

Anticipated Direction of Forthcoming Proposed Guidance on Critical Mineral and Battery Component Value Calculations for the New Clean Vehicle Credit

Background

The Inflation Reduction Act represents the most ambitious legislative investment to address climate change in our nation's history and includes tax incentives designed to lower costs for working families, grow the clean energy economy, and strengthen America's supply chains. It introduces a number of significant changes, which phase in over time, to the credit for new clean vehicles under section 30D of the Internal Revenue Code. The earliest change applied to vehicles sold on or after August 17, 2022, when new clean vehicles were required to undergo final assembly in North America to qualify for the credit. On January 1, 2023, additional changes affecting credit eligibility will automatically become applicable. Before January 1, the credit was phased out for manufacturers after they sold 200,000 electric vehicles. That per-manufacturer cap will no longer apply to vehicles sold after December 31, 2022. Also on January 1, new requirements including limiting the availability of the credit based on a vehicle's manufacturer's suggested retail price and restricting eligibility for high-income purchasers will apply.

One significant pending change involves how the credit amount is calculated. Prior to the Inflation Reduction Act's critical mineral and battery provisions becoming applicable, the credit is calculated based on the vehicle's battery capacity, with a base amount of \$2,500, an additional \$417 for a battery with a capacity of 5 kilowatt hours, and an additional \$417 for each kilowatt hour of capacity in excess of 5 kilowatt hours, up to a maximum credit of \$7,500 per vehicle. Instead of calculating the credit based on the vehicle's battery capacity, the Inflation Reduction Act's pending provisions, once applicable, will tie the credit amount to whether the new clean vehicle's battery meets a critical mineral requirement (\$3,750) and a battery component requirement (\$3,750), up to a maximum credit of \$7,500 per vehicle.

Pursuant to the statutory rules in the Inflation Reduction Act, the critical mineral and battery component requirements apply to vehicles placed in service after Treasury and the IRS issue proposed guidance on these requirements. Treasury and the IRS have been working diligently to develop proposed guidance on these novel requirements and will clearly identify such proposed guidance when it is issued. Until that proposed guidance is issued, the new clean vehicle credit amount will continue to be determined based on the vehicle's battery capacity, subject to other eligibility criteria, some of which are new or revised by the Inflation Reduction Act. Treasury and the IRS intend to issue proposed guidance on the critical mineral and battery component requirements in March 2023.

Once the proposed guidance is issued, vehicle manufacturers will be required to certify whether their vehicles meet the critical mineral and battery component requirements. This upcoming certification requirement has understandably generated comments and questions from vehicle manufacturers and a broad range of stakeholders about the rules for determining compliance with these new requirements. The broad stakeholder interest in these new requirements has highlighted the importance of continued communication with stakeholders while Treasury and the IRS develop proposed guidance on these requirements.

The following discussion outlines relevant terms and concepts that reflect Treasury’s and the IRS’s preliminary views. This does not constitute proposed guidance issued by the Secretary or her delegate, and this discussion is not intended to (and does not) create any right or benefit, substantive or procedural, enforceable at law or in equity by any party. The terms and concepts below are being shared in this preliminary format to promote transparency ahead of the issuance of proposed guidance currently being developed. No formal comments are being sought until regulations are proposed, although Treasury and the IRS continue to welcome stakeholder input on all of the clean energy and climate provisions in the Inflation Reduction Act.

Critical mineral requirement

Once applicable, the critical mineral requirement will be met if the percentage of the value of the critical minerals¹ in the vehicle’s battery that were extracted or processed in the United States, or in any country with which the United States has a free trade agreement in effect, or recycled in North America,² is equal to or greater than 40 percent for a vehicle that is placed in service in 2023 after the date on which Treasury and the IRS issue proposed guidance.³ This required percentage increases annually to 50 percent in 2024, 60 percent in 2025, 70 percent in 2026, and 80 percent after 2026.

Identifying the activities that constitute the extraction, processing, and recycling of critical minerals and where those activities occur will be vital to certifying compliance with the critical mineral requirement. Our current intention is to propose defining some of the key terms relevant to such identification as follows:

- *Extraction.* Extraction means the activities performed to extract minerals or natural resources from the ground, including by operating equipment to extract minerals or natural resources from mines and wells, or to extract minerals or natural resources from the waste or residue of prior extraction. Extraction concludes when activities are performed to convert raw mined or harvested products or raw well effluent to substances that can be readily transported or stored for direct use in critical mineral processing.
- *Processing.* Processing means the refining of substances or materials that have been extracted, including the treating, baking, and coating processes used to convert extracted substances and materials into constituent materials.
- *Recycling.* Recycling means the series of activities during which recyclable materials containing critical minerals are transformed into specification-grade commodities and consumed in lieu of virgin materials to create constituent materials; such activities result in new constituent materials contained in the battery from which the electric motor of a new clean vehicle draws electricity.

¹ The term “critical minerals,” as used throughout this document, refers to the applicable critical minerals defined in section 45X(c)(6) of the Internal Revenue Code.

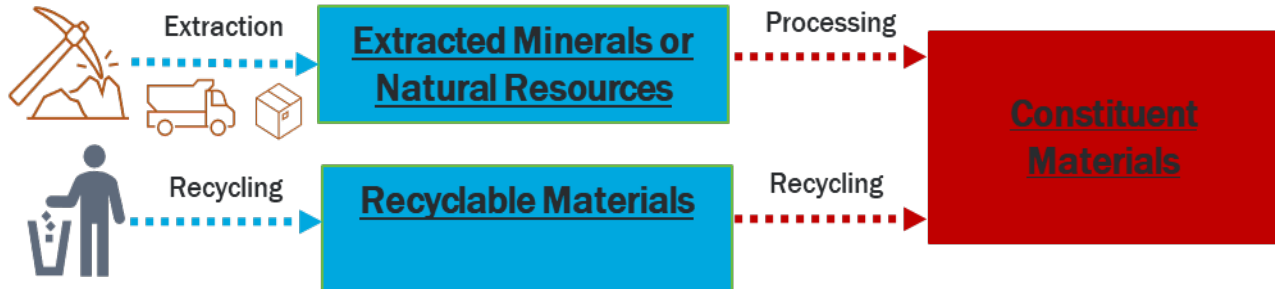
² For purposes of both the critical mineral and the battery component requirements, Treasury and the IRS anticipate proposing that North America means the territory of the United States, Canada, and Mexico as defined in 19 C.F.R. part 182, Appendix A, § 1(1).

³ See [irs.gov](https://www.irs.gov) for information regarding when a personal use vehicle is placed in service.

- *Constituent materials.* Constituent materials means materials that contain critical minerals and are employed directly in the manufacturing of battery components. Constituent materials may include, but are not limited to, powders for cathode active materials, powders for anode active materials, foils, metals for solid electrodes, binders, electrolyte salts, and electrolyte additives, as required for a battery cell.
- *Value.* Value means the arm’s-length price that was paid or would be paid for the property by an unrelated purchaser determined in accordance with the principles of section 482 of the Internal Revenue Code and regulations thereunder.
- *Value added.* Value added, with respect to recycling, extraction, or processing, means the increase in the value of the critical mineral attributable to the relevant activity.
- *Free trade agreement.* The term “free trade agreement” is not defined in the Inflation Reduction Act (or in any other statute). Treasury and the IRS expect to seek comment in the proposed guidance on what criteria should be used to identify free trade agreements for the purposes of the critical minerals requirement and expect to propose that these criteria include whether an agreement reduces or eliminates trade barriers on a preferential basis, commits the parties to refrain from imposing new trade barriers, establishes high-standard disciplines in key areas affecting trade (such as core labor and environmental protections), and/or reduces or eliminates restrictions on exports or commits the parties to refrain from imposing such restrictions, including for the critical minerals contained in electric vehicle batteries. Treasury and the IRS also expect to propose that the term encompasses, at minimum, the comprehensive trade agreements of the United States with the following countries: Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Jordan, South Korea, Mexico, Morocco, Nicaragua, Oman, Panama, Peru and Singapore. Further, Treasury and the IRS expect to propose that the Secretary may identify additional free trade agreements for purposes of the critical minerals requirement going forward and will evaluate any newly negotiated agreements for proposed inclusion during the pendency of the rulemaking process or inclusion after finalization of the rulemaking.

The supply chain for critical minerals and battery components could be divided into distinct phases for purposes of evaluating the critical mineral and battery component requirements. A critical mineral would be either (1) recycled or (2) extracted or processed into constituent materials along with other inputs. Constituent materials would then be used in the manufacturing of some battery components. The figure below illustrates this battery supply chain pertaining to critical minerals.

Scope of Critical Minerals Value



Because of the complexity of battery supply chains, particularly with respect to critical minerals, and the detailed tracking that would be required to determine compliance, Treasury and the IRS currently anticipate proposing as a transition rule a three-step process for determining compliance with the critical mineral requirement for calendar years 2023 and 2024. This transition rule would be intended to provide manufacturers time to develop the necessary capability to certify compliance to the critical mineral requirement throughout their supply chains. Under this approach, determining the percentage of the value of the critical minerals in a battery that goes toward meeting the critical mineral requirement could be accomplished in three steps.

In the first step, the manufacturer would need to determine the procurement chain or chains for each critical mineral. A procurement chain is a common sequence of extraction, processing, or recycling activities that occur in common set of locations, concluding in the production of constituent materials. Sources of a single critical mineral may have multiple procurement chains if, for example, one source of the critical mineral undergoes the same extraction, processing, or recycling process in different locations. Each critical mineral procurement chain will be evaluated separately in steps two and three.

In the second step, each critical mineral procurement chain in the battery would need to be evaluated to determine whether critical minerals procured from the chain have been (1) extracted or processed in the United States, or in any country with which the United States has a free trade agreement in effect, or (2) recycled in North America. The critical minerals that pass this step are referred to as “qualifying critical minerals.”

If a critical mineral procurement chain involves extraction or processing, then a critical mineral procured from the chain would be treated as qualifying under this second step, and thus as extracted or processed in the United States, or in a country with which the United States has a free trade agreement in effect, if it meets at least one of the following two criteria:

1. 50 percent or more of the value added of the critical mineral extraction steps occurred in the United States or in any country with which the United States has a free trade agreement in effect; or

2. 50 percent or more of the value added of the critical mineral processing steps occurred in the United States or in any country with which the United States has a free trade agreement in effect.

If a critical mineral procurement chain involves recycling, then a critical mineral procured from the chain would be treated as qualifying under this second step, and thus as recycled in North America, if 50 percent or more of the value added to the critical mineral by recycling is derived from recycling that occurred in North America.

Notably, this second step would need to be applied separately for each procurement chain of the critical mineral. For example, lithium that undergoes initial processing activities in a plant in Country A and then is transferred to a plant in Country B to undergo final processing activities, culminating in the lithium being incorporated into a constituent material, would be analyzed under this step together with other lithium moving through the same procurement chain. However, if some of the lithium in the prior example instead undergoes final processing activities in a plant in Country C instead of Country B, then there would be two procurement chains for lithium: 1) Country A to Country B and 2) Country A to Country C.

The third step would calculate the percentage of the value of qualifying critical minerals contained in a battery. To determine this percentage, the sum of the values of all qualifying critical minerals (determined separately for each procurement chain) contained in the battery is divided by the sum of the values of all critical minerals contained in the battery. To determine the value of these critical minerals, the manufacturer could select any date that is after the final processing or recycling step for the critical minerals, but that date must be uniformly applied for all critical minerals contained in the battery. A manufacturer could average this percentage calculation over a period of time (e.g., year, quarter, or month) with respect to vehicles from the same model line, plant, class, or some combination thereof, with final assembly within North America.

If the percentage that results from this third step is equal to or greater than 40 percent for a vehicle placed in service in 2023 after the date on which Treasury and the IRS issue proposed guidance (50 percent in 2024), then the vehicle would satisfy the critical mineral requirement for the new clean vehicle credit.

Battery component requirement

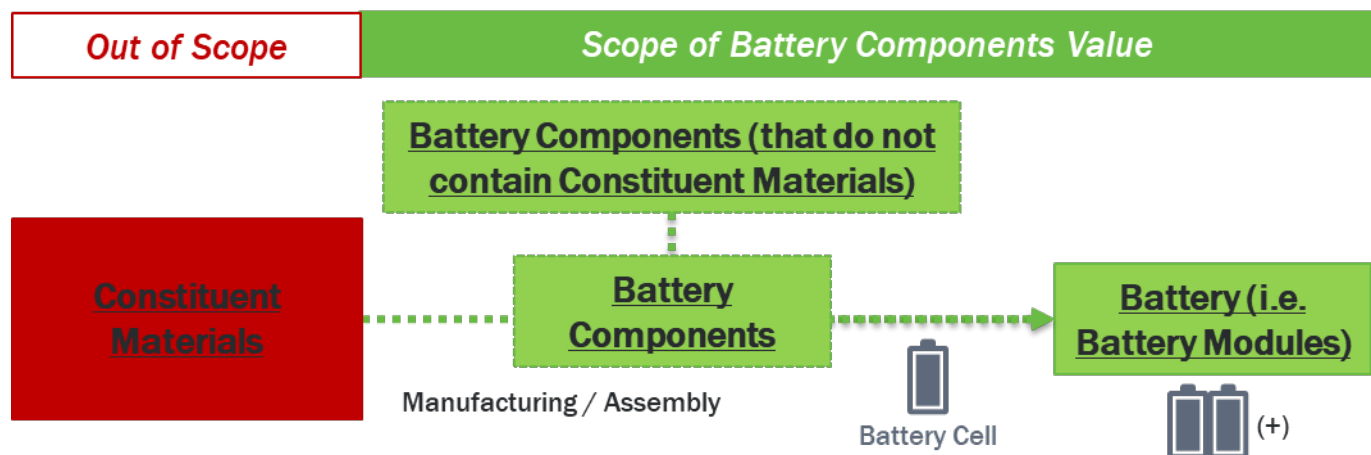
Once applicable, the battery component requirement will be met if the percentage of the value of the components in the vehicle's battery that were manufactured or assembled in North America is equal to or greater than 50 percent, for a vehicle placed in service in 2023 after the date on which Treasury and the IRS issue proposed guidance. This required percentage increases to 60 percent in 2024 and 2025, 70 percent in 2026, 80 percent in 2027, 90 percent in 2028, and to 100 percent after 2028.

Identifying the activities that constitute the manufacturing or assembly of battery components and where those activities occur will be vital to certifying compliance with the battery component requirement. Our current intention is to propose defining some of the key terms relevant to such identification as follows:

- *Battery cell.* Battery cell means a combination of battery components (not including battery cells) capable of electrochemically storing energy from which the electric motor of a clean vehicle draws electricity.
- *Battery component.* Battery component means a component of a battery that is manufactured or assembled from one or more components or constituent materials that are combined through industrial, chemical, and physical assembly steps. Battery components may include, but are not limited to, a cathode electrode, anode electrode, solid metal electrode, separator, liquid electrolyte, solid state electrolyte, battery cell, and battery module.⁴
- *Constituent materials.* Constituent materials means materials that contain critical minerals and are employed directly in the manufacturing of battery components. Constituent materials may include, but are not limited to, powders for cathode active materials, powders for anode active materials, foils, metals for solid electrodes, binders, electrolyte salts, and electrolyte additives, as required for a battery cell.
- *Manufacturing.* Manufacturing, with respect to battery components, means the industrial and chemical steps taken to produce a battery component.
- *Assembly.* Assembly, with respect to battery components, means the process of combining battery components into battery cells and battery modules.
- *Value.* Value means the arm's-length price that was paid or would be paid for the property by an unrelated purchaser determined in accordance with the principles of section 482 and regulations thereunder.
- *Incremental Value.* Incremental value, with respect to a battery component, means the value determined by subtracting from the value of that battery component the value of the manufactured or assembled battery components, if any, that are contained in that battery component.

The figure below illustrates the battery supply chain pertaining to battery components and their relationship with constituent materials based on the potential proposed terms and concepts described above.

⁴ Constituent materials are not considered a type of battery component, although they may be manufactured or assembled into battery components.



Treasury and the IRS currently anticipate proposing that determining the percentage of the value of battery components that goes toward meeting the battery component requirement could be accomplished in the following four steps:

1. Determine whether each battery component was manufactured or assembled in North America. A battery component is considered manufactured or assembled in North America if substantially all of the manufacturing or assembly activities for that battery component occur in North America, regardless of the location of the manufacturing or assembly activities of the components that make up the particular battery component.
2. Determine the incremental value for each battery component. The resulting incremental value for the battery component will be attributable to North America or not based on the determination made in step 1.⁵
3. Determine the total value of the battery components by totaling the incremental values of each battery component determined in step 2. This total value may also be calculated by totaling the value of each battery module.
4. Calculate the percentage of the value of the battery components that were manufactured or assembled in North America by dividing (1) the sum total of the incremental value determined in step 2 for all battery components that were manufactured or assembled in North America by (2) the total value of the battery components determined in step 3.

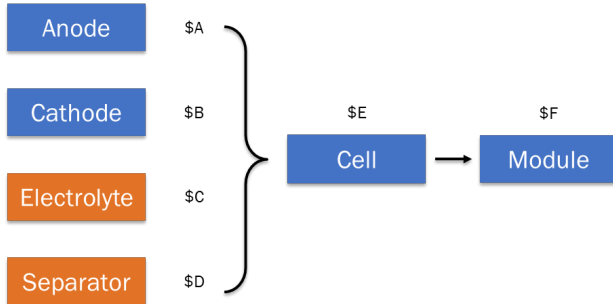
The figure below illustrates these steps.

⁵ For battery components that may be assembled into a battery cell (e.g., cathode electrode, anode electrode, solid metal electrode, separator, liquid electrolyte, solid state electrolyte), the incremental value of such battery components would include the value of the constituent materials contained in such battery components because incremental value would subtract out only the value of other manufactured or assembled battery components, if any, that make up the battery component in question. Because constituent materials are produced by processing or recycling critical minerals – not through manufacturing or assembly – they would not be battery components.

Step 1. Determine place of assembly or manufacture of the components.



Step 2. Determine the incremental value for each battery component contained in the clean vehicle's battery (i.e. collection of modules).



Step 3. Sum the incremental values for all components, regardless of location, contained in the clean vehicle's battery.

Step 4. Calculate the percentage of the value of battery components that were manufactured or assembled in North America for all modules contained in the clean vehicle's battery. In this example, the value of battery components for one module (where only Anode, Cathode, Cell, and Module manufacturing and assembly occurs in North America) is equivalent to:

$$\frac{\text{Anode} + \text{Cathode} + [\text{Incremental value of Cell}] + [\text{Incremental value of Module}]}{\text{Anode} + \text{Cathode} + \text{Electrolyte} + \text{Separator} + [\text{Incremental value of Cell}] + [\text{Incremental value of Module}]} = \frac{A + B + [E-A-B-C-D] + [F-E]}{A + B + C + D + [E-A-B-C-D] + [F-E]}$$

To determine the value for battery components, the manufacturer could select any date that is on or after the final manufacturing or assembly step for the battery components, but that date would need to be uniformly applied for all battery components contained in the battery. A manufacturer could average these percentage calculations over a period of time (e.g., year, quarter, or month) with respect to vehicles from the same model line, plant, class, or some combination of thereof, with final assembly within North America. If the resulting percentage is equal to or greater than 50 percent for vehicles placed in service in 2023 after the date on which Treasury and the IRS issue proposed guidance, then the vehicle would satisfy the battery component requirement.

Summary

As described above, Treasury and the IRS intend to issue proposed guidance regarding the critical mineral and battery component requirements in March of 2023. Those requirements and certification obligations by qualified manufacturers take effect only after Treasury and the IRS issue proposed guidance, and Treasury and the IRS will expressly identify when the proposed guidance is issued. Treasury and the IRS often allow taxpayers to rely on proposed guidance during the period between its issuance and the issuance of final rules and anticipate addressing the extent of reliance in the proposed guidance. Although Treasury and the IRS welcome comments on all of the climate provisions in the Inflation Reduction Act at any time, Treasury and the IRS continue to review previously solicited comments on these requirements in particular.