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# Decision Brief - §45X Eligibility, Ontario Cobalt Refining

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## Beat 1 - Situation, Complication, Question

Electra Battery Materials Corp (TSXV/NASDAQ: ELBM) is developing what its own disclosures describe as North America's only cobalt sulphate refinery, located in Temiskaming Shores, Ontario, Canada [Electra Battery Materials 2024 Annual Report (SEDAR+); TSX-V / NASDAQ filings]. The facility is currently under construction, with early commissioning targeted for Q4 2026 and mechanical completion targeted for Q2 2027, at an initial nameplate capacity of 5,120 tonnes per year of battery-grade cobalt sulphate ramping to 6,500 tonnes per year [Company disclosures / DOE Loan Programs Office 2024]. The company is Canadian-domiciled, widely held, and carries an LG Chem (Korea) offtake relationship; no covered-nation parent holds 25% or more of the entity [Electra Battery Materials 2024 Annual Report (SEDAR+)].

The complication is two-layered. First, the §45X credit as originally enacted was a domestic-production credit - the statute requires eligible components and applicable critical minerals to be produced in the United States and sold to unrelated parties [26 U.S.C. §45X; Pub. L. 117 - 169 §13502]. Electra's refinery is in Ontario, Canada, not the United States, raising a threshold jurisdictional question the source packet does not resolve. Second, the OBBBA (Pub. L. 119 - 21, signed 2025 - 07 - 04) overlaid a new Prohibited Foreign Entity (PFE) regime - including a taxpayer-level bar for Specified Foreign Entities and Foreign-Influenced Entities, and a supply-chain Material Assistance Cost Ratio (MACR) test - on top of the pre-existing credit structure [IRS Notice 2026 - 15]. The question is therefore whether Electra clears both the entity-level PFE bar and the supply-chain MACR test, and whether the Ontario location forecloses §45X eligibility entirely.

## Beat 2 - Recommendation / Verdict

Electra Battery Materials' cobalt sulphate refinery conditionally qualifies for the §45X advanced manufacturing production credit - it clears the entity-level Prohibited Foreign Entity bar on the evidence available, but the verdict is contingent on two unresolved gating preconditions: (1) whether §45X's domestic-production nexus can be satisfied by an Ontario-sited facility, and (2) whether Electra's cobalt sulphate supply chain will satisfy the MACR threshold once IRS safe-harbour tables are finalised.

Three-Axis Rating:

| Axis | Rating |
|---|---|
| Recommendation certainty | MEDIUM |
| Time horizon | 18 - 84 months (credit available through 2033 for applicable critical minerals per OBBBA phase-out schedule; MACR safe-harbour tables pending in forthcoming IRS regulations) |
| Risk exposure | HIGH |

*(Per CFA ROS §11.0 - Oct 2004.)*

## Beat 3 - Rationale

The §45X credit structure is active and cobalt sulphate is an eligible applicable critical mineral, but the statute's domestic-production nexus is an unresolved gating precondition for an Ontario-sited facility. Section 45X provides a production tax credit equal to 10% of costs incurred with respect to the production of applicable critical minerals, including cobalt [26 U.S.C. §45X; Pub. L. 117 - 169 §13502]. The credit applies to eligible components and applicable critical minerals "produced in the US and sold to unrelated parties" [IRS Notice 2023 - 44, 26 U.S.C. §45X]. Electra's refinery is located in Temiskaming Shores, Ontario, Canada [Electra Battery Materials 2024 Annual Report (SEDAR+)]. The source packet does not contain any provision, treaty clause, or regulatory carve-out extending §45X eligibility to Canadian-sited production, and I am not permitted to supply one from outside the packet. This is the single most consequential gap in the determination.

Electra clears the entity-level PFE/FEOC bar with high confidence on the evidence available. The OBBBA PFE regime bars a Specified Foreign Entity or Foreign-Influenced Entity from claiming the §45X credit for tax years beginning after 2025 - 07 - 04 [IRS Notice 2026 - 15]. The legacy §30D(d) (7) FEOC definition - which the PFE concept carries forward and broadens - covers entities owned, controlled by, or subject to the direction of the governments of China, Russia, North Korea, or Iran, including entities where 25% or more of board seats, voting rights, or equity is held by those governments or their agents [US Treasury Final Rule, Federal Register 89 FR 96936]. Electra is assessed as NON_FEOC: it is Canadian-domiciled, widely held, dual-listed on TSXV and NASDAQ, and the methodology record confirms no covered-nation parent at the 25%-or-above threshold [Electra Battery Materials 2024 Annual Report (SEDAR+)]. The LG Chem (Korea) offtake relationship does not implicate a covered nation.

The MACR supply-chain test is a live but unresolved gating condition whose safe-harbour thresholds have not yet been published. The OBBBA PFE regime imposes a Material Assistance Cost Ratio test on the supply chain feeding a §45X-eligible facility - material assistance from a Prohibited Foreign Entity can disqualify the credit at the supply-chain level even where the taxpayer itself is not a PFE [IRS Notice 2026 - 15]. IRS Notice 2026 - 15 (issued 2026 - 02 - 12) is interim guidance that largely restates the statute and explicitly defers the definitive PFE definition and the MACR safe-harbour threshold tables to forthcoming regulations [IRS Notice 2026 - 15]. The source packet contains no MACR threshold figure, no safe-harbour table, and no information about the origin of the cobalt feedstock Electra intends to process. I cannot determine whether Electra's supply chain will satisfy the MACR test.

The §30D FEOC regime - the predecessor framework - is terminated as a forward-looking credit gate and does not independently bar Electra. The §30D New Clean Vehicle Credit was terminated by OBBBA (Pub. L. 119 - 21 §70502) for vehicles acquired after 2025 - 09 - 30 [US Treasury FEOC Final Rule, 89 FR 96936; IRS Final Rule 26 CFR 1.30D, Federal Register 89 FR 37706]. The §30D(d) (7) FEOC exclusion retains force only for vehicles placed in service on or before that date [US Treasury Final Rule, Federal Register 89 FR 96936]. The relevant forward-looking framework is the PFE/MACR regime under §45X, not §30D. Electra's compliance posture must be assessed against the live regime, not the terminated one.

The §45X credit phase-out schedule for applicable critical minerals creates a defined time horizon within which any qualifying production must occur. As amended by OBBBA, the §45X credit for applicable critical minerals (including cobalt) is available at 100% through 2030, then phases to 75% in 2031, 50% in 2032, 25% in 2033, and zero after 31 December 2033 [IRS Notice 2023 - 44, 26 U.S.C. §45X]. With Electra's mechanical completion targeted for Q2 2027 [Company disclosures / DOE Loan Programs Office 2024], the window for full-rate credit - if all gating conditions are satisfied - is approximately 2027 through 2030. The phase-out thereafter is material to any investment or offtake decision.

## Beat 4 - Risks to the Verdict

Risk 1 - The domestic-production nexus may be an absolute bar. The most consequential assumption underlying the conditional affirmative is that some mechanism - a treaty provision, a regulatory extension, or a statutory carve-out not present in the source packet - could extend §45X eligibility to Canadian-sited production. If §45X's "produced in the US" requirement is an absolute jurisdictional gate with no applicable extension, the verdict flips from conditional to disqualified regardless of Electra's PFE status or MACR compliance. The source packet does not resolve this, and I cannot supply the resolution from outside knowledge. This is the single assumption whose failure would most decisively change the determination.

Risk 2 - The MACR safe-harbour threshold, once published, may not be satisfiable on Electra's feedstock supply chain. The interim guidance (IRS Notice 2026 - 15) defers the definitive MACR threshold to forthcoming regulations [IRS Notice 2026 - 15]. If those regulations set a threshold that Electra's cobalt feedstock sourcing cannot meet - for example, if a material proportion of feedstock originates from a PFE-linked supply chain - the supply-chain prong of the PFE test would bar the credit even if the entity-level bar is cleared. The source packet contains no information about Electra's feedstock origin, making this risk unquantifiable on current data.

Risk 3 - Commissioning delays could compress or eliminate the full-rate credit window. Electra's facility is under construction with mechanical completion targeted Q2 2027 [Company disclosures / DOE Loan Programs Office 2024]. The operational status confidence is assessed as MEDIUM in the source record [Electra Battery Materials 2024 Annual Report (SEDAR+)]. Delays beyond 2030 would push production into the phase-out period, reducing the effective credit rate from 10% of costs to 7.5%, 5%, or 2.5%, and eliminating it entirely after 2033.

## Beat 5 - Alternatives Considered

Alternative 1 - Flat disqualification on jurisdictional grounds. I considered rendering a flat negative verdict on the basis that §45X requires production "in the US" and Electra's refinery is in Ontario, Canada. I rejected this as the sole verdict because the source packet does not contain the full statutory text establishing whether any Canada-specific extension exists, and a flat disqualification based on an absence in the packet - rather than an affirmative prohibition - would itself be an over-assertion. The correct posture is a conditional verdict that names the domestic-production nexus as an unresolved gating precondition, not a fabricated resolution in either direction.

Alternative 2 - Flat qualification on the strength of the NON_FEOC determination. I considered rendering a flat affirmative verdict on the basis that Electra clearly clears the entity-level PFE/FEOC bar. I rejected this because a flat "qualifies" that silently ignores the unresolved domestic-production nexus and the outstanding MACR safe-harbour tables would be an over-assertion inconsistent with the gaps the brief itself surfaces. The entity-level PFE clearance is a necessary but not sufficient condition for §45X eligibility; the jurisdictional gate and the supply-chain MACR test are independent preconditions that remain open.

## Beat 6 - Confidence, Freshness & Outlook

Three-Axis Rating (top-line call repeated):

| Axis | Rating |
|---|---|
| Recommendation certainty | MEDIUM |
| Time horizon | 18 - 84 months (through 2033 phase-out; MACR tables pending) |
| Risk exposure | HIGH |

Drivers of confidence:

- The entity-level PFE/NON_FEOC determination is grounded in SEDAR+ and SEC EDGAR filings with explicit methodology and is assessed HIGH confidence [Electra Battery Materials 2024 Annual Report (SEDAR+); SEC EDGAR].
- The §45X credit structure, cobalt's eligibility as an applicable critical mineral, and the OBBBA phase-out schedule are all clearly stated in the statute and confirmed in the source packet [26 U.S.C. §45X; Pub. L. 117 - 169 §13502].
- The termination of §30D as a forward-looking gate and the carry-forward of the FEOC concept into the PFE regime are unambiguous in the packet [US Treasury Final Rule, Federal Register 89 FR 96936].

Drivers capping confidence:

- The domestic-production nexus - whether §45X can apply to an Ontario-sited facility - is the single most consequential unresolved question and is entirely absent from the source packet.
- IRS Notice 2026 - 15 is interim guidance only; the definitive PFE definition and MACR safe-harbour threshold tables are deferred to forthcoming regulations whose content is unknown [IRS Notice 2026 - 15].
- Electra's feedstock sourcing (the input to any MACR analysis) is not described in the source packet.
- The facility's operational status confidence is MEDIUM; commissioning milestones are drawn from 2024 disclosures that are 12 or more months old as of the audit date [Company disclosures / DOE Loan Programs Office 2024].

Freshness & half-life: The entity-level records are sourced from SEDAR+ and SEC EDGAR filings with a last-updated timestamp of 2026 - 07 - 13 [Electra Battery Materials 2024 Annual Report (SEDAR+); SEC EDGAR]. The regime records reflect the OBBBA as signed 2025 - 07 - 04 and IRS Notice 2026 - 15 issued 2026 - 02 - 12. The half-life of this brief is short: the forthcoming IRS regulations implementing the definitive PFE definition and MACR safe-harbour tables will materially change the supply-chain prong of the analysis.

Re-assessment trigger: This verdict should be re-assessed immediately upon (a) publication of the IRS final regulations implementing the MACR safe-harbour threshold tables under the PFE regime, or (b) any statutory or regulatory clarification establishing whether §45X's domestic-production nexus extends to Canadian-sited production - whichever occurs first.

## Data Limitations & Confidence

The following gaps are unresolved and would need to be closed to move the verdict from conditional to affirmative or negative:

| Gap | Nature | Impact on verdict |
|---|---|---|
| §45X domestic-production nexus for Ontario-sited facility | Absent from source packet - no extending provision, treaty clause, or carve-out present | Gating - unresolved gate; if absolute bar, verdict flips to disqualified |
| MACR safe-harbour threshold tables | Deferred to forthcoming IRS regulations per IRS Notice 2026 - 15 | Gating - supply-chain prong cannot be resolved until tables are published |
| Electra's cobalt feedstock origin | Not described in source packet | Required for any MACR analysis |
| Definitive PFE definition | Deferred to forthcoming IRS regulations per IRS Notice 2026 - 15 | Could affect entity-level assessment if definition broadens beyond current FEOC parameters |
| Commissioning timeline currency | Capacity and milestone data from 2024 disclosures, 12+ months old | Affects timing of credit availability within the phase-out window |

## Methodology & Disclosures

This brief was produced using only the regulatory regime records and subject-entity records supplied in the source packet. No external knowledge, outside regulatory text, or world-knowledge facts have been introduced. Every load-bearing factual claim is cited to a named source record in the packet. Gaps are stated as honest absences, not filled from inference or recalled knowledge. *(Per CFA ROS §10.0.)*

No conflicts of interest are known with respect to Electra Battery Materials Corp or any counterparty named in this brief. LodeIQ has no commercial relationship with the subject entity that would impair analytical independence. *(Per CFA ROS §9.0.)*

LodeIQ is an intelligence service, not an investment, legal, or tax advisor. This brief does not constitute legal advice, tax advice, or a recommendation to buy or sell any security. Recipients should obtain independent legal and tax counsel before acting on any determination herein.

## Figures

| date | jurisdiction | action type | regulation name | summary | citation |
|---|---|---|---|---|---|
| 2023-01-01 | United States | REPEALED | IRA Section 30D — Clean Vehicle Tax Credit | IRA Section 30D — Clean Vehicle Tax Credit | IRA Section 30D — Clean Vehicle Tax Credit |
| 2023-01-01 | United States | ENACTED | IRA Section 45X — Advanced Manufacturing Production Credit | IRA Section 45X — Advanced Manufacturing Production Credit | IRA Section 45X — Advanced Manufacturing Production Credit |
| 2023-01-01 | United States | REPEALED | US IRA — EV Battery Domestic Content Requirements | US IRA — EV Battery Domestic Content Requirements | US IRA — EV Battery Domestic Content Requirements |
| 2024-01-01 | United States | REPEALED | FEOC Battery Component Exclusion (2024) | FEOC Battery Component Exclusion (2024) | FEOC Battery Component Exclusion (2024) |
| 2024-01-01 | United States | ENACTED | IRA Section 30D(d)(7) — Foreign Entity of Concern (FEOC) Restrictions | IRA Section 30D(d)(7) — Foreign Entity of Concern (FEOC) Restrictions | IRA Section 30D(d)(7) — Foreign Entity of Concern (FEOC) Restrictions |
| 2024-05-06 | United States | REPEALED | 26 CFR 1.30D-6 — Section 30D FEOC Final Rule (Carve-Out Mechanics) | 26 CFR 1.30D-6 — Section 30D FEOC Final Rule (Carve-Out Mechanics) | 26 CFR 1.30D-6 — Section 30D FEOC Final Rule (Carve-Out Mechanics) |
| 2025-01-01 | United States | REPEALED | FEOC Critical Minerals Exclusion (2025) | FEOC Critical Minerals Exclusion (2025) | FEOC Critical Minerals Exclusion (2025) |
| 2025-07-04 | United States | ENACTED | IRA §45X/§45Y/§48E — Prohibited Foreign Entity (PFE) Restriction and Material Assistance Cost Ratio (MACR) | IRA §45X/§45Y/§48E — Prohibited Foreign Entity (PFE) Restriction and Material Assistance Cost Ratio (MACR) | IRA §45X/§45Y/§48E — Prohibited Foreign Entity (PFE) Restriction and Material Assistance Cost Ratio (MACR) |

*Figure 1: Compliance landscape - timeline of dated actions*

Source: LodeIQ computed rollup over 11 packet records (10 sources: US Treasury / IRS final rule 26 CFR 1.30D-6 (Section 30D Excluded Entities), Federal Register May 6 2024 - eCFR title 26 section 1.30D-6; US Treasury FEOC Final Rule, 89 FR 96936; IRS Final Rule 26 CFR 1.30D, Federal Register 89 FR 37706; +7 more).
Computed deterministically by LodeIQ from the report's source packet · Source tier: T3

## Compliance landscape — status


*Figure 2: Compliance landscape - status*

Source: LodeIQ computed rollup over 11 packet records (10 sources: US Treasury / IRS final rule 26 CFR 1.30D-6 (Section 30D Excluded Entities), Federal Register May 6 2024 - eCFR title 26 section 1.30D-6; US Treasury FEOC Final Rule, 89 FR 96936; IRS Final Rule 26 CFR 1.30D, Federal Register 89 FR 37706; +7 more).
Computed deterministically by LodeIQ from the report's source packet · Source tier: T3