Boosting Europe's clean industrial transition: making the Industrial Accelerator Act deliver for EVs and batteries

November 2025

Summary

Europe is losing ground in the global clean technology race. Unless decisive action is taken it will be exposed to ever greater dependencies, deindustrialisation and major job losses. Whether Europe adopts a much more forceful industrial policy now will determine whether it is able to achieve its economic, defence and climate goals.

The EU should ensure a significant share of critical electric technology stack (batteries, electronics, e-motors, chips, software and critical minerals) will be produced in Europe. Non-European firms can play an important role in this, provided they onshore their supply chains and enter in beneficial partnerships. This will not happen organically: the failure of the EU's Net Zero Industry Act (NZIA) demonstrates aspirational domestic production targets without policy and funding do not make any difference on the ground.

Europe has many strengths. It has a large market for cleantech - e.g. one in five cars sold in 2025 are electric - and there are dozens of companies planning to produce battery components and minerals locally (Annex I), but many struggle to survive in the ramp-up phase or fail to secure offtake from carmakers because Chinese sourcing remains cheaper.

Local content requirements are essential to break this deadlock, and they can be scaled gradually as domestic capacity grows.

The forthcoming Industrial Accelerator Act (IAA) offers a critical opportunity to introduce **simple, effective Made-in-EU and local content rules for electric vehicles (EVs) and batteries**.

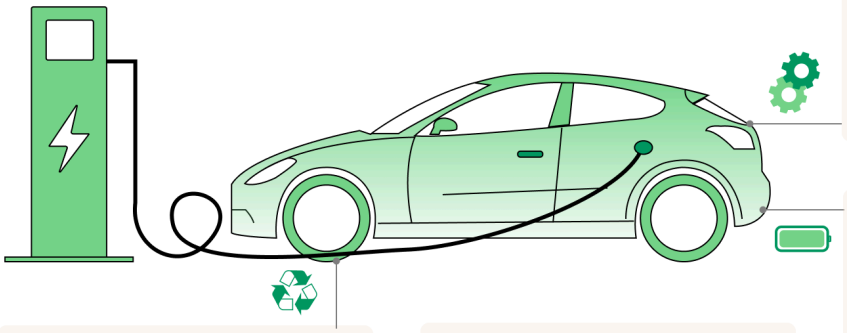
T&E proposes four pillars for a successful IAA:

- **Define Made-in-EU rules for EVs and batteries**

Europe must create lead markets for zero-emission vehicles while progressively developing domestic value chains. **The IAA should clearly define what Made-in-EU EVs and batteries are.** A transparent methodology rewarding Made-in-EU EVs, batteries, key components, and materials is necessary to create a clear business case that attracts private investment. **These rules should above all focus on the electric tech stack** - the strategic heart of a vehicle.

To build competitiveness and scale local clean manufacturing, mandatory Made-in-EU requirements should be progressively embedded across a spectrum of policies and financing instruments.

"Made-in-EU" preference for EVs and batteries



EV production

Full manufacturing in Europe (not just final assembly)

Batteries

- EU-based cell, module, pack production
- Increasing number of Made-in-EU components (e.g. cathodes, anodes, etc) and % of EU added value per component (e.g. 60% of CAM) by 2030

Materials and recycling

- Use of EU-recovered materials
- Local recycling counts toward EU content

Electric tech stack

- Increasing number of Made-in-EU components - battery, motor, powertrain, electronics by 2030

Source: T&E

T&E

- **Link Made-in-EU rules to key policies, incentives and funding**

Content rules should be simple, consistent and applied across a range of policy measures. Public procurement alone is too small to shape EVs and batteries' markets. The EU's key leverage lies in its single market and the billions of euros in national subsidies and state aid distributed annually. Local content requirements should therefore be tied not only to procurement, but also to national tax incentives, State Aid, EU funding, future corporate fleet legislation, car CO_2 standards, trade and if this combination does not deliver, market access.

- **Introduce a vehicle carbon footprint label and green steel label**

A carbon footprint label for vehicles and key inputs (steel, aluminium, batteries) can drive market demand for clean, locally made materials and products. Labelling efforts should particularly support **green steel offtake in the automotive sector**, in a first instance. The IAA should commit to a vehicle carbon footprint label, based on a new steel carbon footprint label, the existing draft proposal for the battery carbon footprint and an upcoming aluminium carbon label. This vehicle carbon label should be first implemented via the Car Labelling directive review (planned for 2026) and to harmonise national fiscal rules (e.g. France's eco-score). Incentives for the use of green steel could be provided in regulations such as the CO2 standards.

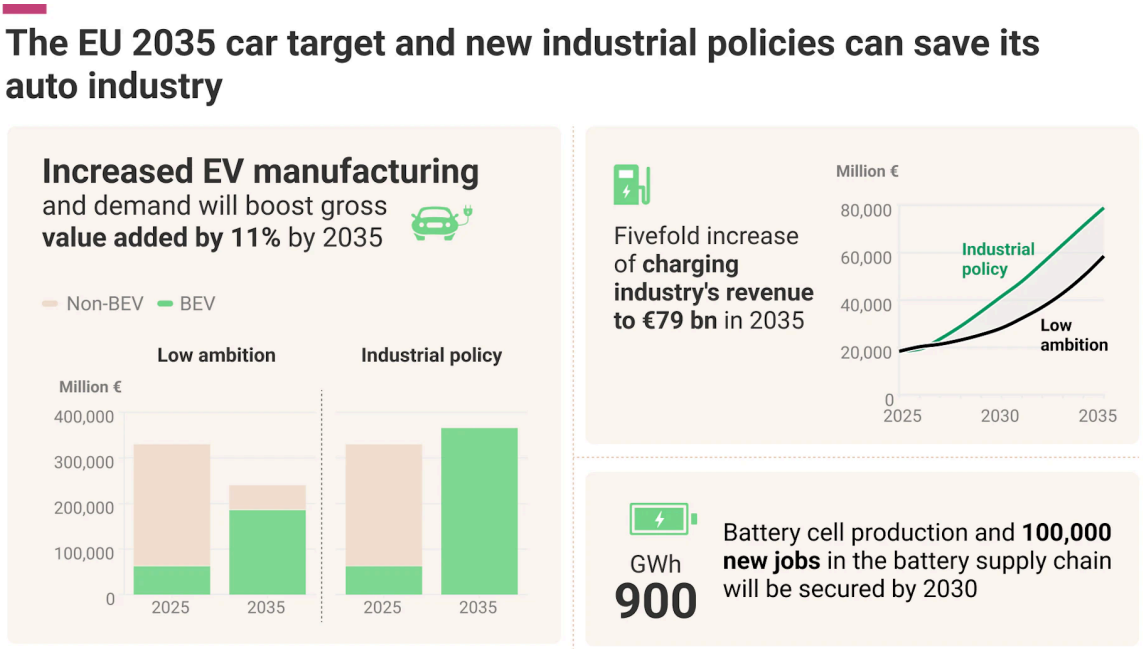
- **Ensure Foreign Direct Investment strengthens Europe's industrial base**

An EU-wide approach to foreign direct investment (FDI) in the EV value chain is essential. The IAA should define what counts as a **meaningful technology transfer,** ensuring that FDI

contributes to resilience and competitiveness rather than deepening dependence. Since 2021, the European Commission has approved around €2 billion in State aid for Asian battery manufacturers, with more subsidies for Chinese players under consideration. This means a significant share of public support for Europe's battery industry is flowing to non-European companies, with limited local value creation. Foreign EV and battery investments should only qualify for public support or trade benefits if they meet clear criteria: local control, technology and IP sharing, skills transfer, sourcing from local suppliers and local value requirements.

1. Define Made-in-EU rules for EVs and batteries

T&E's research demonstrates the significant benefits a robust EU green industrial policy can bring to the automotive value chain.



Source: T&E

Our July 2025 report modelled the impact of maintaining the EU's 2035 zero-emission goal alongside new industrial measures, including electrification targets for corporate fleets, production aid, and support for Made-in-EU Battery Electric Vehicles (BEVs) and batteries. Under this scenario, the automotive value chain's contribution (Gross Value Added) to the European economy would rise by 11% by 2035, Europe's EV production would triple by 2030, and Europe would source 67% of its batteries, 46% key battery components like cathodes, and 90% of lithium chemicals domestically.

Maintaining the economic strength of Europe's automotive sector requires preserving the integrity of the 2035 CO_2 zero-emission target while strengthening industrial and demand-side policies to make local manufacturing attractive.

The future IAA is a key instrument to achieve this, creating automatic eligibility for incentives - including public procurement, purchase subsidies, and manufacturing aid - based on clear, pre-defined and binding criteria.

Strong local content policies provide investment certainty and can ensure Europe captures value across the EV and battery supply chain. For products like EV batteries, local content is as critical as sustainability, enhancing supply chain sovereignty.

While European based OEMs sourcing more from China may lower EV production costs in the short term, it would deepen Europe's dependence on Chinese technologies and ultimately erode the long-term competitiveness and independence of its automotive industry.

For BEV production, Made-in-Europe criteria should require full manufacturing in the EU. Taking inspiration from the French eco-score, requirements must cover key manufacturing stages in order to close the loophole that allows near-complete vehicles imported from outside Europe to qualify for incentives through minimal semi-knockdown "kit assembly".

We recommend a staggered approach to define local content, balancing progressive localisation of **critical components** and **value-added thresholds**. Localising the **EV electric technology stack** - including the EV battery - is the key to resilience. The electric stack is the critical cleantech innovation necessary for the ICE-EV transition. It also has dual-use crossovers, and contains most rare earths.

- **Made-in-EU batteries**

Specific local content criteria for batteries should require **battery cell, module and pack assembly and production in Europe.**

Then a Made-in-EU battery should incorporate **several critical Made-in-EU components** where Europe must build industrial capacity and secure control of key intellectual property. Localisation should be guaranteed for the most strategic parts of the battery value chain: cathode active materials, cathodes, anodes and anode materials, separators, electrolyte, and battery management systems (BMS). **The number of required battery components produced in Europe should progressively increase - e.g. from 3 in 2026 to 5 in 2030**. The list of key components identified in the Net Zero Industry Act (NZIA) Delegated Act should be used for that purpose.

A percentage-based localisation threshold applied to the Bill of Materials (BoM) should be progressively ramped up by 2030, in line with the timeline of major EU component and recycling projects coming online.

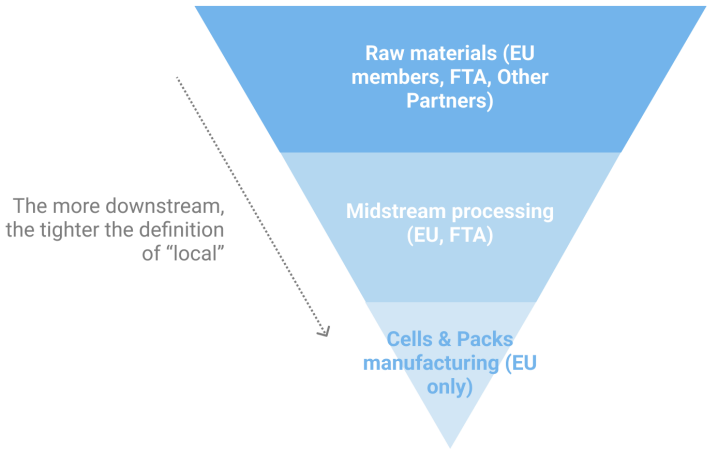
T&E analysis indicates that by 2030, almost 70% of EU battery cell demand can be met through domestic manufacturing. For upstream materials, 46% of EU demand for PCAM and CAM could be covered by EU-based production, with local processing capacity ranging from 19% of nickel demand to 90% for lithium. Based on this evidence, we recommend **2030 localisation thresholds** that are both realistic and ambitious enough to send a strong industrial signal, going beyond current market trajectories:

- ➢ Battery pack: 100%
- ➢ Battery cell: 80%
- ➢ CAM: 60%

This BoM approach, used in trade agreements such as the EU-UK Trade and Cooperation Agreement (TCA), calculates the share of a product's value generated locally. The EU-UK TCA sets local content thresholds for EVs - and batteries - traded across the Channel in order to qualify for the preferential 0% duty. While BoM is the most robust and WTO-compatible method, it can be complemented by tariff-shifting rules, where a fully transformed component counts as local even if its raw inputs are imported. However, **tariff shifting should be strictly limited to non-critical, low-risk parts of the value chain, as otherwise it risks undermining localisation**.

Local criteria should tighten up the value chain: for batteries, raw materials could originate from the European Free Trade Association (EFTA), the United Kingdom, Free Trade Agreement (FTA) partners, and mineral partnership countries, while cell and pack manufacturing - including battery management systems (BMS) - should require strictly Made-in-EU production.

Defining "local": the closer to final product, the tighter the definition



Source: T&E

- **Made-in-EU electric technology stack**

Beyond batteries, **Made-in-EU rules should focus above all on the electric tech stack** - the most strategic part of a vehicle. Inclusion of ancillary parts of the vehicles (e.g. tires, seat belts, wheels, etc) is less strategic but could secure existing jobs in the supply chain while representing additional cost for the vehicle.

We suggest a **progressive approach**, starting from a limited number of critical components (e.g. 3 in 2026, including e.g. battery and electric motor), then rising to a wider set of Made-in-EU components (e.g. 5 in 2030).

Specific EU production requirements should be introduced particularly for electric powertrains and electronics (e.g. power semiconductors, chips and modules, battery management system chips, motor control units, inverter integration, magnets, etc).

Public incentives linked to Made-in-EU criteria should not be extended to activities directly or indirectly controlled by Foreign governments, ensuring that strategic decision-making and technology development remain anchored in Europe and its global partners.

- **Complementarity with circularity and clean materials policies**

Local content requirements can neatly complement other lead market policies that support a shift towards green materials - from green steel and green aluminium to recycled materials. Public incentives for EVs should use both local content requirements and low carbon requirements (see section *'3. Developing a vehicle carbon label and green steel label'*).

Local content rules should **incentivise local scrapping and recycling of EVs and local recycling of battery materials**, to avoid the current leakage of end-of-life EVs and battery materials out of the EU. We recommend to include materials from EU end-of-life batteries, production scrap from EU-based cell manufacturing facilities, as well as battery materials from EU-based recycling facilities, to qualify as local content. Recycled steel and aluminium should be considered green (see 'vehicle carbon footprint' section).

- **Local content as an industrial and resilience strategy**

Without rapid deployment of local content tools, Europe risks becoming a market for foreign clean-tech products, losing jobs, industrial capacity, and strategic resilience. The IAA must therefore function not merely as an enabling framework, but as a binding industrial strategy that captures value, strengthens the green transition, creates jobs and secures Europe's competitive edge. Ultimately, local content requirements can provide certainty to investors that European-made products will be prioritised, hence leveraging private capital.

This approach can be adapted for other strategic sectors. Focus and prioritisation are essential: the EU must concentrate on sectors critical to decarbonisation and economic security, such as batteries, steel and green hydrogen, rather than attempting to satisfy every industrial constituency.

Made-in-EU requirements are not a silver bullet. They must complement other key policies - such as smart environmental regulation, targeted investment support, and fair trade protections - to create a thriving environment for clean technologies in Europe.

Global competition and trade

Globally, major economies are already using local content rules to secure clean-tech supply chains. The US (Inflation Reduction Act), India (>50% localisation of EV plants, and a Production Linked Incentive - PLI), Japan (procurement of storage batteries), Indonesia (>80% local content for EV batteries by 2030) and South Africa (>20% local content for storage batteries) all require significant localisation in EV and battery production.

China's "Made in China 2025" strategy created a highly integrated and subsidised EV ecosystem, producing 80% of global lithium-ion batteries at roughly one-third lower cost than the EU. The recent modifications to the US IRA end the EV purchase credits tied to local content criteria but add previously non-existent restrictions to 'Section 45X' battery production credits. Only batteries without significant Chinese involvement in their supply chain are eligible, a strong incentive for home- and friendshoring. **Without similar measures, Europe risks lagging in industrial competitiveness and becoming even more dependent**.

While WTO rules under the Agreement on Subsidies and Countervailing Measures (ASCM) prohibit subsidies contingent on domestic over imported goods, the EU can design support schemes to comply. The EU can invoke GATT Article XXI - the national security exception - to justify measures supporting domestic battery manufacturing. Batteries are vital not only for clean mobility and energy storage but also for critical defense applications such as unmanned systems, communications, and base resilience. Given the broad scope of Article XXI and its applicability to materials essential for military and strategic infrastructure, the EU has a legal and political case to defend targeted local content provisions as necessary for its security interests. This approach provides a legally cautious and policy-strong path to resilient local cleantech production. One avenue the EU could investigate to increase legal certainty before the ECJ is codifying GATT XX and XXI in EU law.

2. Link Made-in-EU rules to key policies, incentives and funding

Local content rules should be systematically applied across policies, including tenders for battery storage systems and EV procurement, public procurement, national EV incentives, EU-level funding schemes, state aid (especially production support), penalties for lack of local content in the car CO2 standards, and the forthcoming corporate fleets legislation.

Public procurement

Public procurement (PP) must align fully with Europe's climate and industrial objectives by integrating a "European preference" for EU-Made clean products. PP represents 14% of EU GDP - around €2 trillion annually - that could accelerate the green transition and circularity, strengthen domestic manufacturers, and enhance strategic autonomy.

According to Carbone 4, currently only 9% of EU public contracts can be considered green, despite 10% of GHG emissions being linked to public procurement, and 60% of contracts are awarded solely on lowest cost, with competition at a decade low. The 2026 review of Public Procurement Directives presents a major opportunity to boost demand for clean, locally produced products. Future directives should integrate environmental standards with industrial policy objectives, ensuring public procurement stimulates domestic production of key clean technologies. Mandatory non-price (resilience and sustainability) criteria should be embedded in both horizontal and sectoral legislation, with minimum quotas for domestically manufactured products.

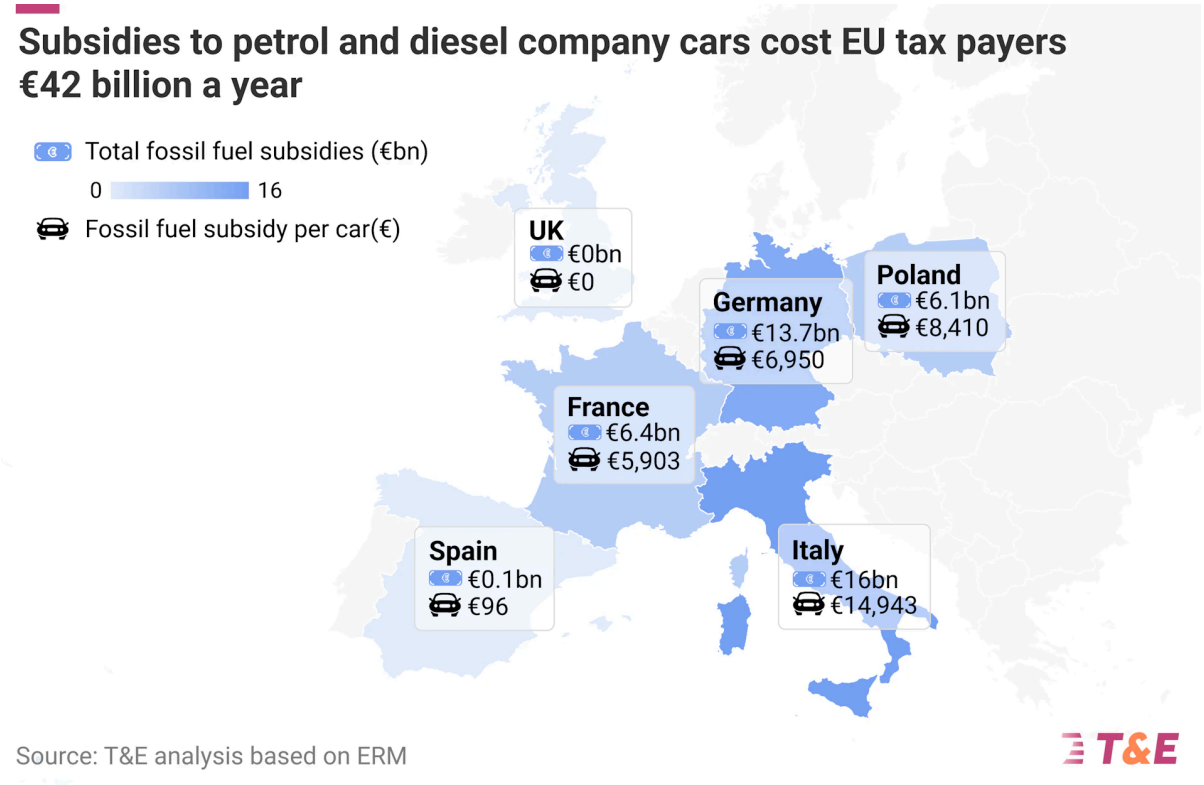
The IAA should require that public tenders for EVs include Made-in-EU rules, particularly for batteries with growing shares of domestically sourced materials. Given that publicly owned and procured vehicle fleets are a small part of the market[1], a 100% local production requirement is realistic.

Corporate fleets legislation

Local content rules in the IAA should be strict requirements in fleet regulations, not super credits, to maintain legislative ambition. BEVs need to meet these criteria to count towards the fleet regulation/targets.

[1] In France in 2024, only 0,6% of new cars were purchased by public authorities.

T&E's October 2024 study showed fossil fuel subsidies for company cars cost €42 billion annually, particularly favoring SUVs, which receive up to €8,900 per year in tax breaks versus private buyers. This also explains why companies are registering twice as many climate harming SUVs than private households. Of the total €42 billion, €15 billion go into subsidising SUVs.



With corporate cars representing on average 60% of new registrations and accounting for 73% of WLTP emissions, legislating corporate fleets offers a key opportunity to drastically reduce road transport emissions and integrate Made-in-EU criteria. This can play a crucial role in creating demand for EVs and providing investment certainty for European carmakers, battery producers, and the power sector.

Car CO2 standards

Instead of simply rewarding BEVs that meet local content criteria (incentive), the EU should set hard requirements or malus for BEVs that don't meet the criteria. This would guarantee that the EU sets a clear direction of travel towards a strong EU based BEV production footprint. In practice the EU could use the local content definition in car CO2 via:

- **Minimum Made-in-EU requirement**: at least 80% of BEVs need to comply with local content rules (by 2035). Extra BEVs that don't meet the criteria are not counted towards the CO2 targets. For example: for a fleet with 80 Made-in-EU BEVs and 30 'not' Made-in-EU BEV, only 20 'not' Made-in-EU BEVs count, the other 10 don't contribute to the fleet average.
- **Malus** (0.5-0.8 multiplier) for BEVs not meeting the local content requirement.
- Only vehicles that meet the local content criteria can be counted towards **pooling**.

Any super-credit system must include safeguards to avoid loopholes, with credits awarded only to strictly defined small, affordable, Made-in-EU BEVs.

National subsidies: tax incentives and State Aid

Sustainability and resilience criteria for EVs and embedded components (batteries, steel, aluminium) should extend beyond public procurement to national taxation, EV subsidies, social leasing schemes, and corporate fleet requirements. Introducing Made-in-EU requirements into incentives and public funding can reward the use of local components and materials, scaled gradually as local cleantech capacity grows.

The IAA should provide the legal framework to integrate Made-in-EU criteria across EU State Aid rules and guidelines, in particular the Clean Industrial Deal State Aid Framework (CISAF), the Climate, Energy and Environmental Aid Guidelines (CEEAG) and the General Block Exemptions Regulation (GBER). The EU should require EVs, batteries and their components such as cathodes to be manufactured locally to benefit from those subsidies. A tiered system could reward locally produced battery cells, with additional top-ups for locally producing cathodes or anodes, or sourcing and recycling local materials.

EU funding

Made-in-EU criteria should serve as eligibility conditions for all EU funds (e.g., Innovation Fund, InvestEU instruments) and Recovery and Resilience Facility support, mirrored by the European Investment Bank (EIB) and national promotional banks benefiting from EU guarantees. In the post-2028 EU budget (MFF 2028-2034), Made-in-EU requirements should be embedded in the European Competitiveness Fund (building on Article 10 on "EU preference") and National and Regional Partnership Plans (NRRPs set in the 27 Member States). Top-ups can reward higher domestic value-added in batteries, cathodes, and other critical components.

To maximise impact, public support should prioritise production aid - output-based support (EUR/kWh produced) for cleantech manufacturing - rewarding actual production rather than costs, particularly during ramp-up phases.

3. Developing a vehicle carbon label and green steel label

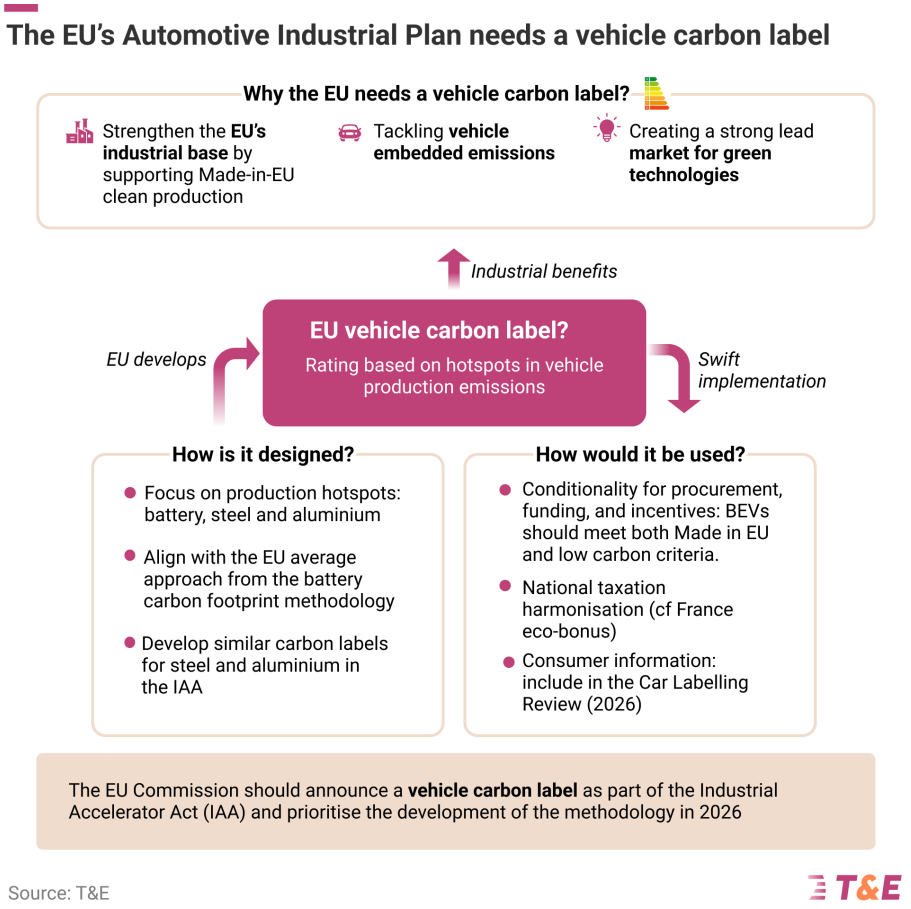
The IAA must drive low-carbon innovation by prioritising green-labelled products, creating stable and predictable market conditions that encourage investment in sustainable technologies. For cars, this means setting clear eligibility criteria for public support based on a harmonised EU vehicle carbon footprint label. For public support and incentives, the EU carbon footprint performance should be complemented by local content requirements.

Vehicle carbon label in the IAA (or 'eco-score')

T&E proposes that the EU develops an instrument to identify 'low carbon' vehicles in the IAA: a 'vehicle carbon label' (or 'eco-score'). Its key objectives are to:

- **Support for Made-in-EU clean production**: An EU vehicle carbon label would reward the cleaner energy and production within the EU.
- **Create a lead market**: Stimulates demand for low-carbon materials, providing industry signals to invest in and scale clean technologies, such as green steel, aluminum and batteries.

- **Address embedded emissions**: As tailpipe emissions decrease with electrification, policies must tackle the vehicle embedded emissions from materials and production.



Design

- **Focus on the production hotspots: battery, steel and aluminium** - which together make up 75% of the vehicle embedded carbon for BEVs.
- **Align with the EU average** approach from the battery carbon footprint methodology.
- Develop similar **carbon labels for steel and aluminium** in the IAA.

How would it be used?

- **Consumer information:** included in the Car Labelling Review (planned in 2026). In the EU Automotive Action Plan, the Commission has committed to supporting consumer information by including "*information about the carbon content of key materials used in the vehicle*". This would guide consumers with transparent environmental information, driving demand for cleaner vehicles and enabling informed purchasing decisions. Crucially, the EU Car Labelling (A to G) rating system should be based on a harmonised regulation which clearly distinguishes ZEVs from non-ZEVs (e.g. different colors such as green vs red) in order to reflect their far better environmental performance. To ensure the label is future proof, classes A, B, and C should be reserved for zero emission vehicles (0 g/km) and distinguished based on the vehicle carbon footprint performance. Then classes D, E and F should reflect

different levels of CO2 emissions in real world conditions (e.g. D: between 0 and 50 g/km, E: 50-100 g/km, F: above 100 g/km).

- **Conditionality for procurement, funding, and incentives**: Vehicles eligible for procurement, funding, and incentives should be BEVs only and should meet both Made-in-EU criteria as well as a low carbon criteria. The vehicle carbon label, combined with local content requirements, offer a sustainability and industrial policy tool that can be swiftly and uniformly implemented across the EU in public procurement, national taxation, subsidies, and other legislations.
- **Harmonisation of national taxation:** the label would strengthen the EU single market by preventing Member States from taking fragmented approaches to rating the carbon footprint of cars (cf France's eco-bonus but also the UK's different rules for vehicle carbon footprint).
- **CBAM extension to automotive products:** the label would serve as the foundation for extending CBAM to imported vehicles. The carbon levy would simply be the carbon price value (€/tCO2) multiplied by the vehicle carbon footprint (in tCO2).

The Commission should announce a vehicle carbon label as part of the IAA and prioritise the development of the methodology in 2026.

- **Commit to aluminium carbon label in IAA:** The EU is already discussing the battery carbon footprint methodology (as part of the battery regulation), and has committed to a steel carbon label under the IAA. However, there are no plans for developing a carbon label for aluminium. - this gap should be addressed in the IAA.
- **Formalise a vehicle carbon label:** Once that is done the label can be designed by combining the carbon footprint value for steel, aluminium and batteries.
- **Start monitoring and reporting:** By the end of 2026, carmakers report on the vehicle carbon footprint to the European Commission.
- **Set the eligibility threshold:** Based on market data, the Commission sets an eligibility threshold (e.g. 5 tCO_2) with a declining trajectory over 5-10 years. Vehicles meeting it receive a carbon label below the threshold. The EU should require Member States to harmonise their methodologies whenever carbon footprint performance is applied in taxation or other regulatory frameworks.
- **Expand to include plastics, carbon fiber, powertrain and electronics**: as a second step the EU should seek to extend the scope beyond steel, aluminium and battery to include other emissions hotspots.

Create green steel lead markets in the automotive sector

The automotive sector consumes 17% of EU steel, much of it highly polluting (over 2 tCO_2e per tonne, more than twice the EU average). Deployment of low-emission steel remains slow due to limited demand and higher costs, with automakers' weak offtake commitments hindering investment. Introducing green steel quotas for new cars under the IAA would cut embedded emissions and create a market signal to scale green steel in Europe.

T&E recommends introducing EU-made green steel targets in new cars: 40% green steel in new cars in 2030, 75% in 2035 and 100% in 2040. The evidence shows that these are feasible thresholds, covering both recycled and primary green steel**.**

To strengthen the resilience of the European economy, support the EU steel industry's effort to decarbonize, and prevent loopholes from foreign resource shuffling, such green steel quotas should be accompanied by Made-in-EU requirements.

A sliding-scale approach with tiered classes should define low-carbon steel. This enables accounting for the share of scrap steel in primary steel production - emission thresholds vary based on the proportion of scrap steel included in production. This incentivises additional use of scrap as it will lead to lower carbon footprint while preventing an artificial rush for steel scrap. At the same time, this will give a clear signal toward prioritising investment in cleaner production methods such as DRI and away from highly polluting traditional blast furnace-basic oxygen furnace (BF-BOF) processes. A transitional class for DRI with natural gas can also be considered in the tiered classes mentioned above. The LESS system provides a good basis for the definition of such classes.

The IAA should set low-carbon product labels based on steel carbon labels, establishing EU thresholds (tCO_2/kg) to reward cleaner production. These labels should be mandatory for all steel used in the automotive sector.

A simple and harmonised EU steel carbon label methodology

- **Scope 1 emissions:** ETS data should be used for the carbon intensity of EU production while the CBAM framework can capture the carbon intensity of imported products. Stringent verification and reporting requirements are essential for credible assessment of foreign production emissions. In cases where accurate and verifiable data is unavailable, conservative default values should be applied as a fallback.

- **Scope 2 electricity emissions:** Align with simple location-based electricity grid carbon intensity averages, starting with EU average, rather than national ones. Market mechanisms like GoO or PPA should not be allowed.

- **Mandatory reporting in automotive:** Steel carbon labels should be mandatory for all steel used in the automotive industry. This is required to disclose "*information about the carbon content of key materials used in the vehicle*" as part of the Car Labelling review.

- **Label information:** The label should indicate the steel carbon class, the carbon footprint of a ton of steel (tCO2/t of steel) and the share of scrap used.

- **One single EU method**: Simple, low admin, and easy to automate method used across all carbon footprinting efforts (incl CBAM, battery carbon footprint, ESPR, etc).

While green steel quotas in new cars are the cornerstone of a steel lead market, complementary policy and measures are critical to ensure broad uptake, fair competition, and accelerated investment in low-carbon production. Incentives can be differentiated depending on vehicle carbon classes. We recommend the following supportive policies:

Public procurement: Governments at national and local levels should commit to buying products containing EU-made green steel. Public procurement accounts for 11% of the EU steel market according to ECOS. The EU should amend Public Procurement directives to mandate minimum shares of Made-in-EU green steel in infrastructure, transport, and public works, tailored to sector-specific demand:

- **Automotive**: prioritise green steel in public fleet purchases and government-funded vehicle manufacturing.
- **Construction**: prioritize green steel in public buildings and transport infrastructure.

Local content rules: the implementation of EU content requirements should ensure that final products (notably cars) reward the use of locally made low emission steel. This can be done by adding Made-in-EU requirements to EU funding (e.g. Innovation Fund or InvestEU), EIB loans and national state aid schemes.

Creating conditions to invest in scaling green aluminium production in the EU

Similarly, the IAA could be key in creating a lead market for green aluminium in the EU, creating strong conditions to invest into scaling green aluminium production in Europe. The EU should set minimum green aluminium quotas for new cars (including both recycled and primary green aluminium), whilst exploring a low-carbon product label for green aluminium. These labels - which should be mandatory for all aluminium used in cars - should be based on aluminium carbon intensity. Similarly to steel labels, there should be carbon intensity thresholds (in tCO_2/kg) divided into tiered classes in order to reward cleaner production with a better grade, which would incentivise investments in cleaner production pathways.

4. Ensure foreign investment strengthens Europe's industrial base

Foreign Direct Investment (FDI) has become a major channel for Chinese EV and battery companies to enter the European market. A growing number of Chinese manufacturers are setting up greenfield factories for EVs and batteries across Europe. However, under current EU rules, such investments are exempt from screening, which means they bypass strategic oversight. T&E analysis shows that this creates three major risks:

- **No meaningful technology transfer**: EU companies gain little or no access to manufacturing know-how, intellectual property, or industrial skills.
- **Bypassing of EU suppliers**: Foreign firms often bring their own supply chains, limiting opportunities for European SMEs.
- **Strategic dependency**: Without conditions, Europe risks locking in new dependencies just as it tries to reduce reliance on China in critical raw materials.

The EU's existing FDI screening framework focuses on acquisitions of existing companies, but greenfield investments - building new factories - are outside its scope. This loophole leaves Europe exposed to unchecked industrial expansion from third-country actors, without safeguards for reciprocity or resilience.

Since 2021, the European Commission has approved around €2 billion in State aid for Asian battery manufacturers, with more subsidies for Chinese players under consideration. This means a significant share of public support for Europe's battery industry is flowing to non-European companies, with limited local value creation.

Local content requirements must be reinforced by a robust EU-level FDI screening regime to prevent competition between Member States for foreign investment and ensure strategic alignment with Europe's industrial priorities.

The Commission should define in the IAA what constitutes a meaningful technology transfer and embed this definition in EU legislation, including clear methods of implementation. This would provide the foundation for a longer-term overhaul of FDI rules and enable a future binding recommendation to Member States.

More broadly, the FDI screening regulation should shift final decision-making authority for investments critical to EU resilience to the EU level. Leaving these decisions solely at the national level encourages "country shopping" by foreign investors and undermines Europe's leverage in shaping strategic industrial outcomes.

To protect Europe's industrial base, foreign EV and battery investments should only qualify for public support or trade benefits if they meet at least the following criteria:

1. **Local control**: Joint ventures with >50% European ownership, ensuring EU influence over governance and strategic decisions.

2. **Technology and IP sharing**: Licensing agreements or joint IP ownership, focused on industrial and operational know-how rather than just R&D centres.

3. **Skills transfer**: Commitments to train European workers in battery and EV manufacturing processes.

4. **Local suppliers first**: Clear obligations to source components and materials from European suppliers where available.

5. **Local value requirements**: Battery factories should meet the same EU content thresholds as domestic producers in order to operate tariff-free.

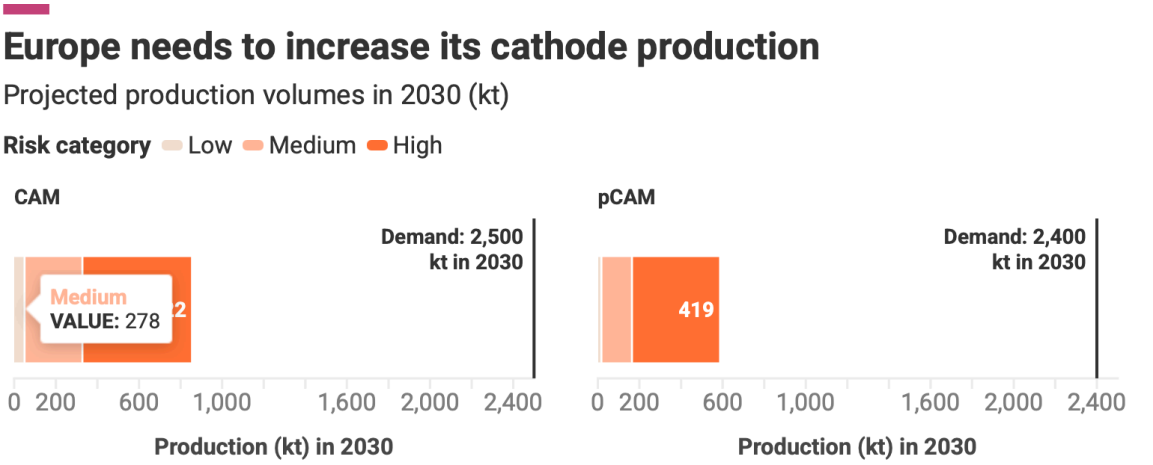
These recommendations should apply to national (or EU) subsidies given to FDI projects, as well as trade or other frameworks negotiated with third countries (e.g. Clean Trade Investments Partnerships - CTIPs).

Conditions must also prevent **assembly-only** plants that merely put together imported kits without real value added in Europe. Strict definitions of production location and transparent auditing should ensure that FDI projects contribute to European industrial capacity.

Without stronger FDI rules, Europe risks missing out on the industrial benefits of the EV transition while reinforcing its dependence on third countries. The EU can turn FDI into a tool for resilience and competitiveness - rather than a backdoor for dependency.

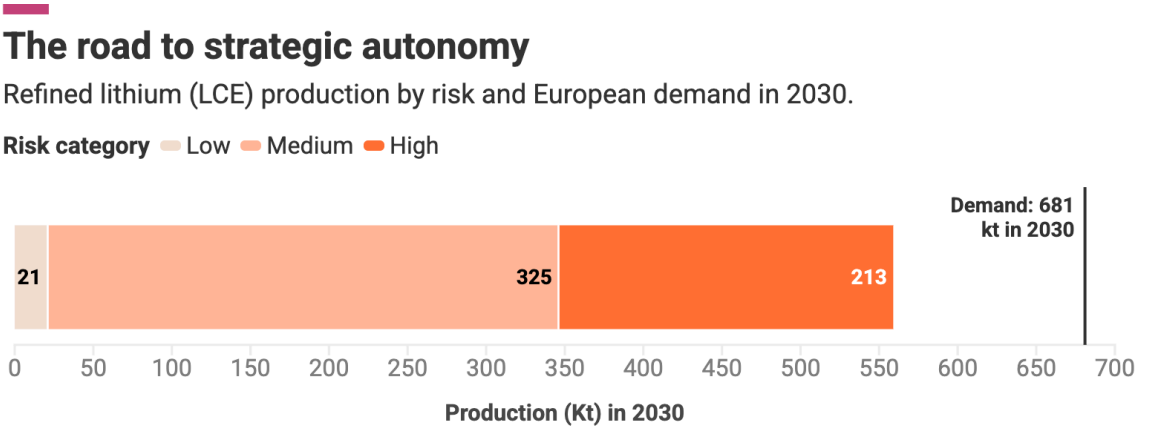
ANNEX: Europe's battery value chain potential

Battery components - Cathode Active Materials (CAM) and their precursors (pCAM) - form the backbone of the battery value chain, accounting for over half of cell costs and determining energy density, charging speed and durability. Yet in 2024, Europe imported 88% of CAM and 96% of pCAM, leaving it exposed to supply shocks and carbon-intensive imports. 5 low-risk plants (66.5 kt, €850m, 990 jobs) are operational or imminent, while 14 medium-risk facilities could add 544 kt with €4.5bn investment and 3,500 jobs. High-risk projects (161 kt, €2.2bn, 1,670 jobs) depend on stronger policy backing. Even if all projects materialise, Europe would meet just 34% of CAM and 25% of pCAM needs by 2030 - falling short of the EU's 40% processing benchmark. If only low- and medium-risk plants succeed, coverage drops to 18% for CAM and below 10% for pCAM, risking upstream mining and recycling investments as raw and recycled materials may be exported to Asia for processing.



Source: T&E modelling and Benchmark minerals.

Europe's demand for **lithium** chemicals is set to surge from 39 kt LCE today to 681 kt by 2030, yet refining capacity lags far behind. Only two refineries are operational with a combined projected output of 16.6 kt in 2025, plus just one active extraction site. Eight more refineries, five mines, and sixteen integrated plants are planned, but 96% of this capacity is medium- or high-risk. Medium-risk projects could cover 48% of 2030 demand (325 kt), high-risk projects 82% if financed, while low-risk operations meet just 3%.

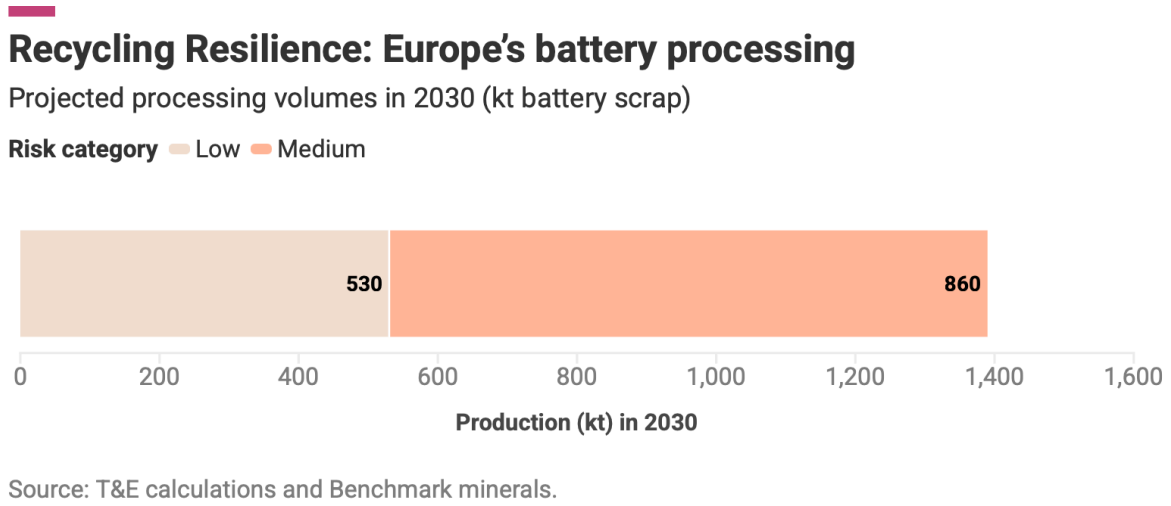


Source: T&E calculations and Benchmark minerals.

Recycling: In the medium- to long-term, recycling spent EV batteries will become indispensable for cutting our dependence on newly mined minerals. Lithium-ion batteries can be processed to reclaim critical metals and feed them back into new battery production.

The EU's Batteries Regulation mandates ambitious recycling quotas and minimum recycled-content thresholds for all EV battery cells on the EU market. Thanks to these rules, Europe's pool of recyclable battery materials will expand rapidly over the next decade. Early on, most feedstock will stem from manufacturing scrap generated by scaling gigafactories, accounting for roughly 75% of the estimated 100 GWh of available material by 2030 (about 10% of that year's battery demand). According to T&E 2024 report on recycling, Europe can source 11% of its 2030 lithium demand in the current policies scenario from recycling, 12% nickel, 13% manganese and 19% cobalt.

To capture this opportunity, Europe must rapidly build both pre-processing facilities (shredding, sorting and sieving) and, most importantly, downstream recovery plants (hydrometallurgical or pyrometallurgical) to turn this scrap into battery-grade material. A total of 77 projects have been tracked on the continent, of which 37 are already operational. In case all the others get to life, they will be able to process around 500 kt of batteries in the pre-processing stage and over 413 kt of batteries in the material recovery stage in 2030.



Source: T&E calculations and Benchmark minerals.

Further information

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