Navigating IAA's negotiations

A T&E feasibility analysis on strict Made in EU criteria for batteries, components and the effects of OEM's fleet booster on the cars and batteries supply chain.

Negotiations are well under way between Member States and at the European Parliament on how to improve the IAA's Commission Proposal. The objective of this paper is to test the credibility and feasibility of three central policy options: a strict EU criteria for cells, strict EU criteria for midstream components for cathode active material (CAM & pCAM), and OEM proposals to dilute the fleet booster.

Key findings and recommendations are

- **Extending the Made-in-EU definition to all cells in subsidised cars would secure the industry uptake.**

  EU cell production will be sufficient to power corporate vehicles manufactured in Europe in 2027 and in 2030 with enough for subsidised private vehicles available, provided that battery projects with medium confidence ratings go ahead.

  As a result, we recommend that:
  - **Cell requirements must remain in place in the Annex** for 2027
  - For corporate cars, **Article 13** should remain in its current form with a strict 'Made in the EU'. The default Made-in-EU scope should include the EU Single Market and the UK.
  - For private cars we suggest
    - **Plan A:** Adopt a strict Made in EU clause as for corporate vehicles
    - **Plan B:** Considering the uncertainty on LFP chemistries and relocation effects of the IAA, plan B for private vehicles could be an opt-in "Made-with-EU" option for a few trusted partner countries and require 33% EU ownership in trusted partners projects.

- To help Europe's nascent midstream industry on **cathode active materials (CAM) and precursors (PCAM)** the IAA needs to
  - Add **pCAM** to the battery component list from **2032** onwards and
  - Consider extending the geographical scope to meet demand
    - **CAM&PCAM PLAN 1: Extend geographical scope for CAM** requirements by 2030 (and pCAM by 2032) through an opt-in Made with Europe approach, focusing on strategic partners (e.g. Canada).
    - **CAM&PCAM PLAN 2:** Add **a minimum Made-in-EU EU threshold** to secure EU investments.

  All in all, T&E suggests a **"pyramid" approach** for the geographical scope:

    - Battery cells should originate from the EU Single Market+UK
    - Midstream components like CAM and PCAM could originate from trusted partners (defined case by case through an “opt-in’ approach)

- The OEM’s **“70% fleet booster”** proposals should be rejected as they significantly undermine the IAA's effectiveness. Such thresholds allow fleets to remain eligible for subsidy schemes without actually securing batteries manufactured in Europe, allowing subsidies to continue flowing toward Chinese battery technology.

1. EU cell production alone is sufficient to power all subsidised EVs manufactured in Europe.

T&E analysis concludes that all subsidised BEVs assembled in the EU (59% of the total BEV sales in Europe[1]) could have a Made in EU Battery under the IAA, with strict Made in EU rules as early as 2027. This means an increase of 34% in EU battery demands compared to the current baseline in 2027. We believe that this can be achieved with the current production forecast of European batteries. This conclusion was confirmed after discussion with key battery manufacturers in Europe.

[1] See T&E methodology to assess share of EV sales covered by EU subsidy schemes at the end

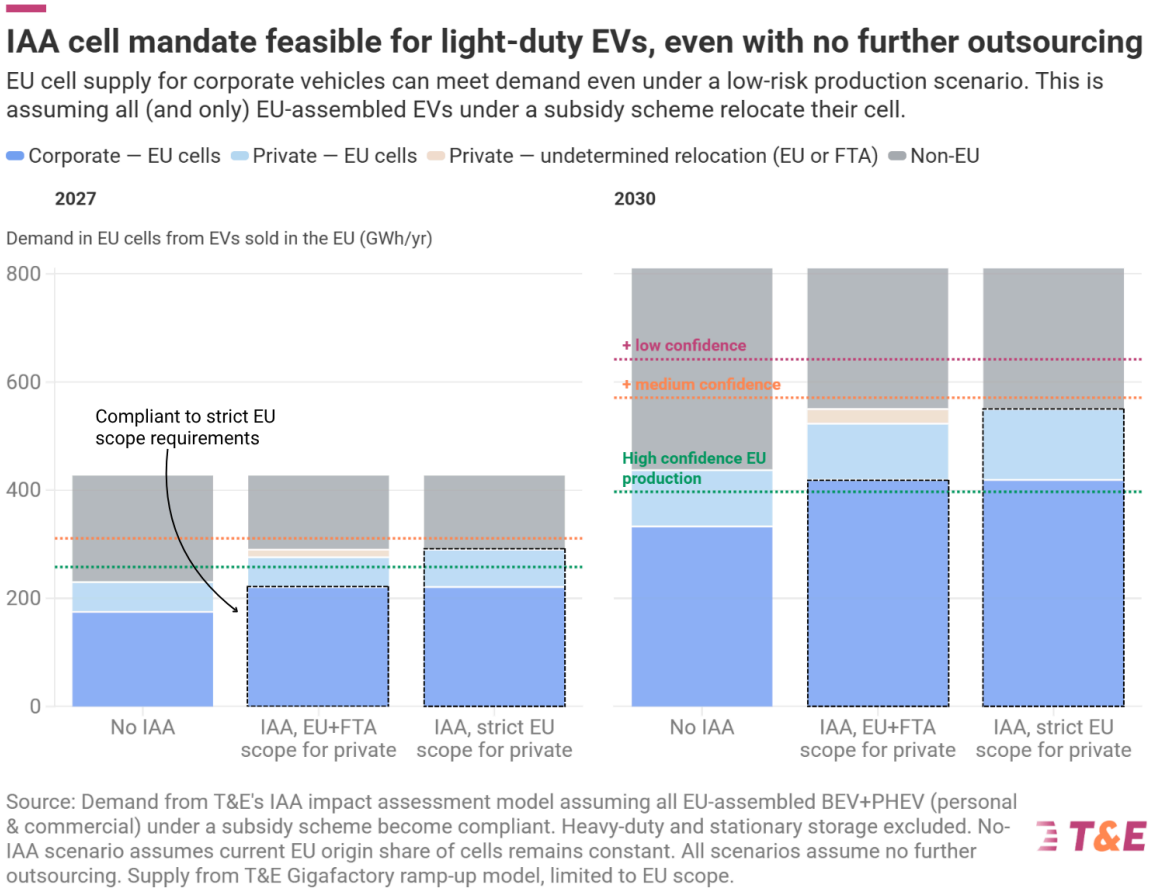


Figure 1: Demand for EU and non-EU cells from EVs sold in the EU and EU cell production capacity

Key assumptions of this analysis include :

- IAA covers light-duty EVs (also including vans).
- EU cell production includes LFP and NMC projects.
- Cell demand from EVs already using EU cells, plus additional demand from EU-subsidy eligible EVs increasing EU cell sourcing.
- Based on conversations with EU cell makers, T&E adopted a voluntary pessimistic assumption regarding production ramp up (high scrap rates in the beginning, scaling over time).
- Ratio between private and corporate channels remains the same as today.

Our assessment shows that the EU+UK has sufficient cells to power corporate EVs and private EVs *manufactured and subsidised in the EU*, under the condition that all projects, including medium confidence ones materialise.

Under the Commission's proposal, the IAA secures EU cell production only for corporate cars. When it comes to cells in private EVs, OEMs could decide to outsource cell production outside of the EU, even for cells that were already sourced in the EU. In other words, since cells in

private EVs are not in the Commission's proposal scope for strict Made-in-EU, part of the demand for private cars cells currently produced in the EU could move to FTA partners.

Under T&E's proposal to apply a strict Made in EU criteria for all subsidised cars (private or corporate), a small uncertainty exists on the onshoring effect of the IAA: will cars currently subsidised yet Made-in-China come back to Europe? If yes, all projects, including low certainty would need to materialise to meet the demand.

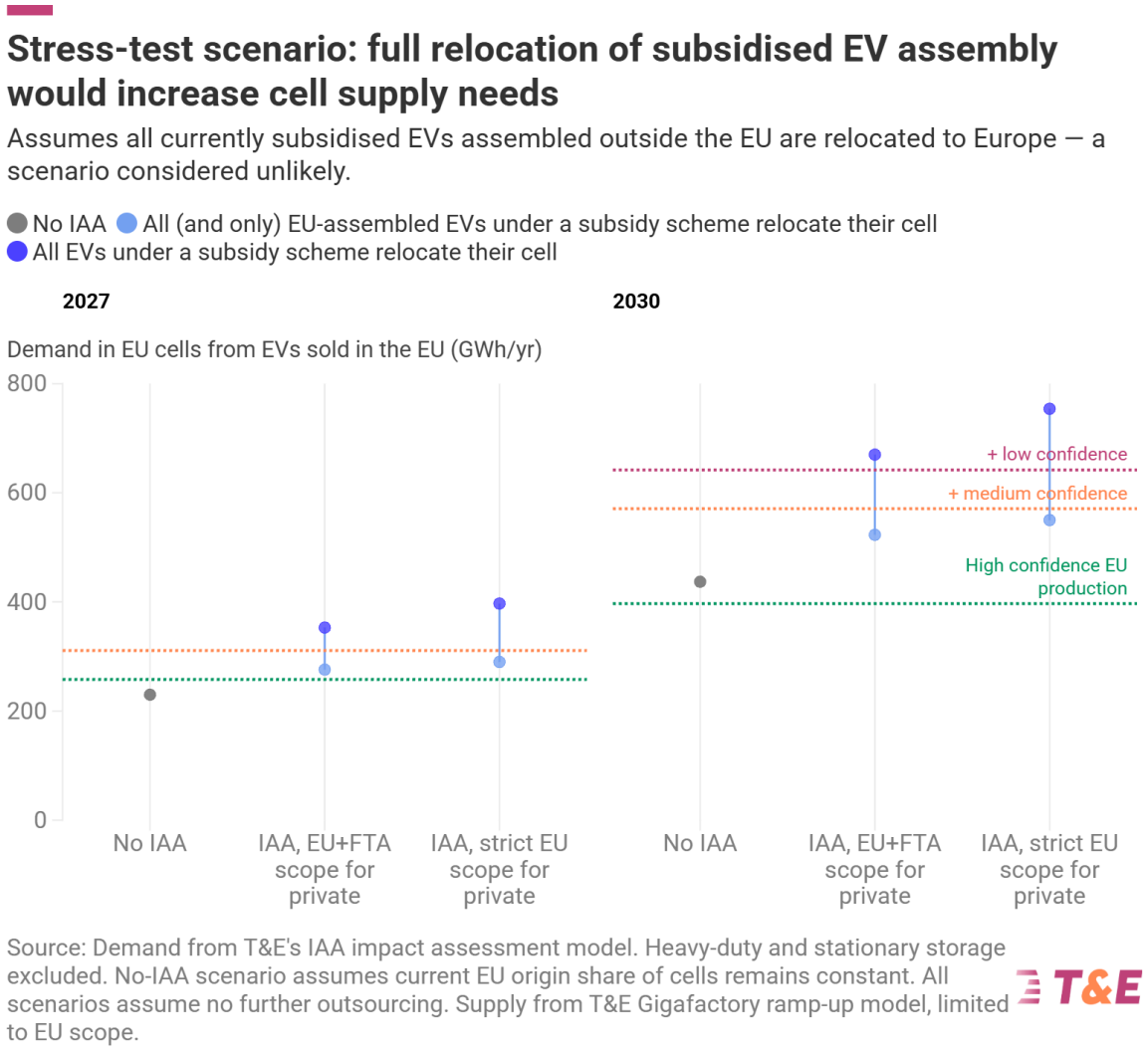


Figure 2: EU cell demand if all subsidised cars that are currently assembled outside of Europe would relocate

It should be noted that the JRC assumes that EVs currently subsidised but assembled outside the EU would not make the additional effort required to relocate production to Europe.

Therefore, T&E's scenario is more conservative and more demanding, while still demonstrating that such a transition would be largely feasible.

Despite small uncertainties regarding EU cell demand in an extreme relocation scenario remaining, **T&E proposes two plans for private cars:**

PLAN A on geographical scope: Apply strict Made-in-EU rules to all cells of subsidised EVs. Tightening the geographical scope to Made-in-EU for all subsidised vehicles is feasible, provided the current project pipeline goes ahead. In such form, the IAA will likely secure all EU projects, including those with less certainty. However, EU battery projects may fall short of EU batteries if OEMs decide to *massively* onshore EV productions (unlikely).

PLAN B on the geographical scope: Considering uncertainties on the LFP chemistry uptake[2], and on the onshoring effects of the IAA, for private cars only, tighten Made-With-EU rules to a strict **opt-in approach of trusted partners** AND require, for all projects exporting cells from trusted partners, **33% ownership from an EU company** to be eligible for subsidies, to avoid circumvention.

Important: Some OEM's demand to delay the cell mandate will jeopardise the materialisation of projects with medium or low confidence: without clear offtake contracts coming from a regulated demand, these projects will struggle reaching the final investment decision.

In practice in the IAA text, T&E recommends :

- Keep the **cell requirements in the Annex** unchanged.
- Keep and **Article 13**, in its current form with a strict 'Made in the EU' scope, unchanged.
- For private cars
    - Plan A. Extend the strict Made-in-EU requirement to all subsidised vehicles.
    - Plan B: For Private cars, to accommodate political priorities and secure additional capacity to meet subsidy requirements more comfortably, T&E would support a carefully widened geographical scope under a strict 'opt-in' approach. This means not including all FTA partners by default but including partners on a by case basis, with EU Single Market and UK included as default. Projects exporting batteries to the EU for the private cars should be owned at 33% by European companies to be eligible.

[2] LFP batteries are expected to make up 54% of the market for passenger BEVs by 2030. Potential for LFP production in Europe does exist. According to T&E analysis, Europe is on track to produce over 100GWh of LFP batteries by 2030. This could reach 150GWh if all potential projects also go ahead.

2. The IAA needs to keep cathode active materials (CAM) requirements for 2030 to help Europe's nascent midstream companies, but needs an extended geographical scope.

The EU battery midstream - the refining stage that converts processed minerals into battery grade materials needed to manufacture batteries - continues to struggle with clear offtake commitments and additional investments. This is why the IAA proposal rightfully sets incentives for CAM.

China dominates global pCAM and CAM production for lithium-ion batteries, controlling over 90% of global production capacity. This is why precursors CAM (pCAM), the step before cathode active material is formed, should also be added to secure demand and leverage private capital.

While crucial projects are being built at the moment, the EU capacity for pCAM and CAM differs from EU battery cell production.

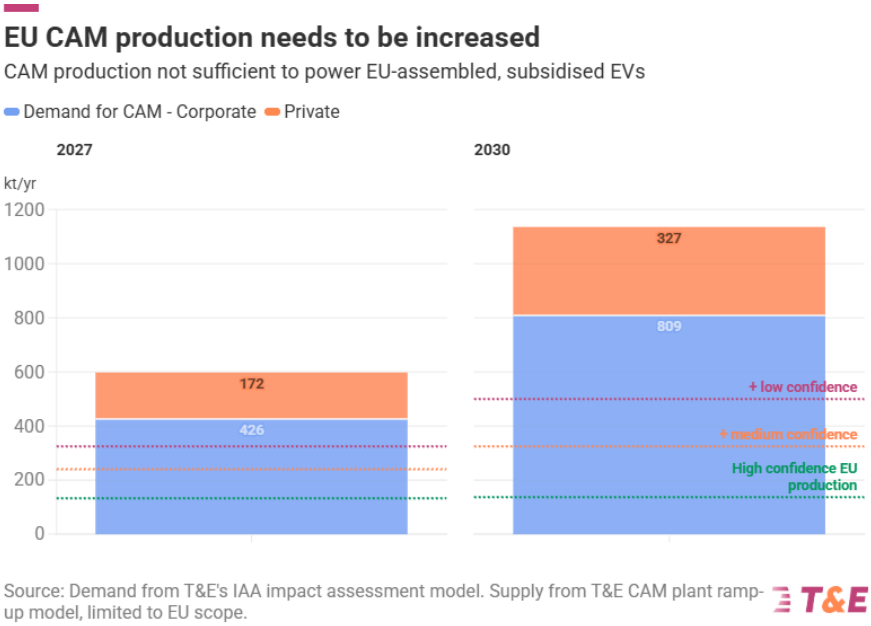


Figure 3: EU CAM production not sufficient to power subsidised EVs alone

T&E analysis shows that more CAM supply will be needed. Importantly, it is crucial to incentivise demand for European CAM projects which is why including CAM in the IAA remains key. Hence, here it can make sense to allow components from partner countries to qualify as Union origin for subsidies.

To help Europe's nascent midstream refining industry on **cathode active materials (CAM) and precursors (PCAM)**, T&E recommends to

- Add **pCAM** to the battery component list from **2032** onwards and
- Consider extending the geographical scope to meet demand
    - **CAM&PCAM PLAN 1: Extend geographical scope for CAM** requirements by 2030 (and pCAM by 2032) through an opt-in Made with Europe approach, focusing on strategic partners (e.g. Canada).
    - **CAM&PCAM PLAN 2:** Add **a minimum Made-in-EU EU threshold** to secure EU investments.

In its current form, the IAA distinguishes geographical scope between sales channels (private and corporate). But to simplify and **accommodate different production capacity realities between battery components**, T&E would recommend a "pyramid" approach depending on the **production stage**. For subsidy eligibility, this would mean that

- ➢ Battery cells and pack should originate from the EU (Single Market+UK)
- ➢ Midstream components like pCAM and CAM originate from EU and trusted partners (decided on a case by case basis)
- ➢ Critical Raw Materials (lithium, nickel, copper, graphite) originate from EU, FTA and trusted partner countries

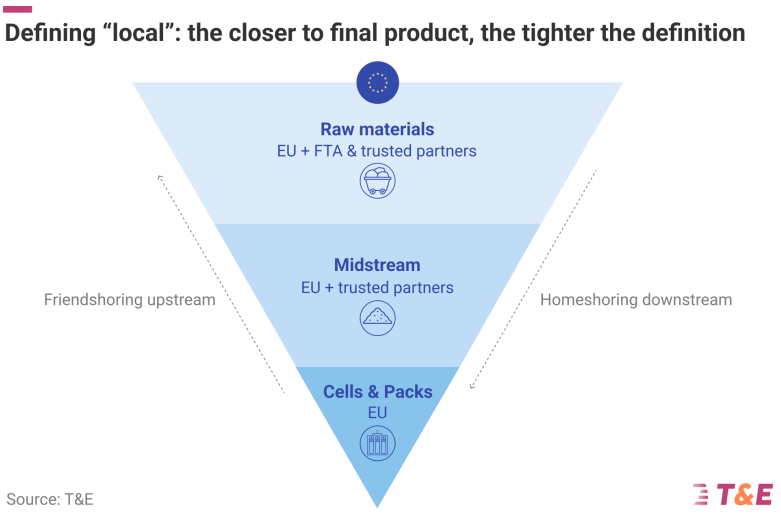


Figure 4: T&E suggested 'pyramid' approach to the IAA's geographical scope

3. OEM proposals for a “70% fleet booster” makes the IAA teethless for most OEMs and dilutes demand for European battery supply chain companies

During the last few weeks, various European car manufacturers (including Renault, Stellantis, and VW) alongside ACEA have voiced support for local sourcing requirements within the IAA. However, a deeper dive into these positions reveals that their recommendations involve pushing back the implementation dates for battery components and introducing a "fleet booster" mechanism. Under this proposal, if 70% of an OEM's EVs meet a (diluted) IAA criteria, their entire EU fleet would qualify for public financial support.

According to T&E's assessment, such a threshold would significantly undermine the IAA's effectiveness, as reaching the 70% fleet booster mark is currently possible with minimal strategic shifts. Furthermore, postponing the cell and CAM mandates would remove the critical pull factors needed for cells and CAM projects to reach Final Investment Decisions, allowing fleets to remain eligible for subsidies without actually securing batteries manufactured in Europe.

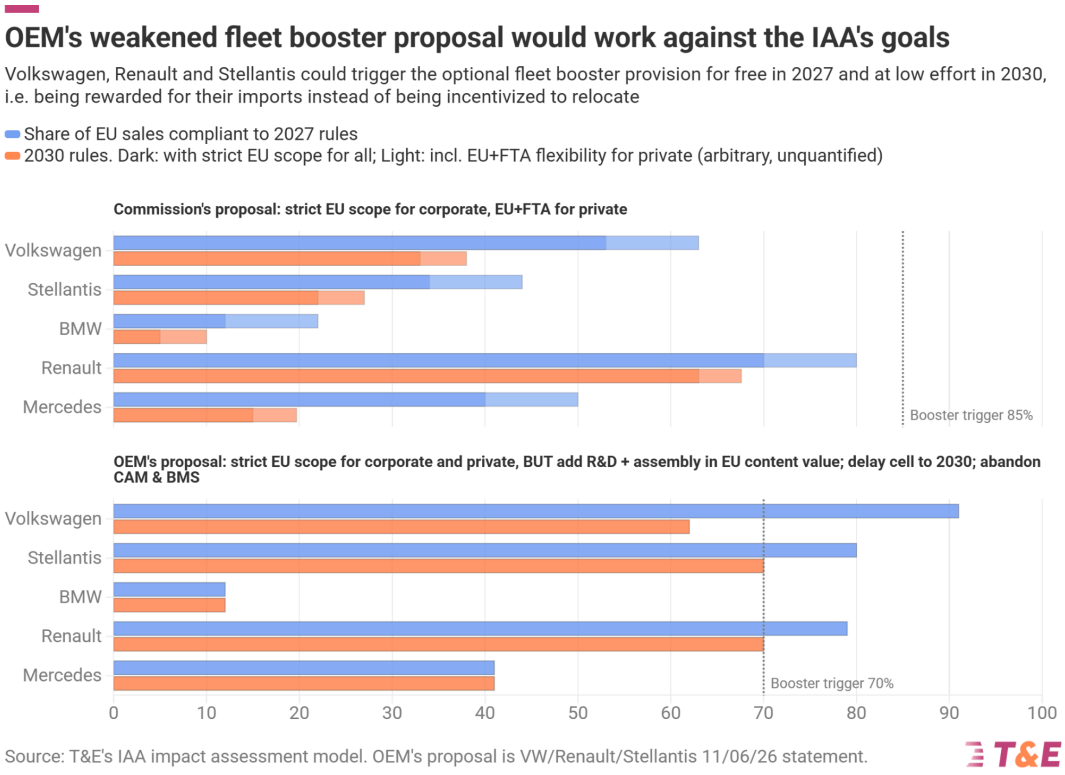


Figure 5: Commission vs OEM fleet booster proposals

Nowadays, most of the value creation of EU assembled EVs does not stem from battery technology or electronic systems. This explains why a diluted fleet booster without battery obligations would render IAA worthless for most OEMs.

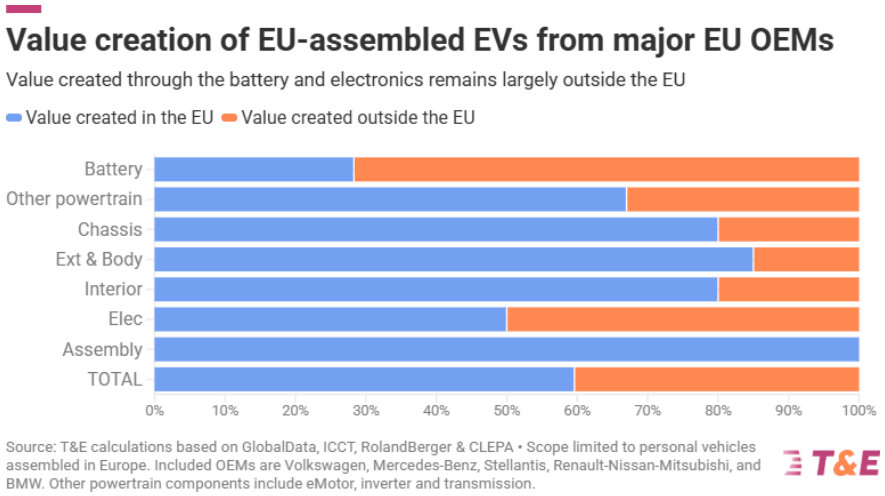
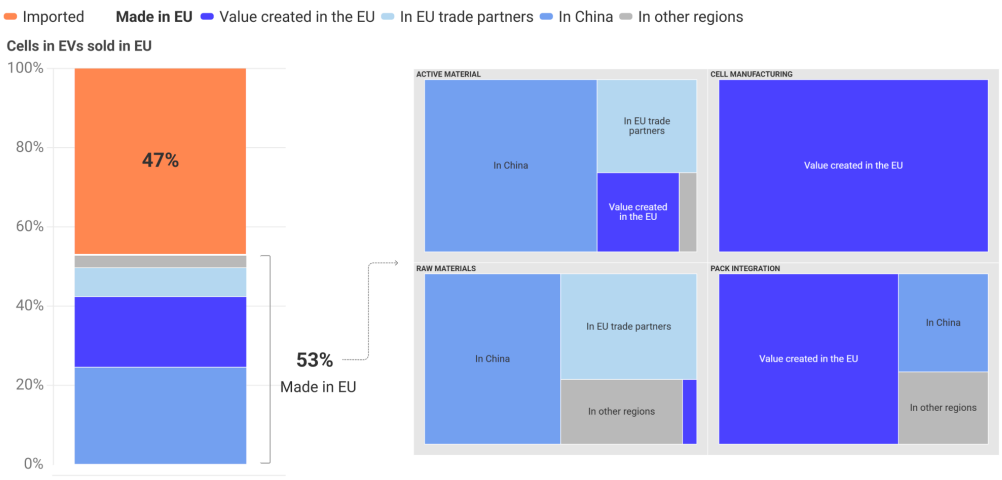


Figure 6: Value creation of EU-assembled EVs by major EU OEMs

The OEMs proposal to postpone battery requirements would represent a big threat for Europe's sovereignty and resilience in battery production. Roughly 50% of the battery cells powering electric vehicles within the European market are currently *assembled* locally. However, for these batteries, local production only accounts for approximately one-third of the overall pack value. Value created through critical parts like the active material (CAM, pCAM) and refined raw materials remains largely in China. As a result, including batteries and components requirement in the IAA proposal as early as 2027 is critical to reshore this production and secure the investment decision of pending EU projects.



Source: T&E analysis
Scope of value items. Raw materials: Li, Co, Ni, Mn; Active materials: pCAM/CAM/AAM, separator, electrolyte & current collectors manufacturing; Cell manufacturing: electrodes preparation, cell assembly, formation, test, sealing; Pack integration: BMS, structure, thermal management, final assembly.

Figure 7: Only reshoring battery cell production with not be sufficient to capture value creation through batteries

Annex: T&E Methodology

Methodology to assess share of EV sales covered by EU subsidy schemes

When assessing the feasibility of the IAA goals, it is important to note that not all EVs on the EU market are subsidised. As a result, EU cell production only needs to cover subsidised EVs, not the entire EV market.

T&E has calculated the share of EVs sold on the EU market covered by subsidy schemes. Starting from the JRC assumption that currently 84% of all EVs sold on the EU market are covered under a subsidy scheme (e.g. subsidies or tax rebates, etc.), we assess how many of those cars are EU assembled and how many would already be considered IAA compliant.

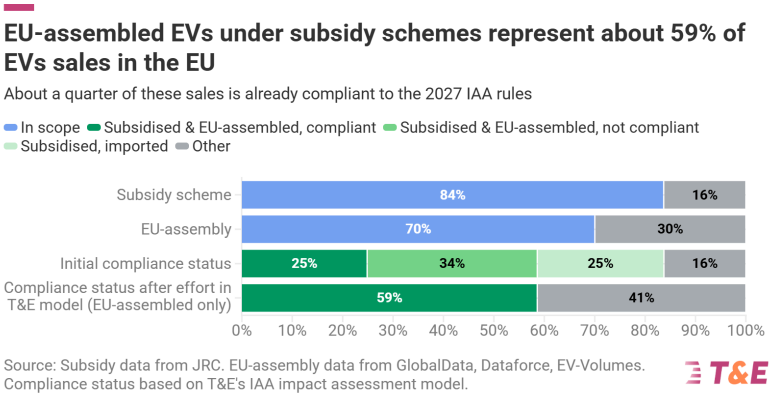


Figure i: Share and origin of EV sales covered by an EU subsidy scheme

Out of the EU-assembled EVs, we assume that 59% will be subject to IAA requirements: 84% subsidy coverage of the 70% EU manufactured, considering an equal split between EU and non-EU assembled EVs.

This means we depart from a conservative scenario, also taking into account the JRC's assumption that non-EU assembled EVs will likely not be reshored in Europe given their current EU-content is too low, making it too costly to reshore larger parts to Europe.
Importantly, T&E's impact assessment model shows that 25% of the subsidised, EU-assembled vehicles are already compliant with IAA requirements, meaning they already source battery cells from the EU and generate over 70% local value addition (excl. battery). Another 34% of currently subsidised cars are already EU-assembled which is why we assume they will make the extra efforts to comply with IAA requirements to remain eligible for subsidies.