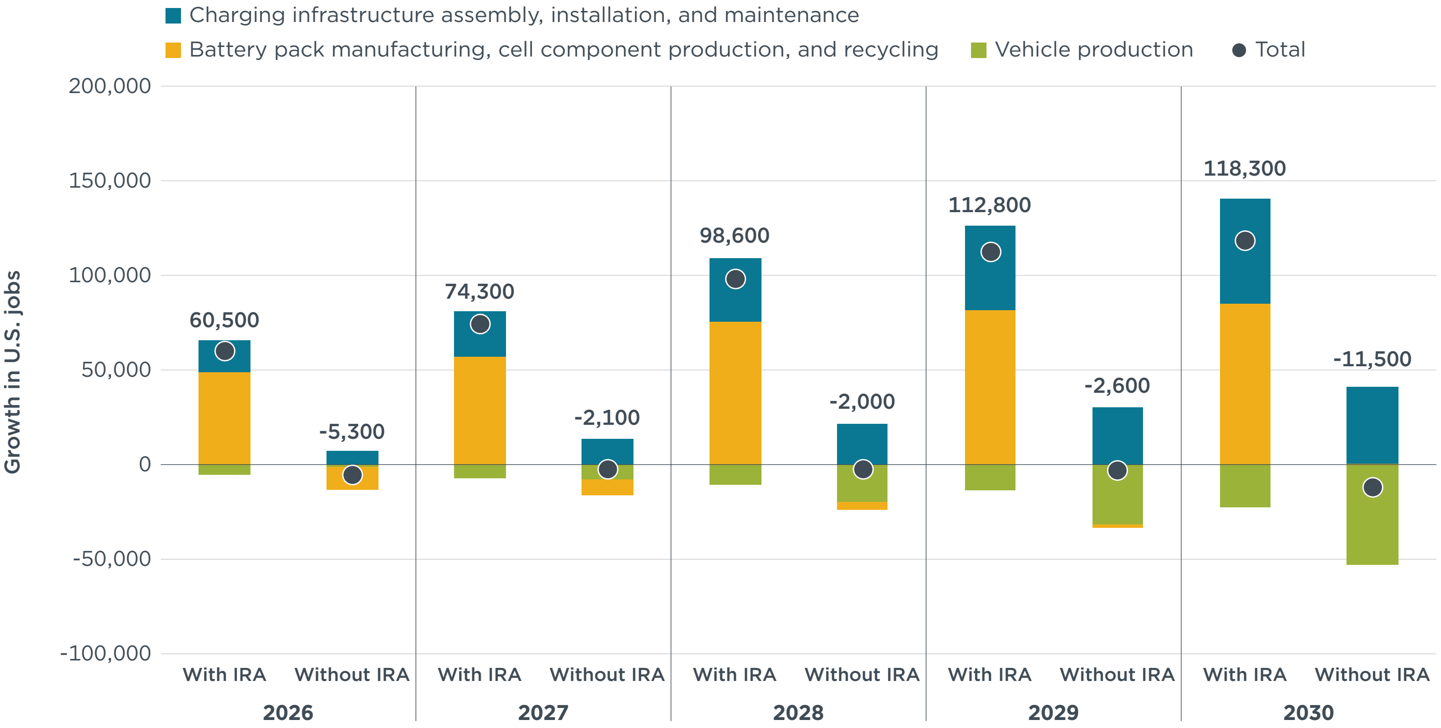
Charger projections for each scenario were derived using the ICCT's EV CHARGE Model (ICCT, 2023), vehicle technical specifications from Pierce and Slowik (2024), and EV sales shares projections for the With IRA and Without IRA scenarios from Figure 1. Overall, we find that the number of chargers needed declines by about 21% without the IRA compared with if the IRA is in force. For home chargers, including single- and multi-family homes, we find that about 18.3 million home Level 2 chargers are needed in 2030 with the IRA, compared with 14.5 million without the IRA. For non-home chargers (including DC fast, public Level 2, and workplace Level 2 chargers), we find that about 1.8 million chargers are needed in 2030 with the IRA, compared with about 1.45 million without the IRA. More details are shown Figure A2 and Figure A3 in the appendix.

National-level job results

Figure 4 summarizes our findings of job growth across the U.S. vehicle production, battery manufacturing, and charging infrastructure industries from 2026 to 2030 compared with 2024, with and without the IRA. The gray circle shows the net impact on jobs in each scenario. With IRA provisions, we project that more than 118,000 direct jobs would be added across the U.S. vehicle, battery, and charging industries. Repealing EV-related IRA provisions would result in a net job loss of close to 12,000 in 2030, leaving 130,000 jobs unmaterialized.

Figure 4

Projected growth in U.S. jobs compared with 2024 under the With IRA and Without IRA scenarios



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

Our analysis of jobs is comparable with other estimates. The EDF (2025) reported that, as of November 2024, announced jobs in passenger EV assembly, EV batteries, EV battery components, and recycling totaled 172,000. In comparison, our analysis projects that by 2030, there could be approximately 199,000 jobs in these sectors.

As the transition to EVs shifts employment away from traditional ICEV manufacturing towards newer sectors necessary for EV adoption, there will continue to be opportunities to create high-quality jobs with prevailing wages and improved working conditions. Among other trends, as new EV and battery manufacturing plants have emerged, especially in the South, developments around autoworker unionization have occurred. In May 2024, workers at an Alabama electric bus plant secured a union contract with wage increases of 25% to nearly 40% (Eidelson, 2024a). The United Auto Workers has secured contracts for its members at two separate General Motors battery manufacturing plants and reached an agreement with Rivian for the automaker to take a neutral stance on unionizing its Normal, Illinois plant once it reached profitability (United Auto Workers, 2025b; LaReau, 2024; Eidelson, 2024b). These contracts secured wage increases of 15%–30%, protected accrued paid time off when on family medical leave and short term disability, improved discipline policies, increased holiday and paid time off flexibility and pay, and established industry best practices for health and safety that can be adopted at non-union facilities, among other benefits (United Auto Workers, 2023, 2024, 2025a).

Likewise, many jobs involved in deploying and maintaining charging infrastructure require skilled electricians, many of whom are members of the International Brotherhood of Electrical Workers (IBEW). The union has already been closely involved in the Electric Vehicle Infrastructure Training Program, which trains and certifies electricians to take part in charging infrastructure projects (IBEW, 2022). Some charging providers are also partnering to improve training. Electric vehicle charging company ChargePoint, for instance, partnered with the National Electrical Contractors Association to prepare its nearly 4,000-member, IBEW-unionized companies to install EV charging infrastructure (The White House, 2022).

Indirect jobs

The growth of direct employment in EV-related industries is likely to drive additional indirect job creation across the economy. Indirect jobs are split into two categories: supplier jobs, which result from increased demand for upstream sectors in the supply chain (e.g., raw mineral processing for EV batteries and manufacturing of semiconductors for EV chargers) and induced jobs, like retail and hospitality from the wages spent by direct and supplier employees (Bivens, 2019). There is often a multiplicative effect in indirect job creation, whereby the number of supplier and induced jobs can exceed that of new direct employment. For instance, GM's expansion of an EV pickup production facility in Orion Township, Michigan, along with the establishment of a new Ultium battery manufacturing facility in Lansing, Michigan, has an estimated employment multiplier of 3.8, indicating that for every new direct job created an additional 2.8 jobs are anticipated in Michigan's economy (Achtenberg, 2022). The EDF found that for nearly 200,000 jobs announced for EV-related sectors nationwide, another 826,000 additional indirect jobs could be generated (EDF, 2025).

We estimated the indirect job creation from the direct jobs in each of the sectors in our analysis using employment multipliers per 100 direct jobs from the Economic Policy Institute (EPI; Bivens, 2019). These multipliers, for both supplier and induced jobs, are defined for 179 private industries based on industry categories from BLS. Because some of the industries in our analysis are not explicitly included in the list of EPI industries, such as EV battery manufacturing and recycling, we applied multipliers from the closest applicable industry. For instance, for direct jobs in charging infrastructure electrical maintenance and repair, we applied the employment multipliers for the electronic and precision equipment repair and maintenance industry. Table 1 shows the employment multipliers used in this analysis.

Table 1

Employment multipliers per 100 direct jobs used to estimate indirect jobs impacts

Industry	Direct jobs to which multipliers are applied	Supplier jobs multiplier	Induced jobs multiplier	Total indirect jobs multiplier
Motor vehicle assembly	Vehicle assembly (ICEV and EV)	935.8[a]	N/A[b]	935.8[c]
Motor vehicle parts manufacturing	Vehicle parts manufacturing (ICEV and EV)	209.8	161.2	371.0
Electric power generation, transmissions, and distribution	Electrical installation	399.1	165.2	564.3
Other electrical equipment and component manufacturing	Charger assembly, battery packs and cell component manufacturing, and battery recycling	166.8	114.5	281.3
Construction	General construction labor	88	89.6	177.6
Architectural, engineering, and related services	Planning and design	90	114.1	204.1
Legal services	Administration and legal services	89.2	111.3	200.5
Electronic and precision equipment repair and maintenance	Electrical maintenance and repair	281.2	166.5	447.7
Software publishers	Software maintenance and repair	193.6	180.3	373.8

Note: Multipliers are adapted from EPI.

[a] For ICEVs and EVs, we subtracted direct jobs from motor vehicle parts manufacturing. For EVs, we also subtracted direct jobs from battery manufacturing and recycling.

[b] Not used to avoid potential double counting with induced jobs from vehicle parts manufacturing and battery manufacturing. Bivens (2019) estimates the induced jobs multiplier per 100 direct jobs in motor vehicle assembly to be 492.1.

[c] This only includes the supplier jobs multiplier per 100 direct jobs for the reasons explained in the former note; the total indirect jobs multiplier from the original EPI source is 1428.0.

Because the sectors we analyzed are in related industries, there is some overlap between direct jobs for one sector and indirect jobs in another. Specifically, the vehicle parts manufacturing industry is a key supplier of the vehicle assembly industry for both EVs and ICEVs, as is the battery manufacturing industry for the EV vehicle assembly industry. To avoid double counting these jobs, we subtracted the direct jobs from the estimated supplier jobs in these industries. For ICEV assembly, we subtracted the direct ICEV parts manufacturing jobs from the calculated supplier jobs, and for EV assembly we subtracted both the direct EV parts manufacturing jobs and the battery manufacturing jobs from the calculated supplier jobs.

Relative to the With IRA scenario, about 310,000 indirect jobs would not materialize in 2030 under the Without IRA scenario. This estimate is conservative and does not account for induced jobs from vehicle assembly due to the difficulty in distinguishing induced jobs between the vehicle assembly sector and its suppliers (i.e., vehicle parts manufacturing and battery manufacturing). Because of the lack of a multiplier specifically for high-voltage battery manufacturing, it is also unclear to what extent the EPI indirect job multipliers applied for EV battery manufacturing would capture upstream jobs in raw material mining and refining.

STATE-LEVEL ANALYSIS

This section outlines our methodology and findings of how IRA repeal would impact jobs at the state level across vehicles, batteries, and charging infrastructure.

Vehicle production

State-level vehicle production jobs are split into vehicle assembly jobs and vehicle parts manufacturing jobs. We used facility-level data to estimate how many jobs are required for vehicle assembly by dividing the number of jobs at ICEV and BEV assembly facilities by their respective vehicle assembly volumes from 2023 based on data from Marklines (n.d.). The complete facility-level data are shown in Table A5, Table A6, Table A7, and Table A8 in the appendix. We estimated that vehicle assembly represents about 22% of total vehicle production labor for ICEVs and 27% for BEVs, with the remaining 78% and 73% of labor, respectively, engaged in vehicle parts manufacturing. Specifically, the facility-level data show there are about 21 vehicle assembly jobs per thousand ICEVs and about 17 vehicle assembly jobs per thousand BEVs, compared with about 96 jobs for assembly and parts manufacturing for ICEVs and 64 jobs for assembly and parts manufacturing for BEVs. For PHEVs, the labor for assembly is increased by 20% relative to ICEVs (Barrett & Bivens, 2021), which means that PHEV assembly represents about 21% of the total vehicle production labor.

Vehicle assembly

We next used these vehicle production labor ratios to estimate the number of jobs in ICEV and EV assembly and parts manufacturing. The approach differed between combustion and electric vehicles. For ICEVs, state shares of vehicle assembly jobs were based on facility-level ICEV assembly capacity data from Marklines (n.d.). For EVs, state shares of vehicle assembly jobs were based on a combination of assembly data from EV-only facilities and facilities that assemble both ICEVs and EVs (Blue Green Alliance [BGA], 2025), and LDV assembly data from facilities that are not included in the BGA data (Marklines, n.d.).

The BGA data cover about 3 million vehicles, which is approximately 68% of our total national-level projection of EVs assembled in 2030 under the With IRA scenario. To estimate state-level vehicle assembly jobs for EVs, we first allocated 68% of the national EV assembly jobs to the states with known EV facilities from the BGA data and then distributed the remaining 32% of EV assembly jobs proportionally among LDV assembly facilities not included in the BGA data. This approach is consistent with the fact that many facilities assemble both electric and combustion vehicles and assumes that much of the growth in EV assembly will be in the same areas where LDV assembly occurs.

Vehicle parts manufacturing

The approach to estimating state-level parts manufacturing jobs also differed between combustion and electric vehicles. For ICEVs, state shares of vehicle parts manufacturing jobs were based on a combination of employment data from BLS and total LDV assembly in each state. The BLS data provided the total number of LDV parts manufacturing jobs in 2023 for several states, including Michigan, Ohio, Indiana, Kentucky, Alabama, New York, and Mississippi, which together make up about 55% of total U.S. LDV parts manufacturing jobs. Additional state-level data on vehicle parts manufacturing jobs were not available. To estimate state-level vehicle parts manufacturing jobs for ICEVs, we first allocated our estimated national vehicle parts manufacturing jobs to these seven states based on the BLS data, and then distributed the remaining 45% of jobs to the remaining states based on the relative share of annual LDV assembly from Marklines (n.d.). This approach assumes that many ICE parts manufacturing jobs are in the same states where the vehicles are assembled.

For EVs, state shares of vehicle parts manufacturing jobs were based on a combination of facility announcements from BGA's EV Jobs Hub (2025) and the distribution of state-level LDV parts manufacturing from the BLS and Marklines data. The facility-level BGA announcement data on EV parts manufacturing jobs sum to about 15,000 jobs, which is around 5% of our total national-level estimate of EV parts manufacturing jobs in 2030. For our state-level analysis, we first allocated our national vehicle parts manufacturing job estimates to the states based on the BGA data, and then proportionally distributed the remaining 95% of EV parts manufacturing jobs to the same facilities that manufacture ICEV parts discussed above. This approach is consistent with the fact that many vehicle parts are shared across electric and combustion vehicles outside of the powertrain and assumes that much of the growth in EV parts manufacturing will be in the same areas where ICEV parts manufacturing and final vehicle assembly occur.

Battery pack manufacturing, cell component production, and battery recycling

The national-level jobs estimates for the battery sector were allocated to states based on the share of the announced production in GWh in each state for batteries, battery cell components, and battery recycling. Specifically, we applied facility-level data from Bui & Slowik (2025) to assess the relative production capacity—and therefore number of jobs—in each state.

Charging infrastructure

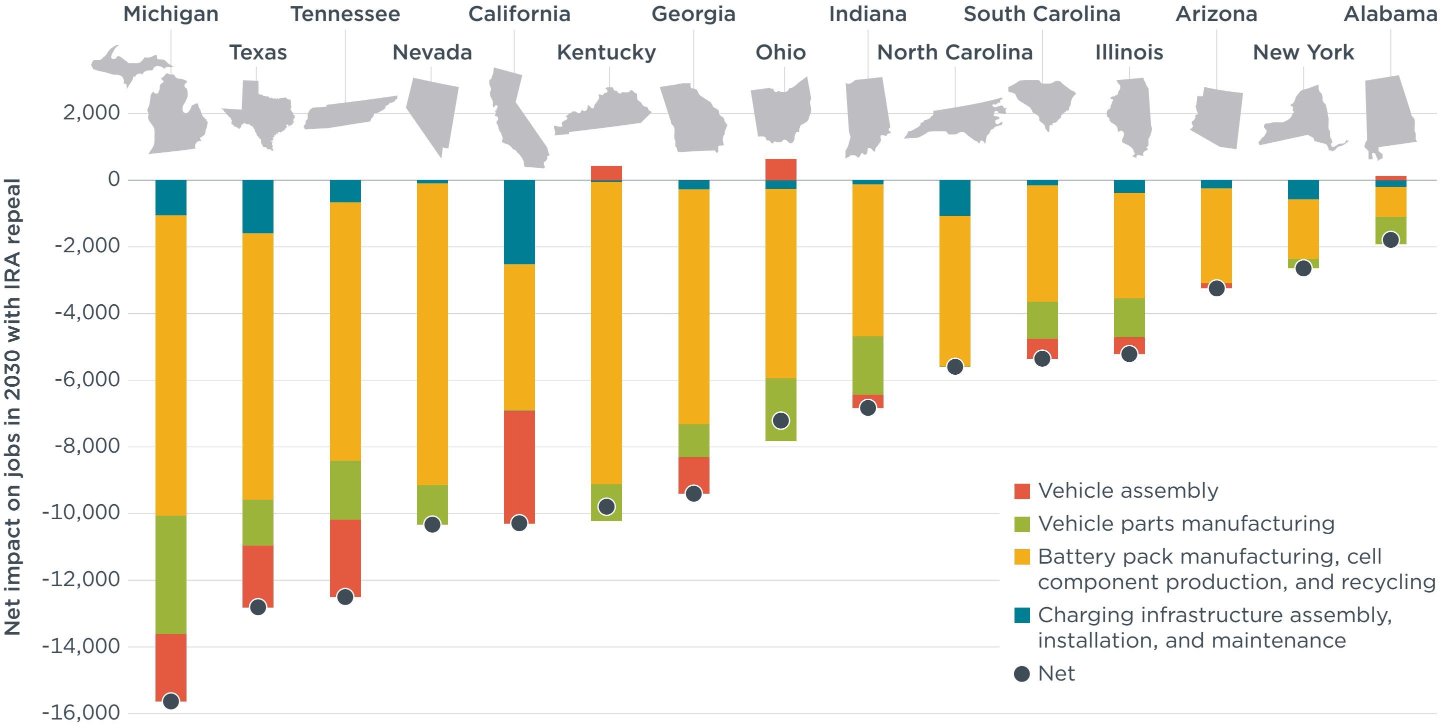
Estimates of state-level charging infrastructure jobs vary by job type (Bui et al., 2024). The number of charger assembly, software maintenance and repair, and administration and legal jobs in each state were calculated based on the state's share of total announced charger assembly jobs. These data were sourced from BGA's EV Jobs Hub (2025), which provides facility-level details on announced production capacity and/or job numbers. These jobs make up about 28% of total charging infrastructure jobs. For all other charging-related jobs—including electrical installation, electrical maintenance and repair, general construction labor, planning, and design—the national-level jobs were distributed proportionally based on a 50-50 weighted mix of 2024 LDV and EV sales shares by state (EV Hub, 2024). This approach assumes that these jobs will be concentrated in areas with higher EV and LDV sales as EV sales in the United States increase.

State-level jobs results

Figure 5 shows the state-level job impacts of repealing the EV-related IRA provisions, highlighting the net job losses between the With IRA and Without IRA scenarios for 2030. The changes in jobs are categorized into vehicle assembly, vehicle parts manufacturing, battery production, and charging infrastructure, and the net change is shown by the gray circle. Drawing from the national-level findings presented above, the state-level results show the geographic distribution of the 130,000 jobs that would be eliminated in 2030 if the IRA were repealed. Some states see a very small growth in vehicle assembly jobs with IRA repeal, but in each of these states the number of jobs gained in vehicle assembly (indicated by the positive numbers) are far more than offset by the number of jobs lost in vehicle parts manufacturing, battery production, and charging infrastructure (indicated by the negative numbers). The 15 states with the greatest number of jobs unrealized due to IRA repeal are Michigan, Texas, Tennessee, Nevada, California, Kentucky, Georgia, Ohio, Indiana, North Carolina, South Carolina, Illinois, Arizona, New York, and Alabama. Repealing the IRA would mean 10,000 to 16,000 jobs lost in the top 5 states most affected, with 14 states experiencing job losses over 2,000.

Figure 5

Net impact on jobs in 2030 with IRA repeal in the most impacted 15 states



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

CONCLUDING REFLECTIONS

Inflation Reduction Act repeal could reduce EV adoption by as much as 20% by 2030. The IRA contains key provisions that support EV adoption, namely the §30D Passenger Clean Vehicle Tax Credit that provides consumers up to $7,500 towards the purchase of a new EV, the §45W Clean Commercial Vehicle Credit that provides businesses with up to $7,500 towards the purchase of a new commercial light-duty EV and includes consumer leasing, and the §45X Advanced Manufacturing Production Tax Credit for domestically sourced batteries. These provisions help to make EVs more affordable to consumers, enabling greater uptake. Under a scenario with the IRA in place, EV adoption is expected to reach 40% in 2030; this falls to 32% in a scenario without the IRA.

Inflation Reduction Act repeal could cause a net loss of about 130,000 direct jobs nationwide by 2030 across the vehicle assembly and parts production, battery manufacturing, and charging infrastructure industries. Our total projected job losses of 440,000 from IRA repeal include an additional 310,000 indirect jobs that could be lost without the IRA. Reduced EV adoption and domestic battery production could lead to depressed growth in indirect and induced jobs, such as in the mineral processing, retail, and hospitality industries.

Inflation Reduction Act repeal would jeopardize progress in onshoring vehicle production. The consumer EV tax credit and the battery manufacturing tax credit specifically incentivize domestic vehicle and parts manufacturing. U.S. investments spurred by these tax credits will contribute to increased onshoring of auto and battery industry jobs. Without those provisions, we do not expect the same volume of U.S. vehicle and parts manufacturing capacity, although we do not specifically assess the effects of potential changes to tariffs. While EVs and non-battery parts generally require fewer assembly and manufacturing jobs than ICEVs, we find that this effect is more than offset by the onshoring effect of the IRA; with IRA repeal, the U.S. would lose auto assembly and parts manufacturing jobs overall. This is additional to the large job losses that would occur in the battery and charging infrastructure industries.

Most of the job losses associated with IRA repeal are in the Midwest and southern states, where significant EV supply chain investments have been announced as a result of the IRA. Michigan, Texas, Tennessee, Nevada, California, Kentucky, Georgia, Ohio, Indiana, and North Carolina—which are home to large vehicle assembly and parts manufacturing facilities and/or where there have been substantial announcements of EV-related battery production capacity—were found to have the greatest job losses if the IRA is repealed and EV adoption slows. The top 5 states in terms of unrealized jobs due to IRA repeal are projected to lose between 10,000 and 16,000 jobs, with 14 states experiencing job losses of over 2,000. Many of these states already have well-established LDV manufacturing industries, which make them prime candidates for investment in new EV-related industries, or have a large number of registered EVs requiring significant charging deployment throughout the next decade. Should the IRA be repealed and EV adoption slow, these states are likely to feel the greatest impact.

As the EV industry in the United States moves out of the early adopter phase and tries to break into the broader market, the question is no longer whether EVs are the future of passenger cars but rather which markets will benefit from the change. In 2024, the U.S. EV sales share was just half of the global EV sales share. Automakers are committed to shifting towards EVs globally, and where they produce vehicles will depend on where electrification is happening soonest, as well as which governments are incentivizing EV production and supply chain development. Other countries are far ahead in the EV transition compared with the United States and, in some cases, are experiencing tremendous industrial growth and job creation as a result. The United States has experienced unprecedented levels of EV- and battery-related investment since the passage of the IRA, but these investments and the associated jobs are at risk from potential IRA repeal. Our estimate that IRA repeal could lead to 130,000 lost direct jobs by 2030 is just one indication of the broader economic, industrial, and employment impacts if the United States were to take a backseat in the global EV transition. Whether the United States will catch up may depend on whether it builds on or rescinds key policies to support a domestic EV industry.

REFERENCES

Achtenberg, K. (2022, January 25). *Gov. Whitmer secures historic $7 billion investment by GM to create thousands of manufacturing jobs, making Michigan a home for company's electric vehicle future* [Press release]. https://www.michiganbusiness.org/press-releases/2022/01/historic-7-billion-investment-gm-create-thousands-manufacturing-jobs-secure-michigan-ev-future/

Alliance for Automotive Innovation. (2024, October 15). [Letter to the House Committee on Ways and Means regarding the auto sector]. https://www.autosinnovate.org/association-update/WM%20Tax%20Teams%20Letter%20-%20Auto%20Innovators.pdf

Argonne National Laboratory. (n.d.). *Light duty electric drive vehicles monthly sales updates - historical data* [Data set]. Retrieved December 23, 2024, from https://www.anl.gov/esia/reference/light-duty-electric-drive-vehicles-monthly-sales-updates-historical-data

Atlas Public Policy. (n.d.). Clean Economy Tracker. Retrieved March 19, 2025, from https://cleaneconomytracker.org/

Baldwin, S., & Orvis, R. (2022). *Implementing the Inflation Reduction Act: a roadmap for federal and state transportation policy.* Energy Innovation. https://energyinnovation.org/report/implementing-the-inflation-reduction-act-a-roadmap-for-state-and-federal-transportation-policy/

Barrett, J. & Bivens, J. (2021, September 22). *The stakes for workers in how policymakers manage the coming shift to all-electric vehicles*. Economic Policy Institute. https://www.epi.org/publication/ev-policy-workers/

Bivens, K. (2019). *Updated employment multipliers for the U.S. economy*. Economic Policy Institute. https://www.epi.org/publication/updated-employment-multipliers-for-the-u-s-economy/.

Bloomberg New Energy Finance. (2024, December 10). Lithium-ion battery pack prices see largest drop since 2017, falling to $115 per kilowatt-hour. https://about.bnef.com/blog/lithium-ion-battery-pack-prices-see-largest-drop-since-2017-falling-to-115-per-kilowatt-hour-bloombergnef/

Bloomberg New Energy Finance. (2025). Lithium-ion batteries: state of the industry 2024. https://www.bnef.com/login?r=%2Finsights%2F34445

Blue Green Alliance Foundation. (n.d.). EV Jobs Hub. Retrieved March 1, 2025, from https://evjobs.bgafoundation.org/

Bravender, R. (2024, November 6). Trump declares "unprecedented and powerful mandate." *E&E News*. https://www.eenews.net/articles/trump-declares-unprecedented-and-powerful-mandate/

Bui, A., Slowik, P. & Lutsey, N. (2021). *Power play: Evaluating the U.S. position in the global electric vehicle transition.* International Council on Clean Transportation. https://theicct.org/publication/power-play-evaluating-the-u-s-position-in-the-global-electric-vehicle-transition/

Bui, A., Slowik, P., & Lutsey, N. (2022). *Power play: Unlocking the potential for U.S. automotive trade with electric vehicles.* International Council on Clean Transportation. https://theicct.org/publication/us-can-evs-power-play-unlock-potential-of-auto-trade-with-elec-vehicles-jun22/

Bui, A., Pierce, L., Ragon, P.-L., Sen, A., & Slowik, P. (2024). *Charging up America: the growth of United States electric vehicle charging infrastructure jobs*. International Council on Clean Transportation. https://theicct.org/publication/us-ev-charging-infrastructure-jobs-jan24/

Bui, A., & Slowik, P. (2025). *Powering the future: assessment of US light-duty vehicle battery manufacturing jobs by 2032*. International Council on Clean Transportation. https://theicct.org/wp-content/uploads/2024/12/ID-255---Battery-jobs_working-paper_final.pdf

Castañeda, C. (2024, December 18). EPA grants California waiver to ban sales of new gas-powered cars by 2035; Trump administration likely to block. *CBS News*. https://www.cbsnews.com/sanfrancisco/news/epa-california-emissions-new-gasoline-vehicles-ban/

Congressional Research Service. (2024). *Clean vehicle tax credits*. https://crsreports.congress.gov/product/pdf/IF/IF12600

Cox Automotive. (2024, October 11). Electric vehicle sales mark another record in Q3, thanks to higher incentives, more choices. https://www.coxautoinc.com/market-insights/q3-2024-ev-sales/

Doi, Noriyuki. (2024, May 22). China's EV industry, led by BYD, drives job growth. *Nikkei*. https://asia.nikkei.com/Spotlight/Electric-cars-in-China/China-s-EV-industry-led-by-BYD-drives-job-growth

Eidelson, J. (2024a, May 16). Another EV factory has unionized boosting labor's push in US South. *Bloomberg*. https://www.bloomberg.com/news/articles/2024-05-16/union-wins-at-ev-bus-factory-strengthening-labor-s-us-south-push

Eidelson, J. (2024b, December 19). UAW reaches secret deal with Rivian to make unionizing easier. *Bloomberg*. https://www.bloomberg.com/news/articles/2024-12-19/uaw-rivian-rivn-strike-secret-deal-to-ease-unionization-of-ev-factory-workers

Energy Innovation. (n.d.). Energy Policy Simulator: United States. Retrieved January 27, 2025, from https://energypolicy.solutions/home/us/en

Environmental Defense Fund. (2025, January 8). *Production underway at dozens of U.S. electric vehicle manufacturing sites after historic levels of investment* [Press release]. https://www.edf.org/media/production-underway-dozens-us-electric-vehicle-manufacturing-sites-after-historic-levels

EV Hub. (n.d.). EV Market Dashboard [Dataset]. Retrieved March 14, 2025, from https://www.atlasevhub.com/market-data/ev-market-dashboard/

EV Volumes. (n.d.). EV Volumes Data Center [Dataset]. Retrieved March 1, 2025, from https://datacenter.ev-volumes.com/

FEV Consulting, Inc. (2023). *Cost and technology evaluation conventional & electrical powertrain vehicles same vehicle class and OEM, P250248 – Summary Report*. Prepared for EPA. https://www.regulations.gov/document/EPA-HQ-OAR-2022-0829-0422

Ford Motor Company. (2017, October 3). CEO strategic update. [PowerPoint presentation]. http://q4live.s22.clientfiles.s3-website-us-east-1.amazonaws.com/857684434/files/doc_presentations/2017/CEO-Strategic-Update-12.pdf

Fuels Institute. (2021). *EV consumer behavior*. Electric Vehicle Council. https://www.transportationenergy.org/wp-content/uploads/2022/11/21FI_-EVC_ConsumerBehaviorReport_V07-FINAL.pdf

IBIS World. (2025). *Truck & Bus Manufacturing in the US – Employment (2005-2031)* [Dataset]. https://www.ibisworld.com/united-states/employment/truck-bus-manufacturing/818/

Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022). https://www.congress.gov/117/plaws/publ169/PLAW-117publ169.pdf

International Brotherhood of Electrical Workers. (2022, August 4). *IBEW challenges U.S. locals to register 10,000 new EVITP-certified electricians by August* [Press release]. https://www.ibew.org/media-center/Articles/22Daily/2208/220804_EVITP

International Council on Clean Transportation. (2023). *EV CHARGE v1.1 documentation*. https://theicct.github.io/EVCHARGE-doc/versions/v1.1/

International Council on Clean Transportation. (2024a). *Roadmap v2.8 documentation*. https://theicct.github.io/roadmap-doc/versions/v2.8/

International Council on Clean Transportation. (2024b). *Electrifying road transport with less mining: A global and regional battery material outlook*. https://theicct.org/wp-content/uploads/2024/12/ID-206---USA-Less-mining-fact-sheet-A4-70156-v2.pdf

Israel, J. (2025, January 8). Republicans move to repeal law that saves older Americans billions in health care costs. *The Pennsylvania Independent*. https://pennsylvaniaindependent.com/politics/republicans-health-care-costs-inflation-reduction-act-repeal-scott-perry/

Kim, H. (2024, December 8). Trump EV skepticism threatens $54 billion in Korea plans. *Bloomberg*. https://www.bloomberg.com/news/articles/2024-12-08/trump-ev-skepticism-threatens-54-billion-in-korean-investments

LaReau, J. L. (2024, June 10). UAW reaches tentative deal with GM's joint venture battery plant in Ohio. *Detroit Free Press*. https://www.freep.com/story/money/cars/general-motors/2024/06/10/uaw-tentative-contract-gm-battery-plant-ultium/74044138007/

Lutz, H. (2025, February 12). Inflation reduction act changes would threaten EV investments, jobs in pro-Trump states. *Automotive News*. https://www.autonews.com/ev/an-republican-states-ira-evs/

Marklines. (n.d.). Marklines information platform [Dataset]. Retrieved February 24, from https://www.marklines.com/en/

National Highway Traffic Safety Administration. (2022). CAFE compliance and effects modeling system. https://www.nhtsa.gov/corporate-average-fuel-economy/cafecompliance-and-effectsmodeling-system

National Highway Traffic Safety Administration. (n.d.). *SAFE The safer affordable fuel-efficient 'SAFE' vehicles rule*. Retrieved February 6, 2025, from https://www.nhtsa.gov/corporate-average-fuel-economy/safe

Neuman, S. (September 18, 2019). Trump says California's ability to set its own emissions standards will be revoked. *National Public Radio*. https://www.npr.org/2019/09/18/761815991/white-house-to-revoke-waiver-allowing-california-to-set-its-own-emissions-standa

Nigro, N., Naimoli, S., and Latham, S. (2025). Risks from vehicle tax incentive reform in 2025. *Atlas Public Policy.* [in press].

Noble, B. (2025, February 11). Farley explains why IRA tax credit repeals could risk jobs, tariffs are 'cost and chaos'. *The Detroit News.* https://www.detroitnews.com/story/business/autos/ford/2025/02/11/ford-gm-ceo-ira-layoffs-tariff-chaos-wolfe-conference/78412424007/

Pierce, L. & Slowik, P. (2024). *Assessment of U.S. electric vehicle charging needs and announced deployment through 2032*. International Council on Clean Transportation. https://theicct.org/publication/assessment-of-us-ev-charging-needs-and-announced-deployment-through-2032-mar24/

Renshaw, J., Kirkham, C., & Eckert, N. (2024, November 15). Exclusive: Trump's transition team aims to kill Biden EV tax credit. *Reuters*. https://www.reuters.com/business/autos-transportation/trumps-transition-team-aims-kill-biden-ev-tax-credit-2024-11-14/

Shen, C., Slowik, P., & Beach, A. (2024). *Investigating the U.S. battery supply chain and its impact on electric vehicle costs through 2032.* International Council on Clean Transportation. https://theicct.org/publication/investigating-us-battery-supply-chain-impact-on-ev-costs-through-2032-feb24/

Slowik, P., Isenstadt, A., Pierce, L., & Searle, S. (2022). *Assessment of light-duty electric vehicle costs and consumer benefits in the United States in the 2022–2035 time frame.* International Council on Clean Transportation. https://theicct.org/publication/ev-cost-benefits-2035-oct22/

Slowik, P., Searle, S., Basma, H., Miller, J., Zhou, Y., Rodriguez, F., Buysse, C., Kelly, S., Minjares, R., Pierce, L., Orvis, R., & Baldin, S.(2023). *Analyzing the impact of the inflation reduction act on electric vehicle uptake in the United States.* International Council on Clean Transportation. https://theicct.org/publication/ira-impact-evs-us-jan23/

The White House. (2025, January 20). *Unleashing American energy* [Executive Order 14154]. Fed Reg 2025-01956. https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-american-energy/

The White House. (2022, February 8). *Fact sheet: Biden-Harris administration ensuring future is made in America*. https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2022/02/08/fact-sheet-biden-harris-administration-ensuring-future-is-made-in-america/

U.S. Bureau of Labor Statistics. (n.d.) *Employment, Hours, and Earnings from the Current Employment Statistics survey (National)* [Dataset]. Retrieved March 19, 2025 from https://www.bls.gov/iag/tgs/iagauto.htm

U.S. Department of Energy. (n.d.-a). Federal tax credits for new plug-in electric and fuel cell electric vehicles purchased in 2023 or after. Retrieved March 10, 2025, from https://www.fueleconomy.gov/feg/tax2023.shtml

U.S. Department of Energy. (n.d.-b). Federal tax credits for solar manufacturers. Retrieved March 1, 2025, from https://www.energy.gov/eere/solar/federal-tax-credits-solar-manufacturers

U.S. Environmental Protection Agency. (2025, March 12). *EPA launches biggest deregulatory action in U.S. history* [Press release]. https://www.epa.gov/newsreleases/epa-launches-biggest-deregulatory-action-us-history

U.S. Environmental Protection Agency. (2023). Population and activity of onroad vehicles in *MOVES4*. https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P101867U.pdf

U.S. Geological Survey. (2025). *Minerals yearbook: Metals and minerals*. https://www.usgs.gov/centers/national-minerals-information-center/minerals-yearbook-metals-and-minerals

United Auto Workers. (2023). *High risk and low pay.* https://uaw.org/wp-content/uploads/2023/11/Ultium-White-Paper.pdf

United Auto Workers. (2024, June). *UAW – Ultium cells local agreement. Local 1112*. https://uaw.org/wp-content/uploads/2024/06/Ultium-Highlighter-Final.pdf.

United Auto Workers. (2025a, February). *UAW – Ultium cells local agreement. Local 1853*. https://uaw.org/wp-content/uploads/2025/02/UltiumHighlighter_SpringHill_2_27_25_V7-PB.pdf.

United Auto Workers. (2025b, March 5). *In another win for southern workers, UAW members at Ultium in Tennessee ratify local agreement* [Press release]. https://uaw.org/in-another-win-for-southern-workers-uaw-members-at-ultium-in-tennessee-ratify-local-agreement/

Vellequette, L. (2019, March 12). VW accelerates electric push with more models, more production. *Automotive News*. https://www.autonews.com/automakers-suppliers/vw-accelerates-electric-push-more-models-more-production/

APPENDIX

Methodology for developing estimated values for the Passenger Clean Vehicle Tax Credit (§30D) for electric vehicle purchases

We estimated annual average values for the §30D tax credit in two steps. We first estimated nominal annual average credit values. We then adjusted the credit value based on buyer and vehicle requirements.

Step 1. To estimate nominal annual average credit values, we used data from fueleconomy.gov on BEV and PHEV eligibility for tax credits and the tax credit amounts combined with market data on annual sales by make and model to determine a historical sales-weighted average credit value (U.S. Department of Energy, n.d.-a). For 2025 values, we used 2024 sales shares. We assumed that all vehicles would be eligible for the $3,750 domestic battery assembly component incentive based on announced North American battery manufacturing capacity exceeding EV demand.

For the critical minerals sourcing component incentive, we used data from BNEF (2025) to project the anticipated demand for battery materials and applied an adjustment for batteries produced in the United States, which was assumed to be 70% in 2025. We then computed the weighted share by value of battery mineral demand sourced from the United States or U.S. free trade agreement partners in line with §30D requirements, holding the share of production and imports by country constant (United States Geological Survey, 2025). We estimated that by 2030, 72% of vehicles qualify for the mineral incentive. We multiplied this by the maximum $3,750 to estimate the incentive available to the average BEV.

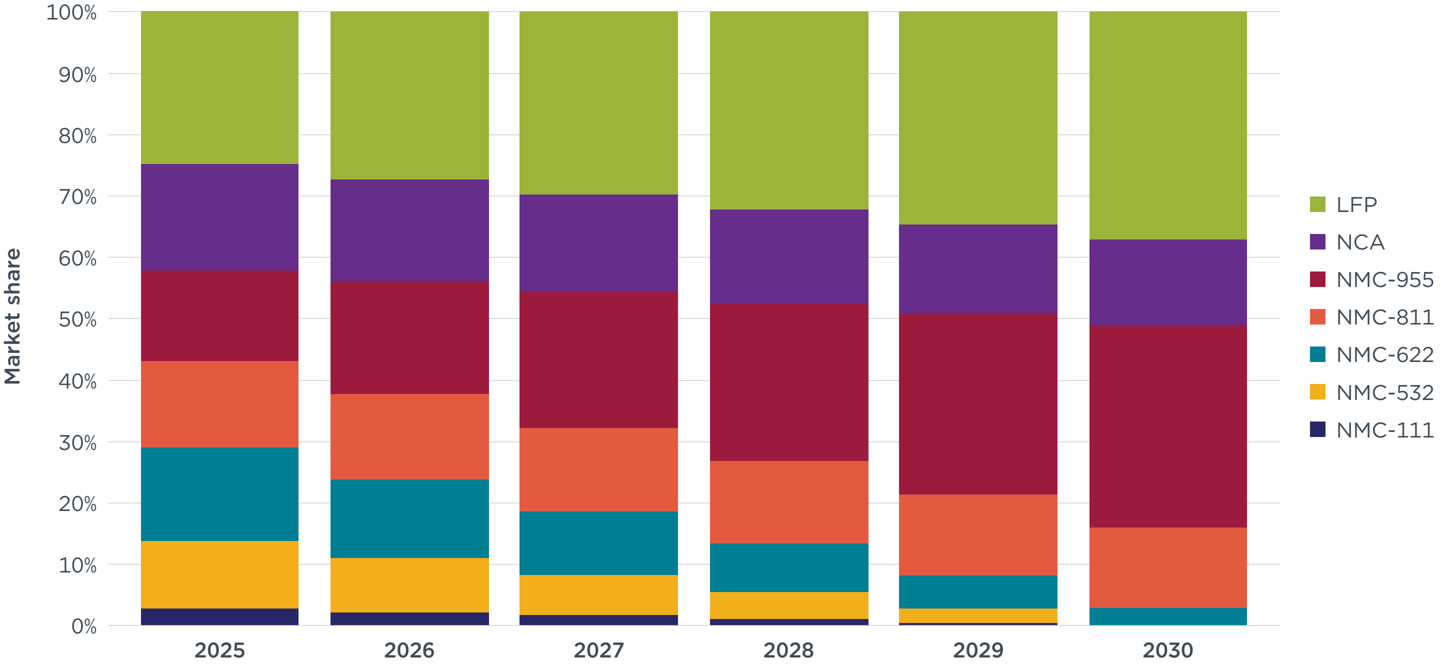
The sum of the domestic battery assembly and critical minerals sourcing components is the total potential credit in each year. We applied an assumed 5% reduction to reflect the transferring of §30D credits from the buyer to the dealer. Finally, we assumed the real value of the tax credit would decline in future years based on anticipated inflation of 3% per year, as the §30D tax credit does not include an inflation adjustment.

Step 2. We then discounted the credit based on the sales-weighted average share of vehicles that meet requirements related to manufacturer's suggested retail price (MSRP), adjusted gross income (AGI), and foreign entity of concern (FEOC). We first discounted the credit based on the sales-weighted average share of vehicles that meet MSRP caps based on historical data, which show that 92% of BEVs were under the MSRP cap. We further reduced the available incentive based on the estimated share of new buyers that are under the AGI cap that is derived based on consumer demographic data from the U.S. Census Bureau and the Fuels Institute (2021). We estimated that 71% of new buyers fall under the income cap in 2025, which increases to about 75% in 2030 as the EV market expands beyond early adopters with relatively higher incomes. We then applied a reduction to account for the FEOC restriction, which declassifies a vehicle as a clean vehicle if it is not FEOC-compliant. Based on data from fueleconomy.gov, we used the sales-weighted share of models that were eligible for tax credits as a proxy for FEOC compliance in 2025 and 2026, which was about 59%. We applied estimated adjustments for future years. The graphite exception expires in 2027. In 2027, we estimated that 19% of new EVs will qualify under FEOC, which is assumed to increase linearly to 37.5% in 2030.

Supplemental tables and figures

Figure A1

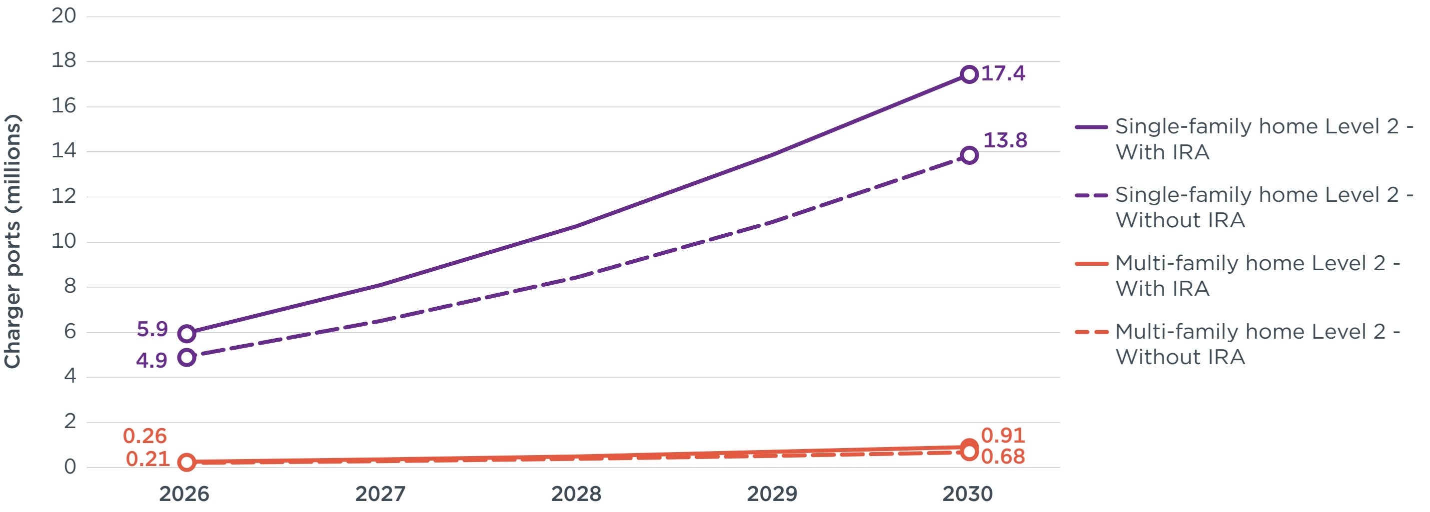
Market share of cathode materials in electric vehicle batteries assumed in this analysis, 2025–2030



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

Figure A2

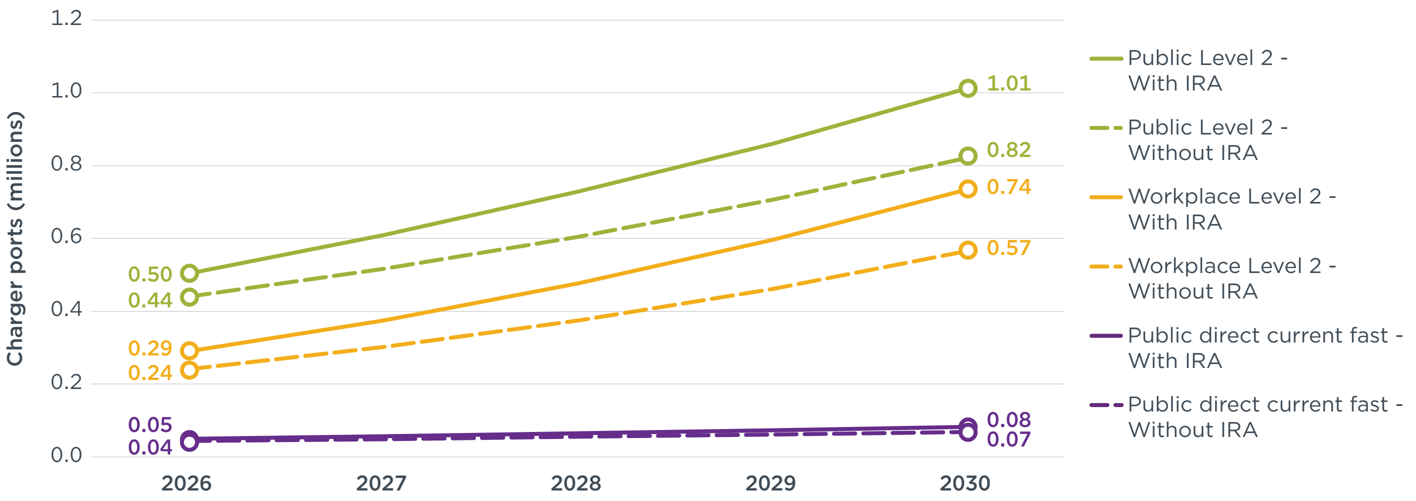
Level 2 home charger needs under the With IRA and Without IRA scenarios, 2026–2030



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

Figure A3

Non-home charger needs under the With IRA and Without IRA scenarios, 2026 through 2030



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION **THEICCT.ORG**

Table A1

Annual light-duty vehicle sales by powertrain for the scenarios considered in this analysis

	With IRA				Without IRA			
	BEV	PHEV	EV	Non-EV	BEV	PHEV	EV	Non-EV
2026	2,746,000	421,000	3,167,000	12,039,000	1,798,000	362,000	2,160,000	13,046,000
2027	3,191,000	599,000	3,790,000	11,352,000	2,258,000	523,000	2,781,000	12,361,000
2028	3,866,000	601,000	4,467,000	10,543,000	2,811,000	536,000	3,347,000	11,664,000
2029	4,605,000	753,000	5,358,000	9,699,000	3,443,000	695,000	4,138,000	10,919,000
2030	5,160,000	826,000	5,985,000	8,991,000	4,091,000	774,000	4,865,000	10,111,000

Note. Numbers in table are rounded.

Table A2

Annual light-duty vehicle stock by powertrain for the scenarios considered in this analysis

	With IRA				Without IRA			
	BEV	PHEV	EV	Non-EV	BEV	PHEV	EV	Non-EV
2026	9,089,000	2,093,000	11,181,000	231,291,000	7,312,000	1,981,000	9,293,000	233,180,000
2027	12,194,000	2,662,000	14,856,000	230,173,000	9,496,000	2,475,000	11,970,000	233,059,000
2028	15,941,000	3,224,000	19,165,000	228,213,000	12,204,000	2,973,000	15,177,000	232,202,000
2029	20,383,000	3,928,000	24,310,000	225,381,000	15,507,000	3,620,000	19,126,000	230,565,000
2030	25,326,000	4,693,000	30,019,000	221,678,000	19,412,000	4,335,000	23,747,000	227,950,000

Note. Numbers in table are rounded.

Table A3
Summary of material content for key materials in battery cathodes and anodes assumed in this analysis in 2025 and 2030 (kg/kwh)

Battery material	NMC-111	NMC-532	NMC-622	NMC-811	NCA	LFP	NMC-955
2025							
Lithium	0.12	0.11	0.10	0.10	0.10	0.08	0.09
Nickel	0.34	0.46	0.52	0.65	0.67	0.00	0.70
Manganese	0.32	0.26	0.16	0.08	0.00	0.00	0.04
Cobalt	0.34	0.18	0.17	0.08	0.13	0.00	0.04
Aluminum	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Phosphorous	0.00	0.00	0.00	0.00	0.00	0.36	0.00
Graphite	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Silicon	0.02	0.02	0.02	0.02	0.02	0.02	0.02
2030							
Lithium	0.12	0.11	0.10	0.10	0.10	0.08	0.09
Nickel	0.34	0.46	0.52	0.65	0.67	0.00	0.70
Manganese	0.32	0.26	0.16	0.08	0.00	0.00	0.04
Cobalt	0.34	0.18	0.17	0.08	0.13	0.00	0.04
Aluminum	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Phosphorous	0.00	0.00	0.00	0.00	0.00	0.36	0.00
Graphite	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Silicon	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Table A4
Total estimated demand of battery materials in 2030 under the With IRA and Without IRA scenarios

Battery material	With IRA (kg)	Without IRA (kg)
Lithium	100,423,000	24,241,000
Nickel	446,508,000	107,783,000
Manganese	28,071,000	6,776,000
Cobalt	48,778,000	11,775,000
Aluminum	1,536,530,000	370,903,000
Phosphorus	139,850,000	33,759,000
Graphite	679,437,000	164,010,000
Silicon	43,729,000	10,556,000

Note: Numbers in table are rounded.

Table A5

Facilities used to estimate the number of assembly jobs per thousand light-duty internal combustion engine vehicles

Companies	Facility name	State	Employees[a]	ICEV assembled 2023	Jobs per 1,000 vehicles
GM	**Fort Wayne**	Indiana	4,287	290,939	15
GM	**Wentzville**	Missouri	4,145	145,379	29
GM	**Arlington**	Texas	5,322	344,232	15
Ford	**Dearborn**	Michigan	3,790	300,005	13
Ford	**Michigan**	Michigan	4,357	157,746	28
Ford	**Flat Rock**	Michigan	1,663	61,165	27
Stellantis	**Warren Truck**	Michigan	3,300	99,432	33
Stellantis	**Michigan**	Michigan	6,494	274,916	24
Stellantis	**Sterling Heights**	Michigan	6,500	274,916	24
Toyota	**Princeton**	Indiana	7,500	363,060	21
Toyota	**San Antonio**	Texas	3,800	181,872	21
Toyota	**Blue Springs**	Mississippi	2,400	156,219	15
Toyota	**Huntsville**	Alabama	4,000	154,076	26
Nissan	**Canton**	Mississippi	5,000	247,165	20
Honda	**East Liberty**	Ohio	2,800	207,022	14
Honda	**Indiana**	Indiana	2,600	234,250	11

[a] Employee counts are generally as of mid-2024.

Table A6

Facilities used to estimate the number of assembly jobs per thousand light-duty electric vehicles

Companies	Facility name	State	Sum of EV investment ($ million)	Sum of EV employees	Estimated EV assembled	Jobs per 1,000 vehicles
Scout Motors (Volkswagen)	Blythewood Facility	South Carolina	$2,000	4,000	200,000	20
Rivian	Georgia Manufacturing Plant	Georgia	$5,000	7,500	400,000	19
Lucid Motors	AMP-1	Arizona	$1,000	6,400	400,000	16
Ford	Rouge Electric Vehicle Center	Michigan	$950	2,100	150,000	14

Table A7

U.S. facilities with some electric vehicle production

Companies	Facility name	State	Sum of EV investment	Sum of EV employees	EV production	Jobs per 1,000 vehicles	Notes	Source*
Ford	Rouge Electric Vehicle Center	Michigan	$950,000,000	2,100	150,000	14		1
Lucid Motors	AMP-1	Arizona	$1,000,000,000	6,400	400,000	16		1
Rivian	Georgia Manufacturing Plant	Georgia	$5,000,000,000	7,500	400,000	19		1
Scout Motors	Blythewood Facility	South Carolina	$2,000,000,000	4,000	200,000	20		1
Tesla	Tesla Fremont Factory	California	$4,100,000,000	22,000	515000	43	Jobs also include battery manufacturing	1
Ford	BlueOval SK Tennessee (JV)	Tennessee	$2,800,000,000	5,800	500,000	12	Jobs also include battery manufacturing	1, 2
Nissan	Smyrna Vehicle Assembly Plant	Tennessee	$1,700,000,000	1,300	150,000	9	Jobs also include battery manufacturing	1
Volkswagen	Chattanooga Plant	Tennessee	$800,000,000	1,000	100,000	10	Jobs also include battery manufacturing	1
Rivian	Normal Plant	Illinois		8,000	48,000	167	Jobs also include battery manufacturing	1, 2
General Motors	Factory ZERO Detroit-Hamtramck Assembly Center	Michigan	$2,200,000,000	2,200	87,500	25	Unclear if it is at the facility or the area	1, 2, 3
General Motors	Orion Factory	Michigan	$4,300,000,000	2,350				
Toyota	Toyota Motor Manufacturing Kentucky	Kentucky	$1,702,000,000	2,100				
Nissan	Canton Factory	Mississippi	$500,000,000	2,000				
Stellantis	Belvidere Assembly Plant	Illinois	$1,500,000,000	1,500				
Ford	Flat Rock Assembly Plant	Michigan	$0	900				
General Motors	Lansing Grand River	Michigan	$1,400,000,000	700				
Canoo	Oklahoma City Assembly Facility	Oklahoma	$160,000,000	680				
Volvo Cars	South Carolina Car Factory	South Carolina	$418,000,000	650				
Mercedes-Benz	Tuscaloosa County Plant	Alabama	$1,000,000,000	600				
Hyundai	Mobis Toledo Assembly Plant	Ohio	$32,617,879	383				
Faraday Future	FF Factory California	California	$14,000,000	350				
Toyota	Toyota Motor Manufacturing Indiana	Indiana	$1,503,000,000	340				
Arcimoto	RAMP Facility	Oregon	$4,900,000	250				
Rivian	Shepherdsville Remanufacturing Facility	South Carolina	$10,000,000	218				
Kia	Kia Georgia	Georgia	$200,000,000	200				
Hyundai	Hyundai Motor Manufacturing Alabama	Alabama	$300,000,000	200				
BMW	Plant Spartanburg	South Carolina	$1,010,000,000	172				
Benteler	Holon Autonomous Vehicle Assembly Plant	Florida	$100,000,000	150				
RBW Sports & Classics	RBW Vehicle Assembly Plant	Virginia	$8,000,000	144				
Honda	Marysville Auto Plant	Ohio	$300,000,000	133				
Honda	East Liberty Auto Plant	Ohio	$300,000,000	133				
Stellantis	Toledo Assembly North Complex	Ohio	$160,000,000	100				
Karma Automotive	Moreno Valley Manufacturing Plant	California	$30,000,000	100				
Aptera	San Diego Manufacturing Facility	California		100				
Lordstown Motors	Lordstown Assembly	Ohio	$0	0				
Vantage Vehicle	Corona Manufacturing Facility and HQ	California	$0					
Stellantis	Detroit Assembly Complex - Mack Plant	Michigan	$0					
Stellantis	Warren Truck Assembly Plant	Michigan	$97,600,000					
Stellantis	Sterling Heights Assembly Plant	Michigan	$235,500,000	Stellantis				
Myers EV	HQ and Manufacturing Facility	Ohio	$0	Myers EV				
Mullen Automotive	ELMS Mishawaka Plant	Indiana	$240,000,000	Mullen Automotive				
General Motors	Spring Hill Manufacturing	Tennessee	$2,000,000,000	General Motors				
General Motors	Bowling Green Assembly	Kentucky	$0	General Motors				
General Motors	GM Fairfax Assembly Plant	Kansas	$390,000,000	General Motors				
GEM	Anaheim Manufacturing Facility	California	$0	GEM				
Ford	Louisville Assembly Plant	Kentucky	$0	Ford				
Ford	Chicago Assembly Plant	Illinois	$0	Ford				

*Unless specified, all data are from Marklines (n.d.)

Table A8
U.S. facilities with light-duty-vehicle-only production

Company	Factory	State	Vehicles	Vehicle type	Employee	Production 2023	Production average 2021-2023	Jobs per 1,000 vehicles (2023)	Note
GM	Fort Wayne	Indiana	Chevrolet Silverado 1500; GMC Sierra 1500	Pickup Truck	4,287	290,939	302,247	15	Employee count as of June 2024
GM	Wentzville	Missouri	Chevrolet Express, Colorado (2014-); GMC Savana, Canyon (2014-)	Pickup Truck and Van	4,145	145,379	171,803	29	Employee count as of June 2024
GM	Arlington	Texas	Cadillac Escalade, Escalade ESV, Escalade V; Chevrolet Tahoe, Suburban; GMC Yukon, Yukon XL,	Pickup Truck and SUV	5,322	344,232	339,347	15	Employee count as of June 2024
Ford	Dearborn	Michigan	Ford F-150, Raptor, for NA, F-150 hybrid (2020-)	Pickup Truck	3,790	300,005	289,116	13	Employee count as of April 2024
Ford	Michigan	Michigan	Ford Focus (2010-2018), Focus Electric (2011-2018), Focus ST (2012-2018), C-Max Hybrid (2012-2018), C-MAX Energi (2012-2018), Ranger (2018-), Bronco (2021-)	Pickup Truck and SUV	4,357	157,746	170,237	28	Employee count as of April 2024
Ford	Flat Rock	Michigan	Ford Mustang, Mustang GT, Mustang Dark Horse, Shelby GT350 & 350R, Fusion (2013-2016), Lincoln Continental (2016-2020), EV (2024- planning)	Luxury car	1,663	61,165	64,078	27	Employee count as of August 2024
Stellantis	Warren Truck	Michigan	Ram 1500 Classic (Quad cabs and Crew cabs) (-Q3 2024 planning); MHV Wagoneer (2021-), Wagoneer L (2021-), PHV Wagoneer (2025-planning), Grand Wagoneer (2021-), Grand Wagoneer L (2021-);	Pickup Truck and SUV	3,300	99,432	103,033	33	Employee count as of August 2024
Stellantis	Michigan	Michigan	Ram 1500 (2018-), Ram 1500 MHV (2019-) EV Ram 1500 REV (late 2024-planning), HEV Ram 1500 Ramcharger (planning)	Pickup Truck	6,494	274,916	296,350	24	Employee count as of August 2024
Stellantis	Sterling Heights	Michigan	Ram 1500 (2018-), Ram 1500 MHV (2019-) EV Ram 1500 REV (late 2024-planning), HEV Ram 1500 Ramcharger (planning)	Pickup Truck	6,500	274,916	296,350	24	Highlights around 3/2023
Toyota	Princeton	Indiana	Sequoia (-2022), Sienna, Sienna Hybrid (2020-), Highlander (Kluger, 2009-), Highlander Hybrid (2013-), Grand Highlander (2023-), Grand Highlander Hybrid (2023-), EV 3-row electric SUV (2026-planning); Lexus TX (2023-) Battery pack assembly (2026-planning)	SUV	7,500	363,060	380,439	21	Employee count as of August 2023
Toyota	San Antonio	Texas	Tundra, Tundra HV (2021-), Tacoma (2010-2022), Sequoia HV (2022-)	Pickup Truck	3,800	181,872	148,415	21	Employee count as of September 2024
Toyota	Blue Springs	Mississippi	Corolla (2011-)	Car	2,400	156,219	139,067	15	Employee count as of September 2024
Toyota	Huntsville	Alabama	Mazda: CX-50 (2022-), CX-50 Hybrid (2024-) Toyota Corolla Cross (2021-); HV Corolla Cross (2023-)	Car and SUV	4,000	154,076	90,151	26	Employee count as of September 2024
Nissan	Canton	Mississippi	Nissan Altima (2014-), Armada (-2016), Titan (-2024), Titan XD (2011-2024), NV series (2011-2021), Sentra (2012-2014), Xterra (2012-2015), Murano (2014-2020), Nissan sedan and crossover EVs (2026-planning); Nissan Frontier (2012-) / Suzuki Equator (-2012); Infiniti QX56 (-2010), Infiniti sedan and crossover EVs (2026-planning);	Pickup Truck and Car	5,000	247,165	230,927	20	Employee count as of August 2024
Honda	East Liberty	Ohio	Honda CR-V, CR-V Hybrid (2022-), Crosstour (-2015); Acura RDX (2012-), MDX (2017-); EV product (2025-planning)	SUV	2,800	207,022	177,700	14	Employee count as of July 2023
Honda	Indiana	Indiana	Honda Civic Sedan (2008-stop production), Civic Natural Gas (Civic GX successor, 2011-2015), Civic Hybrid (2013-2015) / Civic Hybrid Hatchback (2024-), Civic Hatchback (2021-), CR-V (2017-), CR-V Hybrid (2019-), Insight (HV) (2018-2022), Accord Sedan (2025 planning-), Accord Hybrid Sedan (2025 planning-); Acura ILX, ILX Hybrid (2012-2015);	Car and SUV	2,600	234,250	178,879	11	Employee count as of August 2024

Note: Data are from Marklines (n.d.)

www.theicct.org

communications@theicct.org

@theicct.org

THE INTERNATIONAL COUNCIL
ON CLEAN TRANSPORTATION

BEIJING | BERLIN | NEW DELHI | SAN FRANCISCO | SÃO PAULO | WASHINGTON DC