Demand Report

Automotive industry demand forecast: Q3 2025

December 2025

ADVANCED PROPULSION CENTRE UK

Accelerating Progress

Q3 2025 – Automotive industry demand forecast

This demand forecast covers

Markets	Global; Europe; UK
Vehicles	Light-duty vehicles Heavy-duty vehicles 
Materials	Cathode Active Material (CAM); anode material; battery foils; electrolyte and separator material; traction electric motor material

Demand forecast purpose

This forecast brings together data from multiple sources to provide an overview of electrified vehicle (xEV) production for light and heavy-duty vehicles with the aim of putting this into context for global, European and UK regions.

This report consists of two sections:

1. Demand updates
2. Electrified components demand

Our process

The data in this report has been collated by the Advanced Propulsion Centre UK (APC) based on insight gathered from UK original equipment manufacturers (OEMs) as well as forecasts from S&P Global AutoTech Insight, Rho Motion, BloombergNEF (BNEF), Wood Mackenzie, Global Data and KGP Powertrain Intelligence.

Data

Data sources have been used from October 2025 and Q3 2025 (July – September) forecasts.

Background

The APC has been producing quarterly demand reports since 2022 to track and monitor changes and predictions in the demand for automotive batteries and subsequent components.

Our team of expert analysts regularly analyse the market here in the UK, as well as in Europe and worldwide, to understand the market outlook for automotive OEMs and their supply chains, focusing on battery production, supply chain, economic climate, and geopolitical impacts.

Vehicle production forecasts are used to predict the demand for both battery and electrified components in Europe and the UK, including both battery supply chain and electric-motor demands. Additionally, a comparison is provided between demand and anticipated battery material supply in Europe.

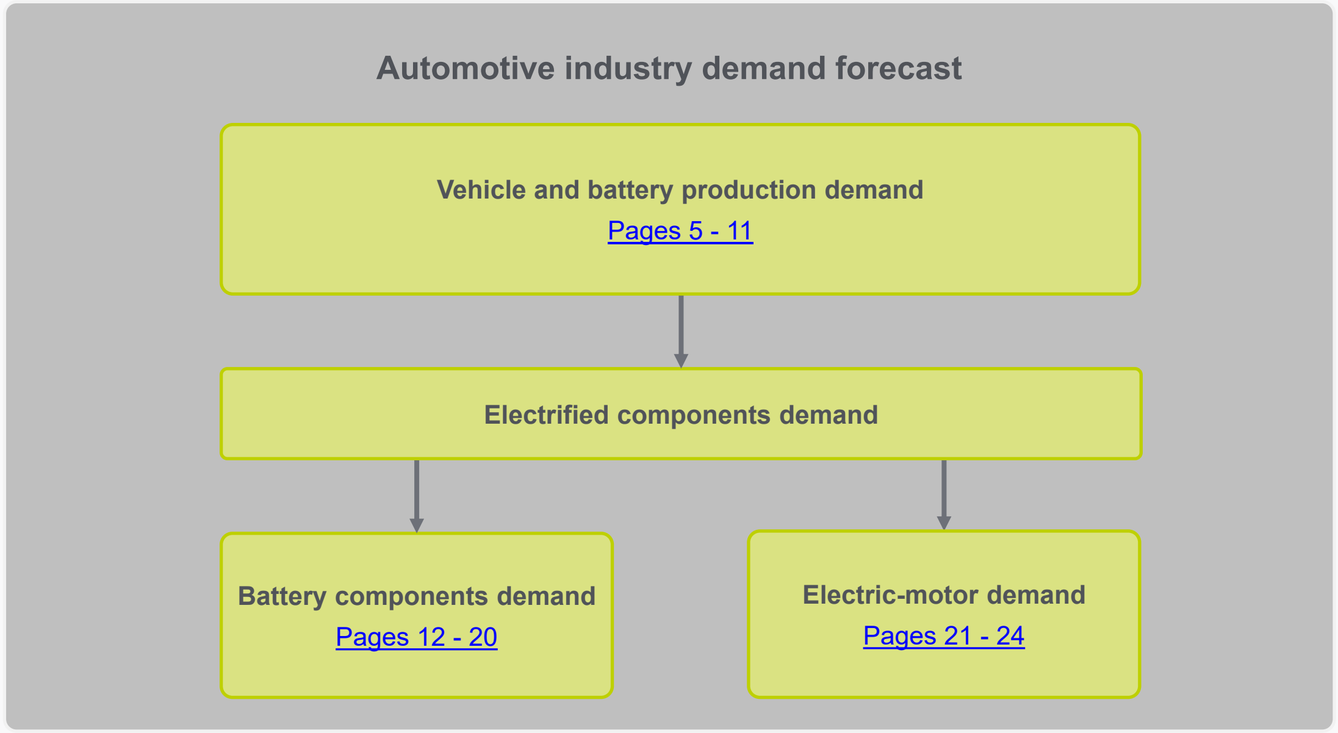
The Advanced Propulsion Centre UK (APC) collaborates with UK government, the automotive industry, and academia to facilitate driving research and investment in zero-emission vehicle manufacturing. Established in 2013 and jointly funded by the Department for Business and Trade (DBT) and the automotive industry, the APC accelerates the technologies that support the transition to zero-emission vehicle manufacturing and towards a net-zero automotive supply chain in the UK.

Department for Business & Trade

Contents

Vehicle production forecasts serve as the basis for projecting the demand for batteries and electrified components across Europe and the UK. This includes forecasting requirements for both the battery supply chain and electric motor production.

The diagram on the right outlines the information flow used in developing these forecasts.



Q3 2025 – Demand update

The following section includes production and battery demand for light and heavy-duty vehicles

Key facts: vehicle production

Global demand update	European demand update	UK demand update
• Global vehicle production is projected to grow moderately, rising from 94 million units in 2025 to approximately 106 million units by 2035. Around one-third of this output is expected to come from China, while Europe and North America will each account for nearly one-fifth of total production. • Vehicle production demand remains broadly consistent with the Q2 2025 Demand Report. There is a slight shift in the vehicle mix: hybrid vehicle share is projected to increase in 2027 and 2030, while the proportion of BEVs shows a modest decline. • Affordability challenges and consumer demand remain longer term challenges in the electrification transition.	• European production is anticipated to continue to grow over the next decade, with around 18 million vehicles expected to be produced per annum in 2035. A slight reduction in BEV production is anticipated, compared with the Q2 2025 Demand Report, leading to a downward adjustment in battery demand estimates. This shift reflects a pivot toward increased hybrid production than previous estimates. • While domestic demand and regulatory adjustments provide some stability, competitive imports and weakening exports are reducing production growth prospects in Europe, especially for premium OEMs. • The EU's CO_2 emissions regulation is due to be reviewed at the end 2025, rather than 2026. The ACEA has called for technology neutrality as well as tailored policies for different vehicle segments. This will likely impact the use of hybrid technologies and powertrain splits expected to be manufactured in Europe and in the UK over the next decade. • Despite China's indication that some chips may be exempt from export controls, risks to European automotive production persist. A governance dispute at Nexperia further heightens uncertainty, as potential disruptions to its China-based operations could constrain critical component supply.	• Over the next decade vehicle production and battery demand remain broadly unchanged compared to the Q2 2025 Demand Report. However, in the short-term Jaguar Land Rover (JLR) experienced a significant cyberattack in early September 2025, leading to a 27% decline in UK vehicle production for the month. This incident underscores the high degree of interconnectivity within the automotive supply chain and the cascading effects of such disruptions, while highlighting the growing strategic risk posed by cyber threats to manufacturing operations. • Uncertainty around BEV production in the UK persists, with several OEMs yet to confirm their local manufacturing plans. To achieve the UK target of recovering output to 1.3 million vehicles by 2035, this would require nearly doubling the production levels forecast for 2025, a pivotal year for the industry's recovery.

Reaching the UK's 1.3 million ambition by 2035; what would this mean?

- To achieve the UK target of recovering output to 1.3 million vehicles by 2035, this would require nearly doubling the production levels forecast for 2025, a pivotal year for the industry's recovery.
- 1.3 million vehicle production remains below pre-Brexit and pandemic production levels, with current forecasts indicating that production from the current OEM base will reach circa 1 million vehicles by 2035.
- With the UK at 1.3 million vehicles, the industry demand will grow by the following:

Vehicle production

UK assembly facilities may operate close to maximum capacity

Existing assembly facilities could require new investment

The entry of a one or more new manufacturers could play a key role in helping the UK meet its 1.3 million vehicle production target

~20%

Key supply chain components could see an ~20% increase compared to current APC forecast demand for 2035

Battery components

95 GWh battery demand

140 kt CAM

90 kt AAM

60 kt Lithium (LCE)

Electric motors

1.8 million e-motors

330 GW e-motor

Over 3 kt magnets

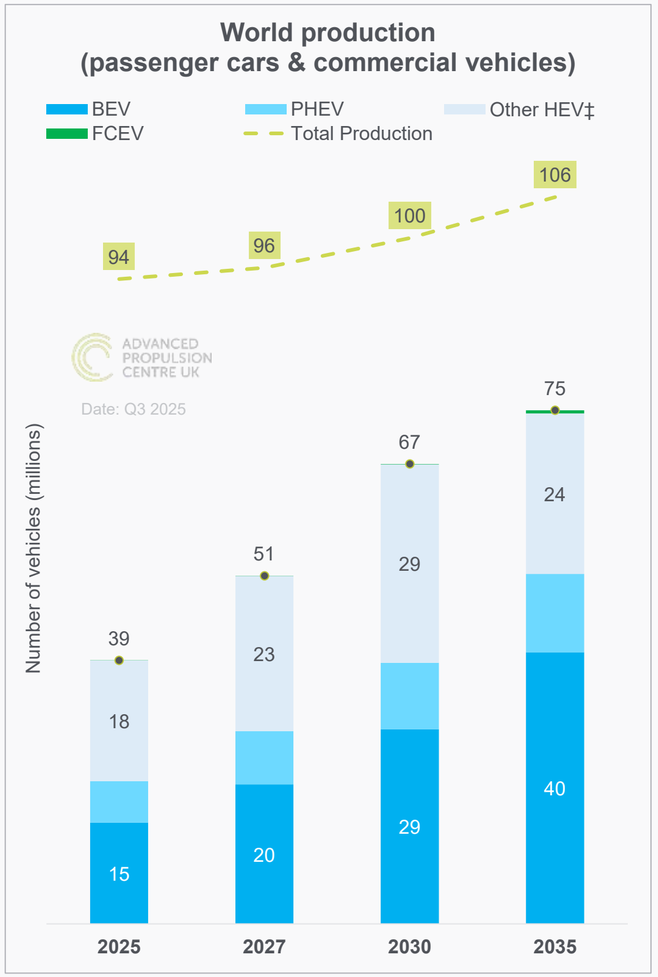
This assessment is based solely on domestic UK vehicle production demand and excludes any consideration of export potential, which could present a significantly greater opportunity

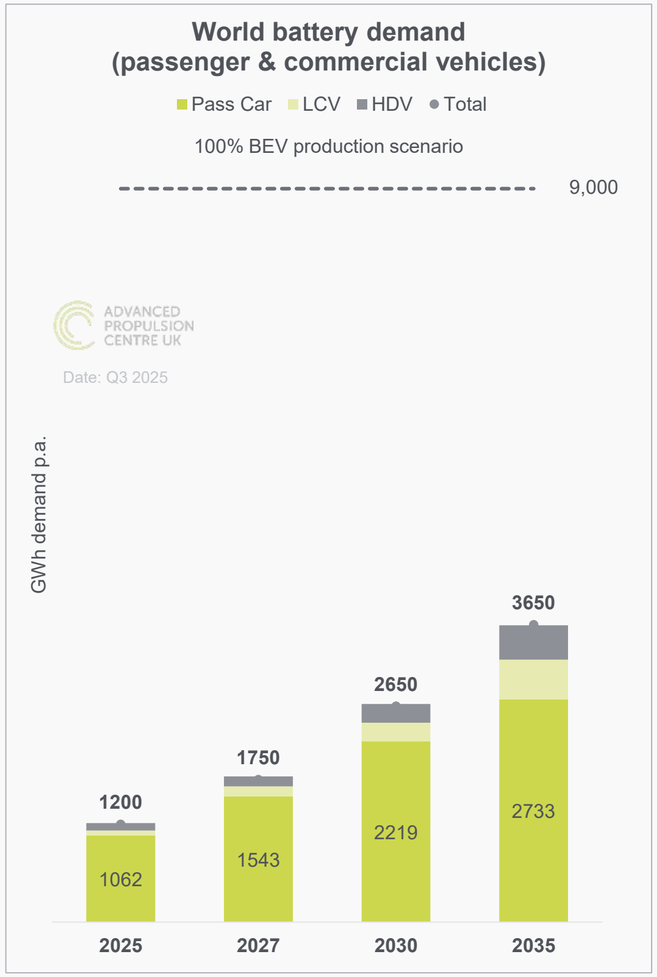
Global production and battery demand

Passenger cars and commercial vehicles

Notable changes compared with previous quarter

- Vehicle production demand remains broadly consistent with the Q2 2025 Demand Report. There is a slight shift in the vehicle mix: hybrid vehicle share is projected to increase in 2027 and 2030, while the proportion of BEVs shows a modest decline.
- Battery demand remains stable, with no material changes observed.





Arrows indicate change compared with Q2 2025 Demand Report

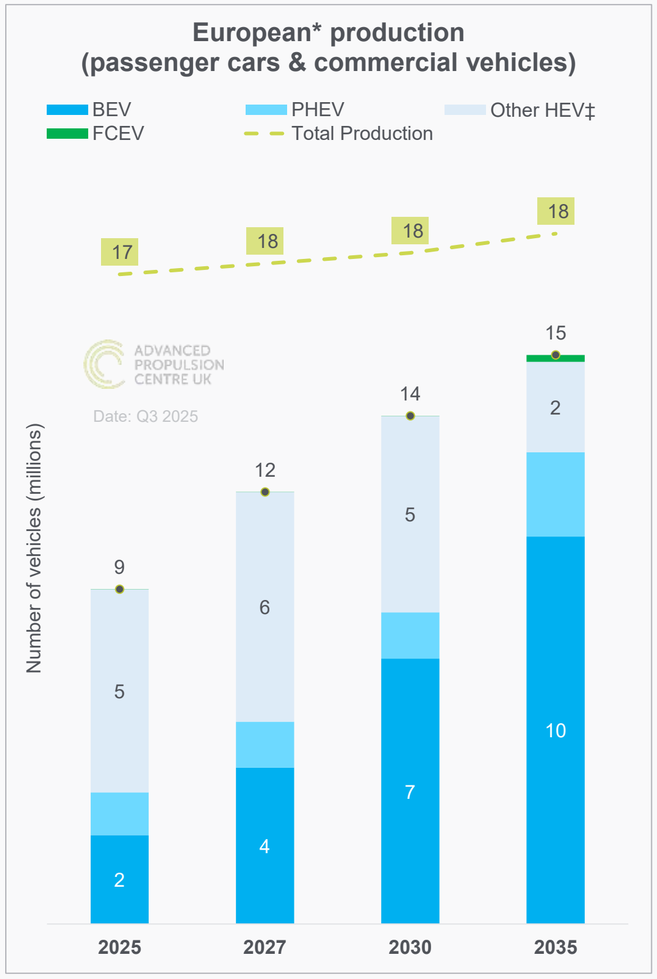
Source: APC Demand Databases using S&P Global AutoTechInsight (October 2025), BNEF forecasts (2025), Wood Mackenzie forecasts (Q3 2025), Global Data and KGP Powertrain Intelligence (Q3 2025) and Benchmark / Rho Motion forecasts (Q3 2025)
Total production includes ICE vehicles. ‡ Other HEV includes MHEV and H_2 ICE

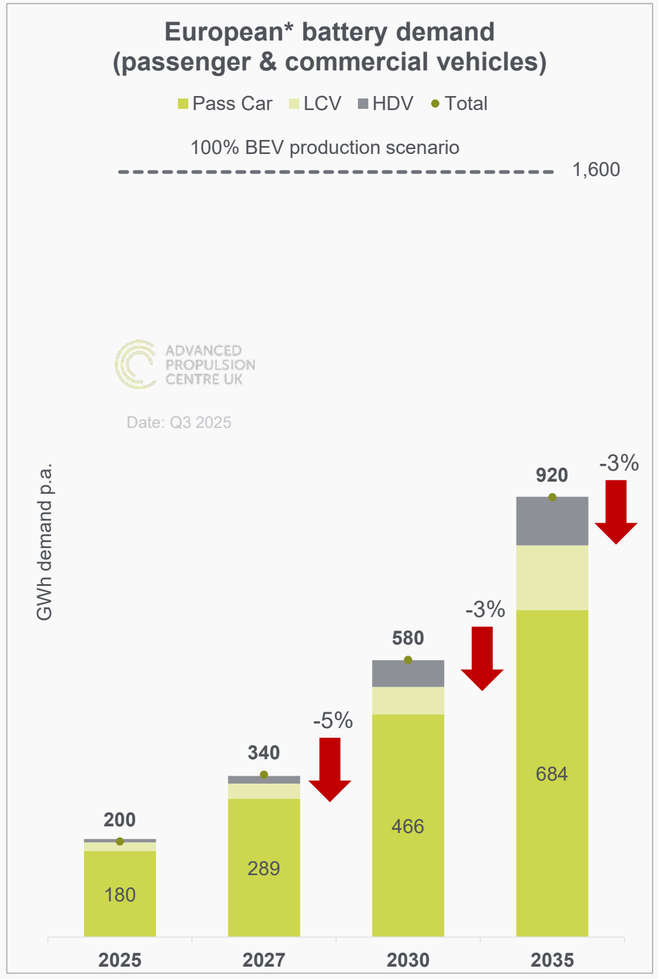
European production and battery demand

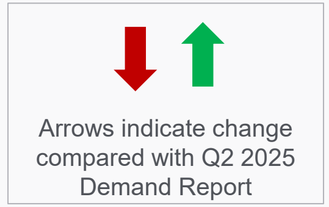
Passenger cars and commercial vehicles

Notable changes compared with previous quarter

- Although the overall number of xEVs produced does not change significantly compared to Q2 Demand Report, there is a slight reduction in BEV production is anticipated.
- This leads to a downward adjustment in battery demand estimates, reflecting a pivot toward increased hybrid production than previous estimates.







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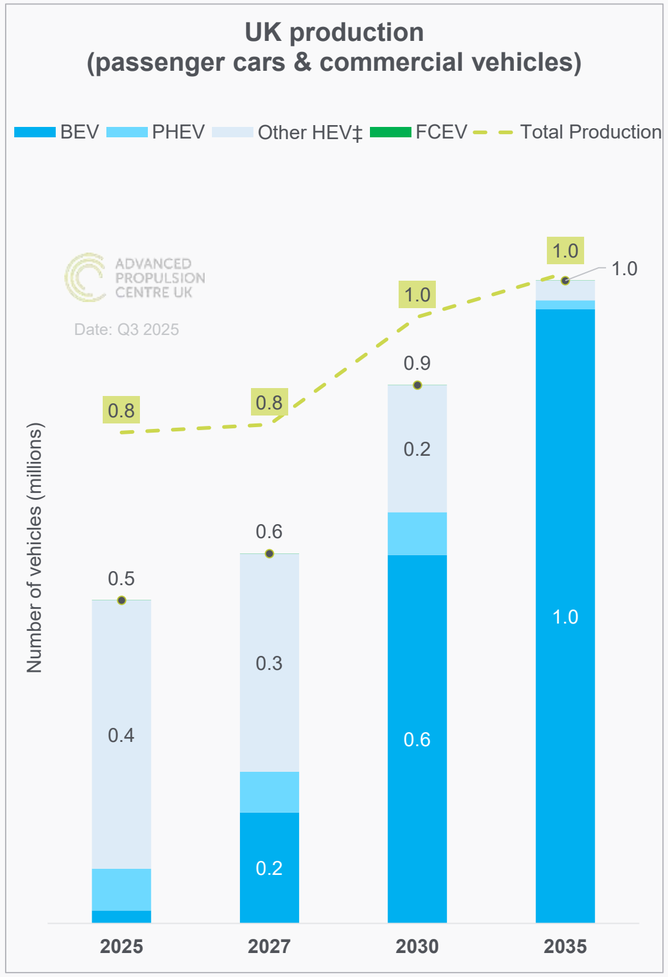
*European forecast includes non-EU countries such as Turkey
Total production includes ICE vehicles. ‡ Other HEV includes MHEV and H_2 ICE

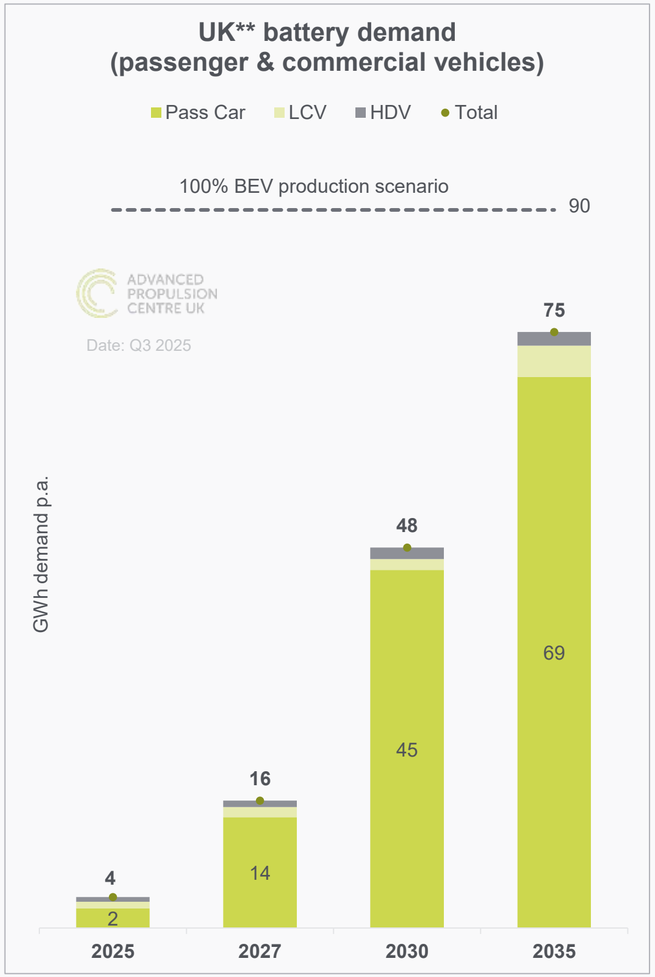
UK production and battery demand

Passenger cars and commercial vehicles

Notable changes compared with previous quarter

- Over the next decade vehicle production and battery demand remain broadly unchanged compared to the Q2 2025 Demand Report.
- UK vehicle production is projected to reach 1 million units by 2035, falling short of the 1.3 million target.





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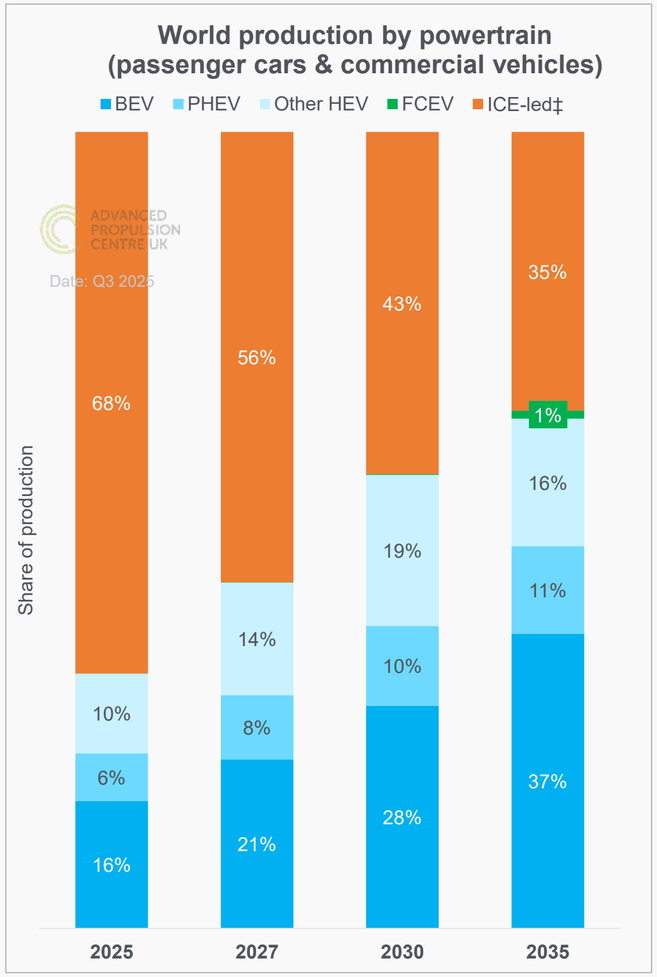
Total production includes ICE vehicles. ‡ Other HEV includes MHEV and H_2 ICE
** Excludes forecast UK battery exports (this represents UK vehicle manufacturing demand only)

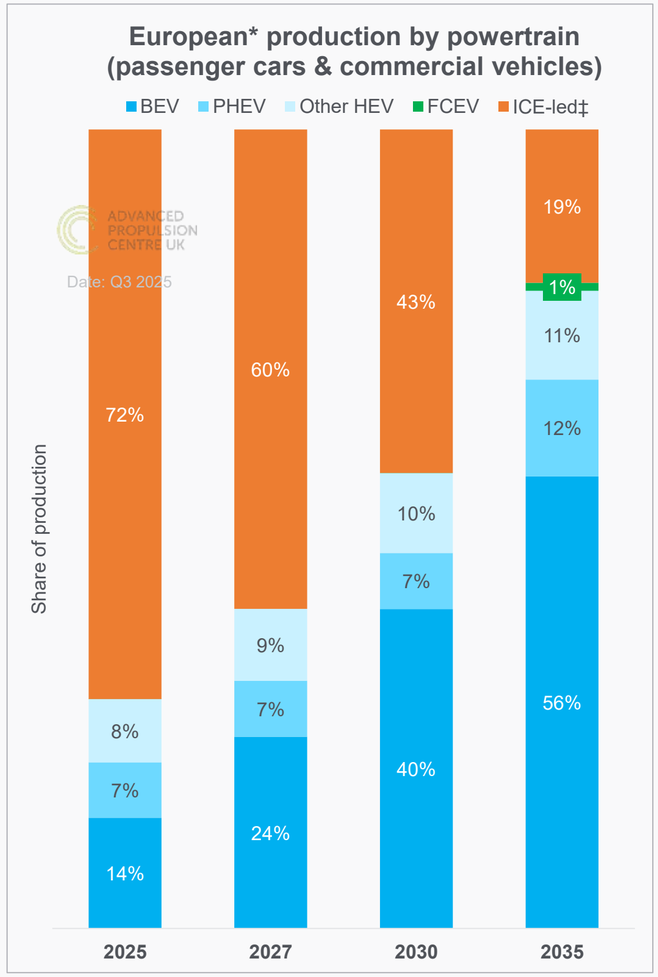
Forecasts by powertrain

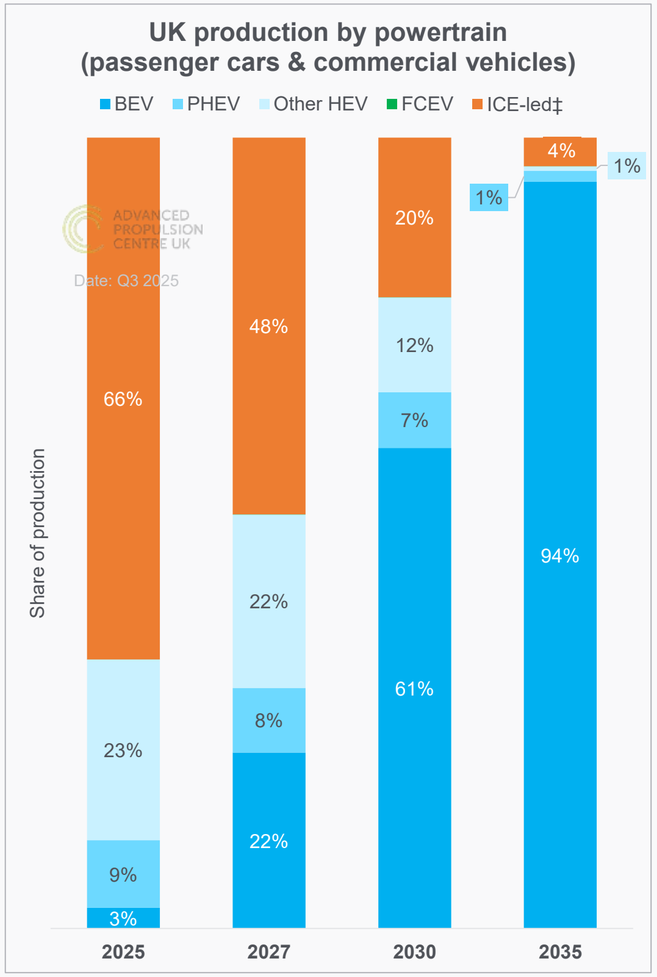
Passenger cars and commercial vehicles

Notable changes compared with previous quarter

- Between 2027 and 2030, the share of BEVs is projected to decline slightly across all three regions. This shift is accompanied by a rise in ICE-led technologies, primarily MHEVs, as well as increased adoption of HEVs and PHEVs.
- European automakers are increasingly lobbying for PHEVs as a response to slowing EV demand, which is reflected in potential increase of PHEV manufacture in the European region in 2035.







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*European forecast includes non-EU countries such as Turkey

‡Includes MHEVs, ICE and Hydrogen-ICE

Q3 2025 – Electrified components demand
Battery components

The following section provides insights into battery material supply chain activity, cathode chemistry split, battery material demand and supply for LDVs (passenger cars and light commercial vehicles)

Key facts: battery components

 European demand update	 UK demand update

• Cell production capacity is projected to surpass demand in 2027. However, this outlook is based on announced nameplate capacity, much of which may not materialise due to the slowing battery demand. Europe is projected to face deficit in both cathode and active material components over the next 10 years.
 	
• As of November 2025, five major EV battery cell projects (part of six selected under the EU Innovation Fund's 2024 Battery Call) have secured a combined €643 million in funding (out of €852 million total). These projects aim to accelerate Europe's battery manufacturing capacity and reduce reliance on imports, supporting the EU's decarbonization goals. These projects represent strategic investments to strengthen Europe's battery value chain, reduce import dependency, and support the transition to zero-emission mobility.
 	
• Funded projects include:
  • ACCEPT (Automotive Cells Company European Production Take-off), located in France (Automotive Cells Company ACC)
  • AGATHE (Advanced Gigafactory), located in France (Verkor)
  • NOVO One, located in Sweden (NOVO Energy)
  • WGF2G (Willstatt GigaFactory) , located in Germany (Leclanche)
  • 46inEU, located in Poland (LG Energy Solution)
 	
• In addition, the majority of EU OEMs have long-term plans (2027+) for solid state batteries including Renault, BMW and Stellantis.
	• Cathode Active Material (CAM) is both the most expensive component of a lithium-ion battery and a critical factor in determining its overall performance. With EU regulations requiring recycled content in batteries by 2031, CAM's strategic value is increasing significantly.
	
	• The UK currently has the capacity to process approximately 17,000 tonnes of end-of-life (EOL) batteries, including those from electric vehicles, through mechanical pre-treatment. This capacity is projected to rise to over 60,000 tonnes by 2030, driven by investments in dismantling and sorting facilities. However, investment in refining technologies remains limited, with only around 50,000 tonnes of refining capacity expected to be installed by 2030.
	
	• Echion Technologies, which develops niobium anodes, has become the first company to use the UK Battery Industrialisation Centre (UKBIC) new Flexible Pilot Line. The flexible pilot line aims to bridge the gap between lab-scale research and full-scale production.

European battery material supply chain activity

Notable compared with previous quarter

- No significant changes to Q2 2025 Demand Report, however the reduction in battery demand at a European level results in a slight reduction in the deficit shown.
- The graph in Figure 1 details an assessment between Europe's supply chain capacity for battery materials with Europe's LDV production demand. This assessment assumes Europe is a self-sustaining bloc with no imports or exports.
- Estimated cell costs for both NMC811 and LFP have been included in Figures 2 and 3 to indicate cost differences due to cell chemistry. LFP has an overall lower cell cost than NMC811.

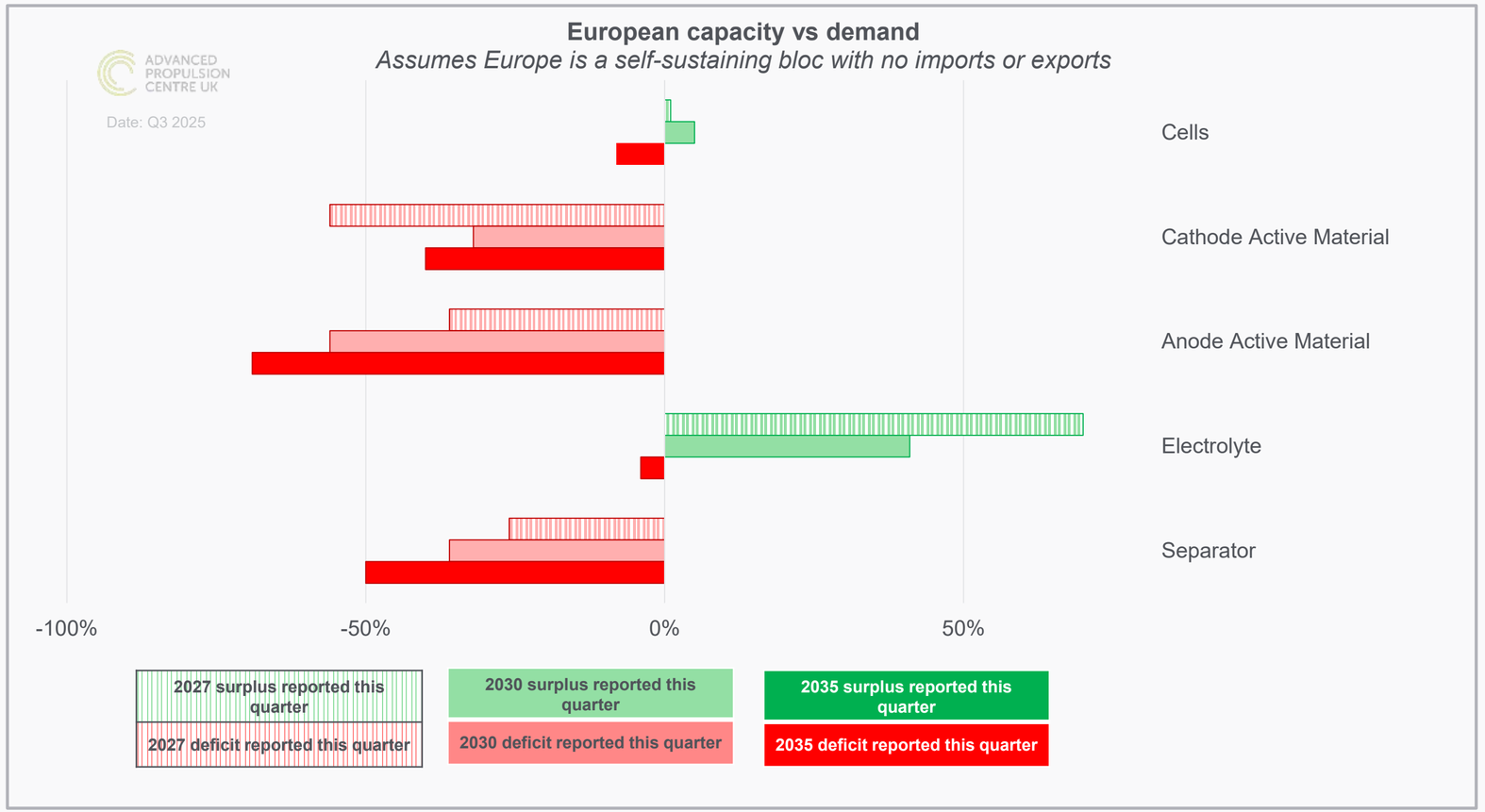


Figure 1: European capacity vs demand assuming Europe is a self-sustaining bloc with no imports or exports

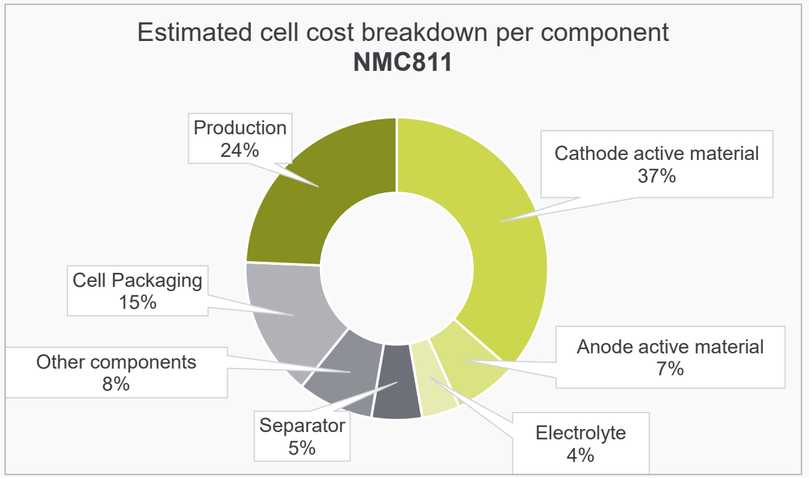


Figure 2: Estimated NMC811 cell cost breakdown per component

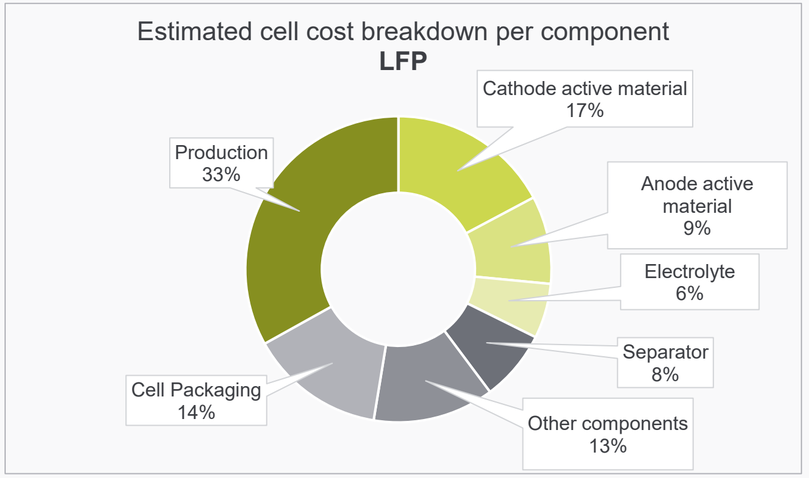


Figure 3: Estimated LFP cell cost breakdown per component

Source: APC Demand Databases using S&P Global AutoTechInsight (October 2025), BNEF forecasts (2025), Wood Mackenzie forecasts (Q3 2025), Global Data and KGP Powertrain Intelligence (Q3 2025) and Benchmark / Rho Motion forecasts (Q3 2025)
‡Europe region includes non-EU countries such as Turkey
*Risk-weighted capacity based on APC internal assessment of announced and under construction projects

Battery recycling capacity vs feedstock

To complement the latest APC insights report (Automotive battery recycling landscape with an UK and EU perspective), this page provides an overview of the European and global battery recycling landscape

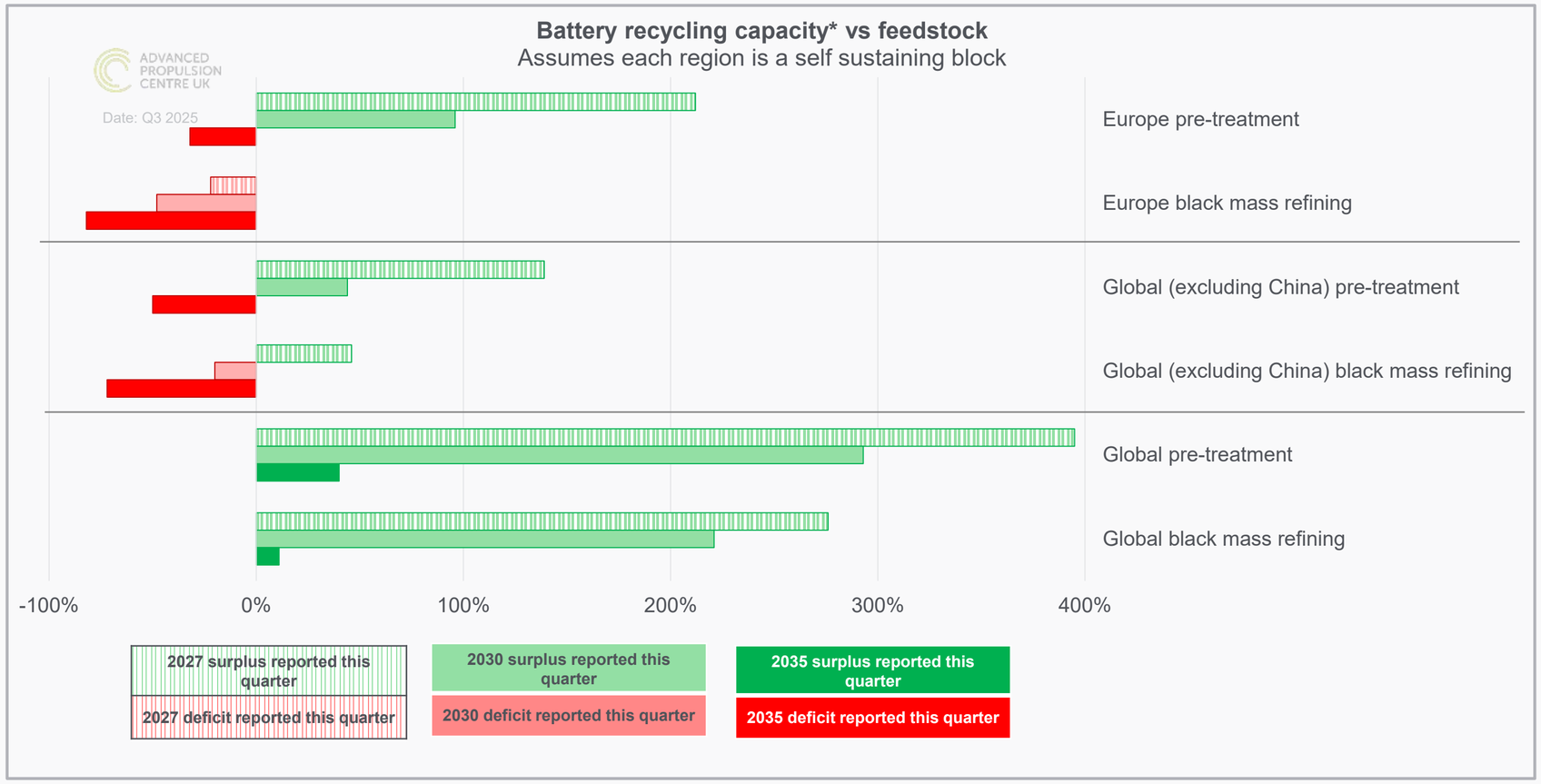


Figure 1: Recycling demand across 3 regions (1. Europe, 2. Global excluding China and 3. Global) assuming each region is a self-sustaining bloc with no imports or exports

Source: Benchmark / Rho Motion battery recycling forecast (Q3 2025)
*Risk-weighted capacity based on projects in commissioning, under construction, or in the planning phase

The chart shows two key stages of the recycling process:

1. **Pre-treatment**
   Converts battery production scrap and EOL batteries into intermediate products such as black mass.

2. **Black Mass Refining**
   Processes black mass into battery-grade materials that can be reused in new battery production.

The chart illustrates the relationship between feedstock availability and recycling capacity across 3 different regions:

1. Europe
2. Global (excluding China)
3. Global

Positive values indicate that the region has more processing capacity than available feedstock (e.g., all end-of-life electric vehicles can be handled locally without exporting material).

Negative values indicate that the region has insufficient processing capacity, meaning some feedstock must be exported to other regions for processing.

Sources of recycling inputs include:

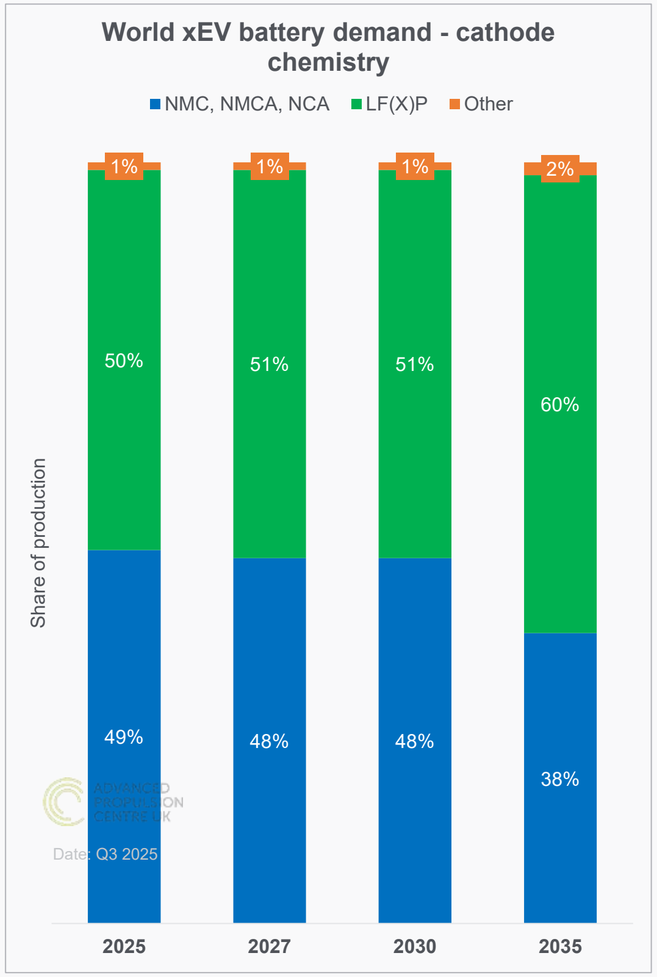
- End-of-life (EOL) electric vehicles
- Gigafactory production scrap
- Stationary energy storage systems

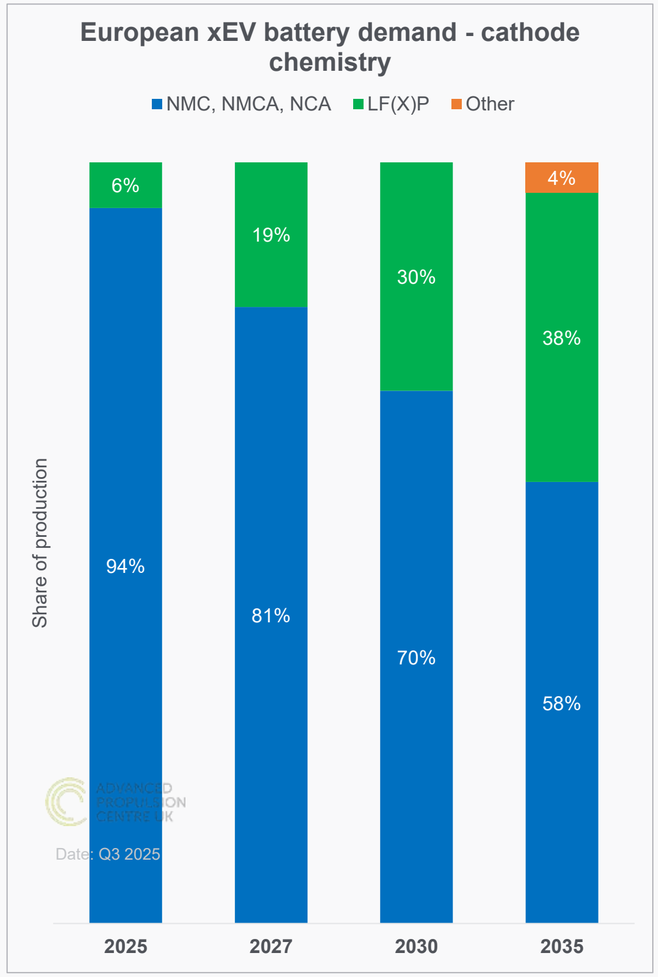
Forecasts for automotive battery demand by cathode chemistry

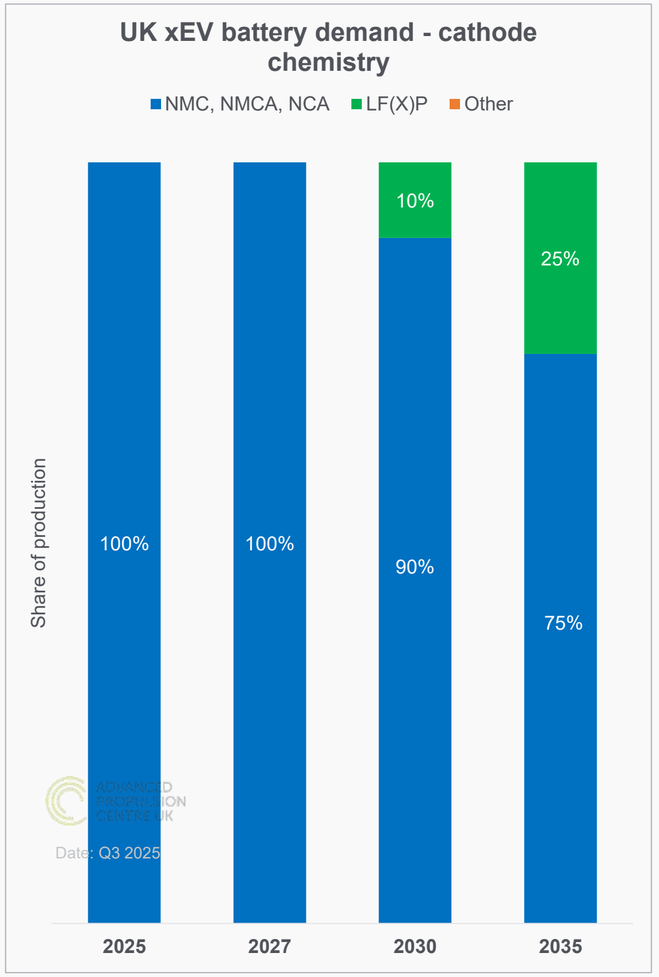
Passenger cars and light commercial vehicles (< 6 tonnes)

Notable changes compared with previous quarter

- No significant changes to Q2 2025 Demand Report.
- LF(X)P is expected to see an increased share within European production over the next 10 years.







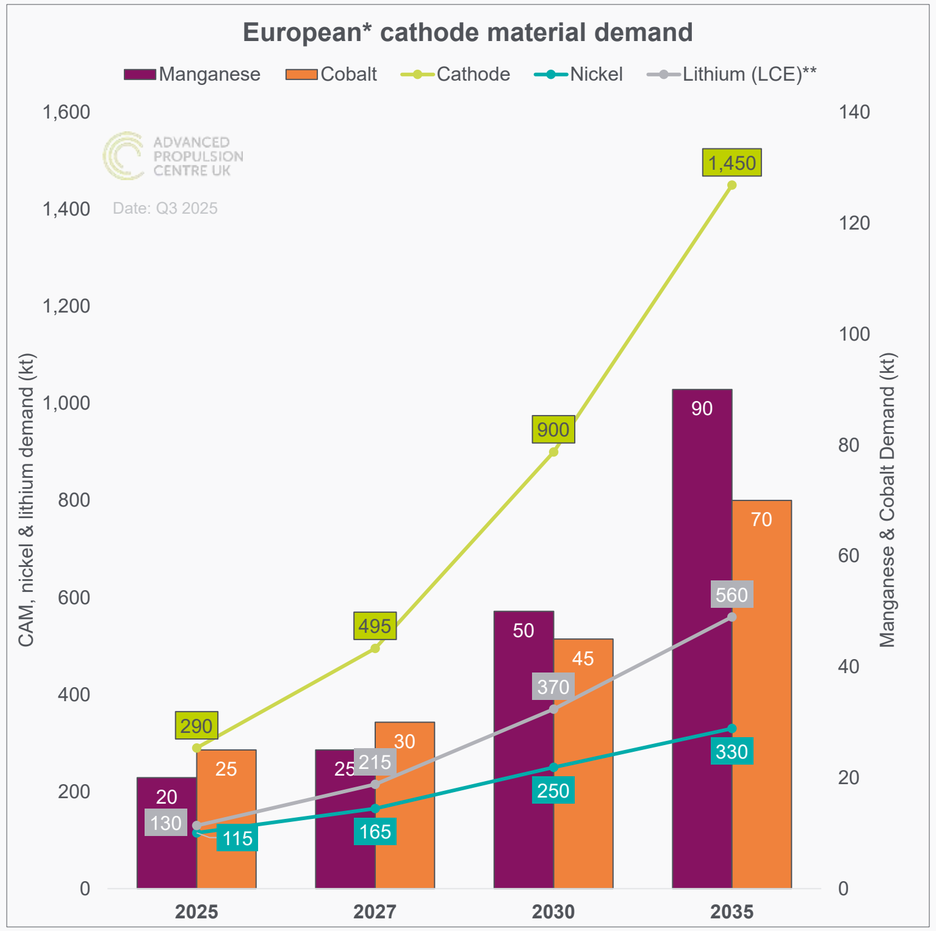
Source: APC Demand Databases using S&P Global AutoTechInsight (October 2025), BNEF forecasts (2025), Wood Mackenzie forecasts (Q3 2025) and Benchmark / Rho Motion forecasts (Q3 2025)
Note: Passenger cars & light commercial vehicles < 3.5t only, *European forecast includes non-EU countries such as Turkey, ‡Includes non-plug-in HEVs & ICE
NMC includes NMC chemistries with less than 80% Nickel content as well as NMCA

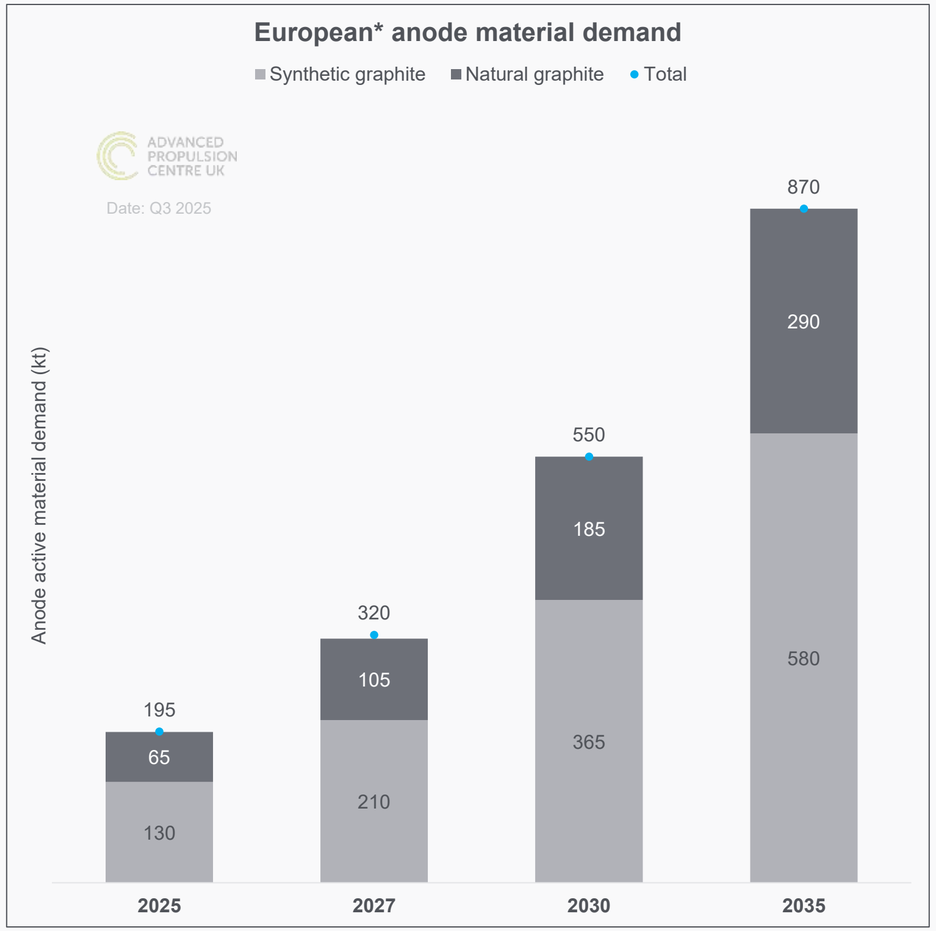
European cathode and anode active material demand

Passenger cars and light commercial vehicles (< 6 tonnes)

Notable changes compared with previous quarter

- Slight decrease in battery materials, compared with Q2 2025 Demand Report, aligning with slight decrease in European battery demand.





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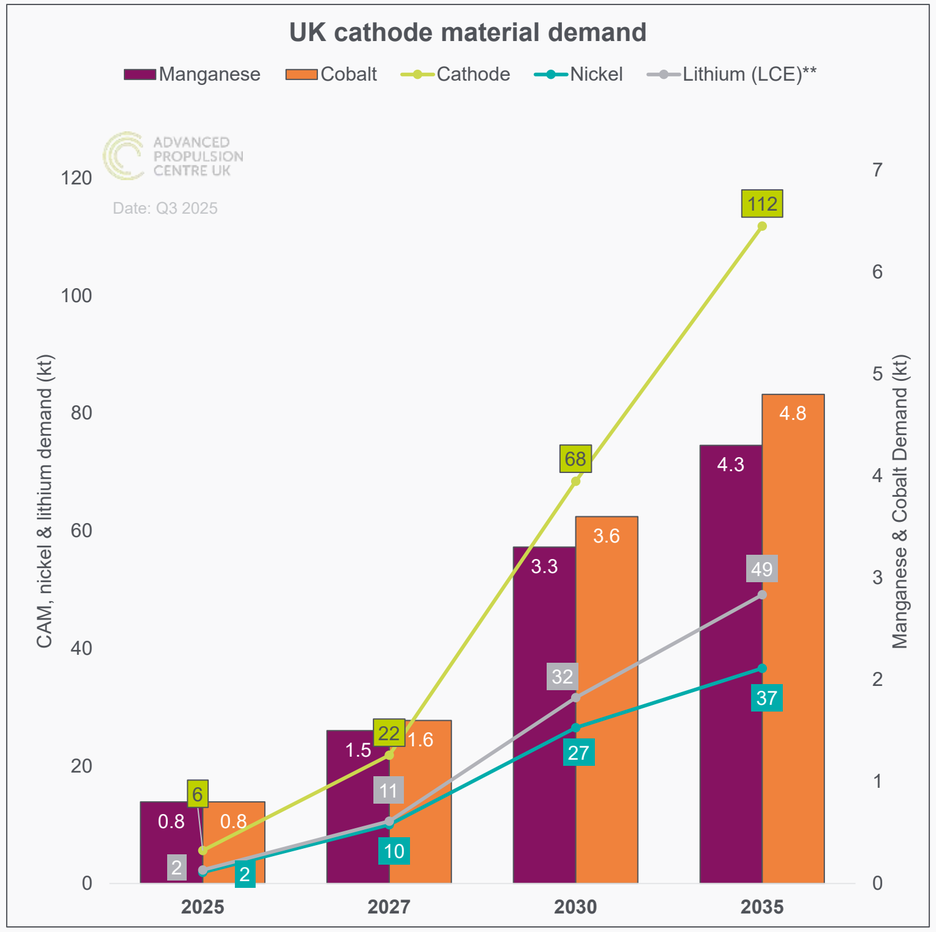
Note: Passenger cars & light commercial vehicles < 3.5t only, *European forecast includes non-EU countries such as Turkey, **Contained Li metal would be 5.3x lower
Anode material demand model assumption: Synthetic to natural graphite demand ratio 2:1

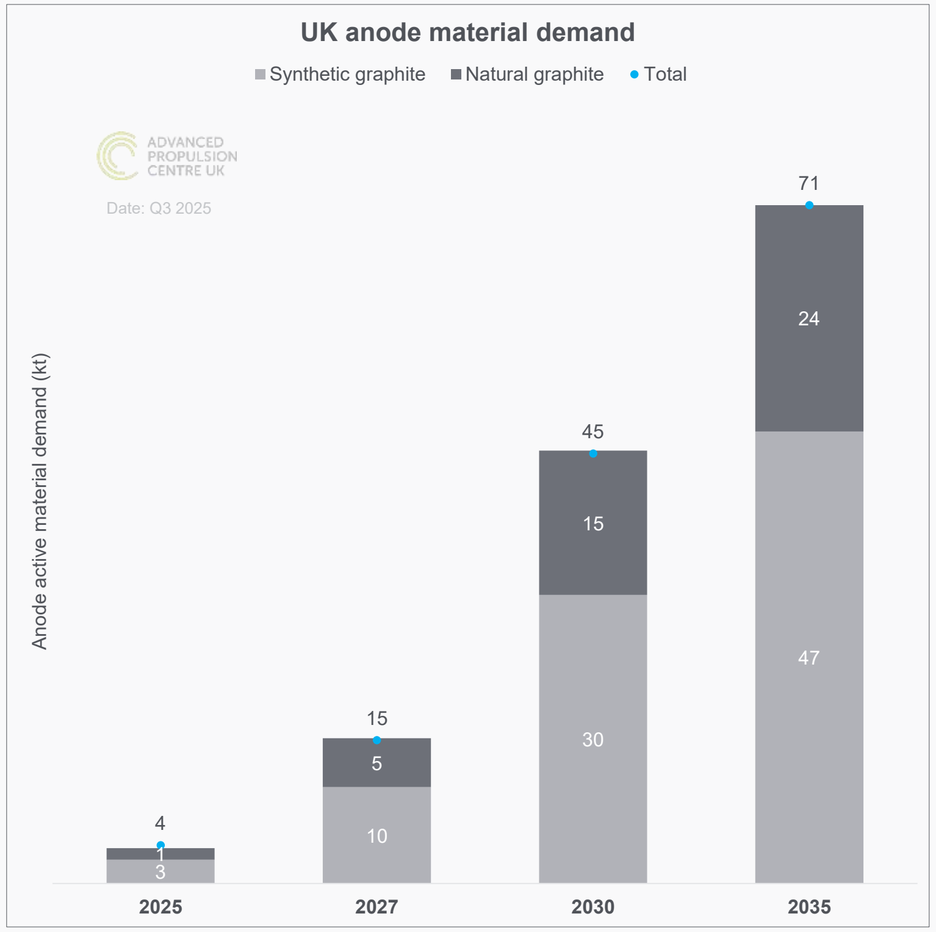
UK cathode and anode active material demand

Passenger cars and light commercial vehicles (< 6 tonnes)

Notable changes compared with previous quarter

- No significant changes to Q2 2025 Demand Report.





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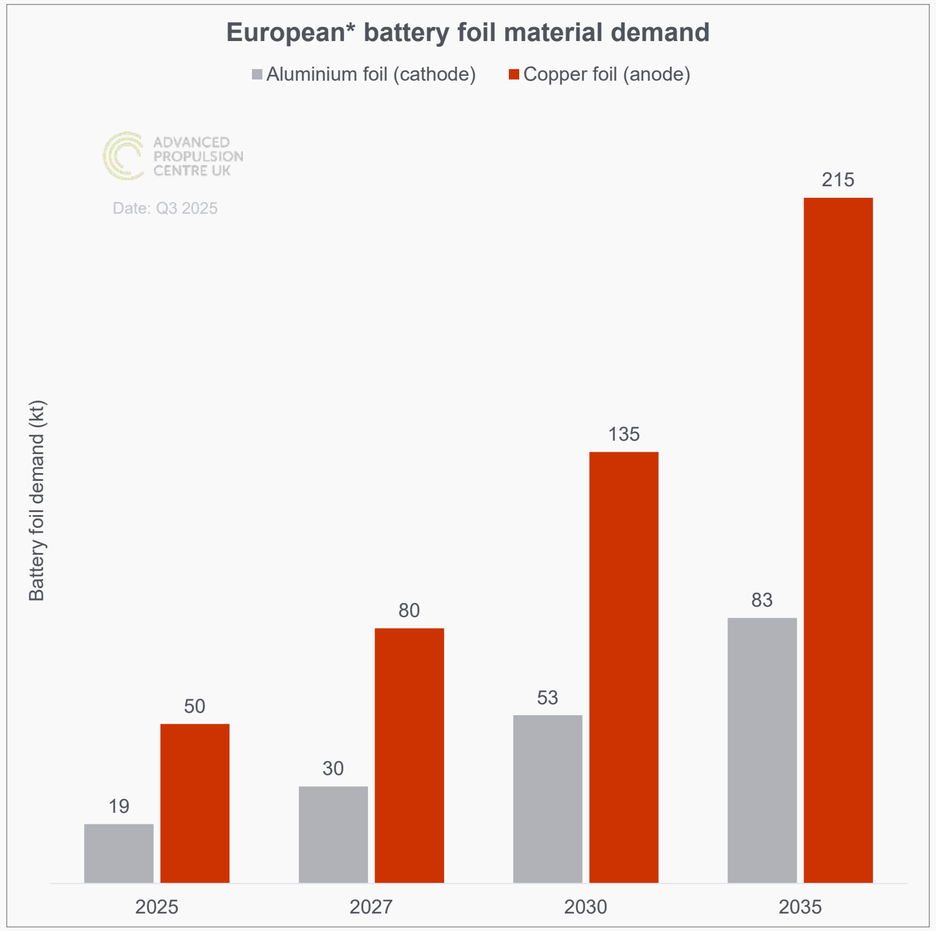
Note: Passenger cars & light commercial vehicles < 3.5t only, **Contained Li metal would be 5.3x lower
Anode material demand model assumption: Synthetic to natural graphite demand ratio 2:1

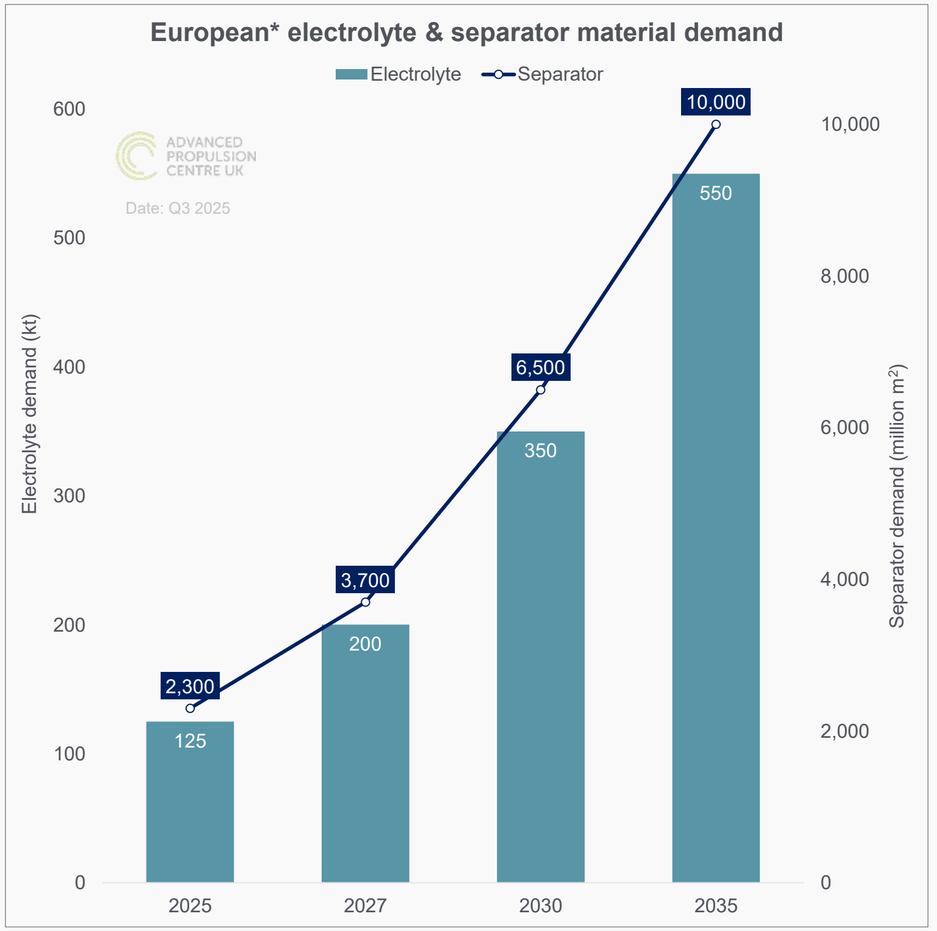
European demand for battery foils, electrolyte and separator material

Passenger cars and light commercial vehicles (< 6 tonnes)

Notable changes compared with previous quarter

- Slight decrease in battery materials, compared with Q2 2025 Demand Report, aligning with slight decrease in European battery demand.





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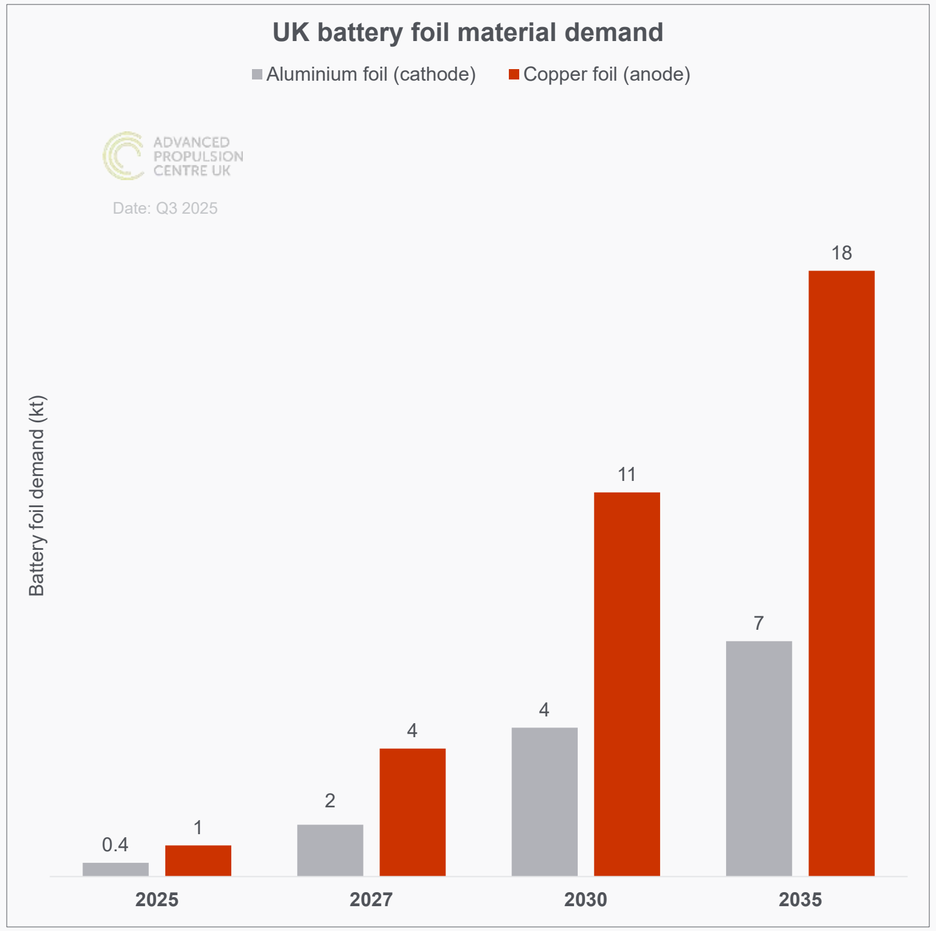
Note: Passenger cars & light commercial vehicles < 3.5t only, *European forecast includes non-EU countries such as Turkey

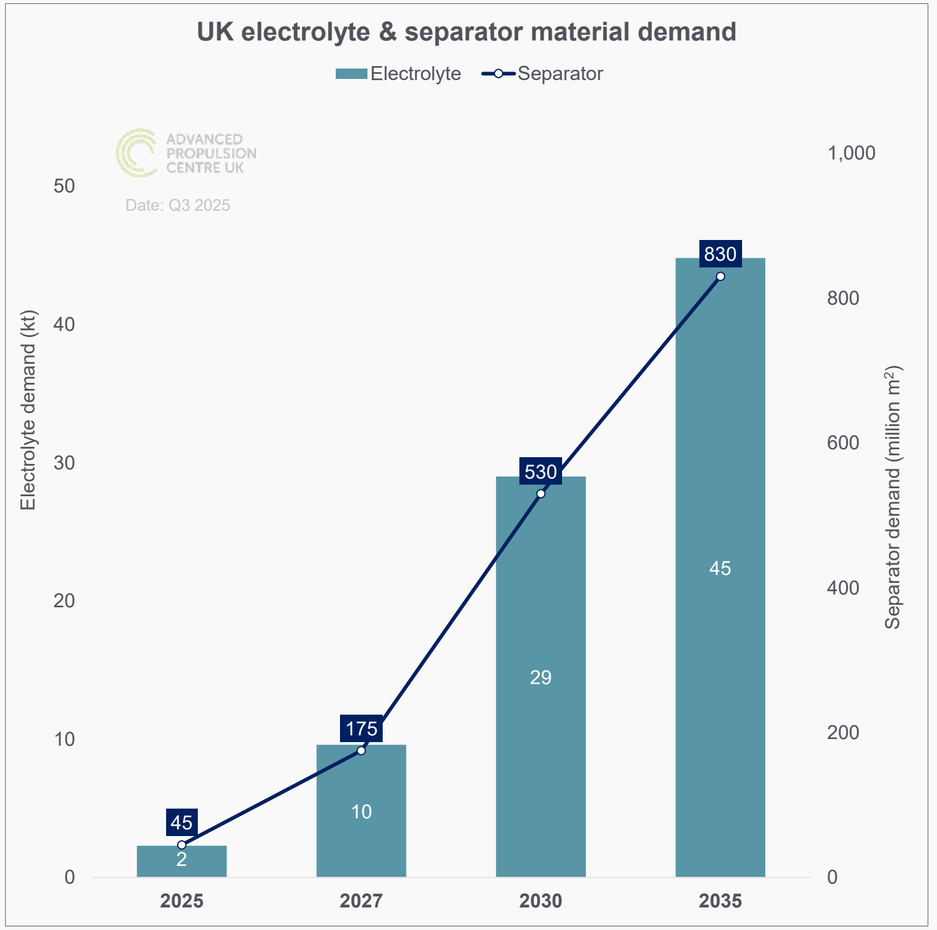
UK demand for battery foils, electrolyte and separator material

Passenger cars and light commercial vehicles (< 6 tonnes)

Notable changes compared with previous quarter

- No significant changes to Q2 2025 Demand Report.





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Note: Passenger cars & light commercial vehicles < 3.5t only

Q3 2025 – Electrified components demand
Electric motors

The following section reviews traction electric motor demand for Light-Duty Vehicles (passenger cars and light commercial vehicles)

Key facts: electric motors

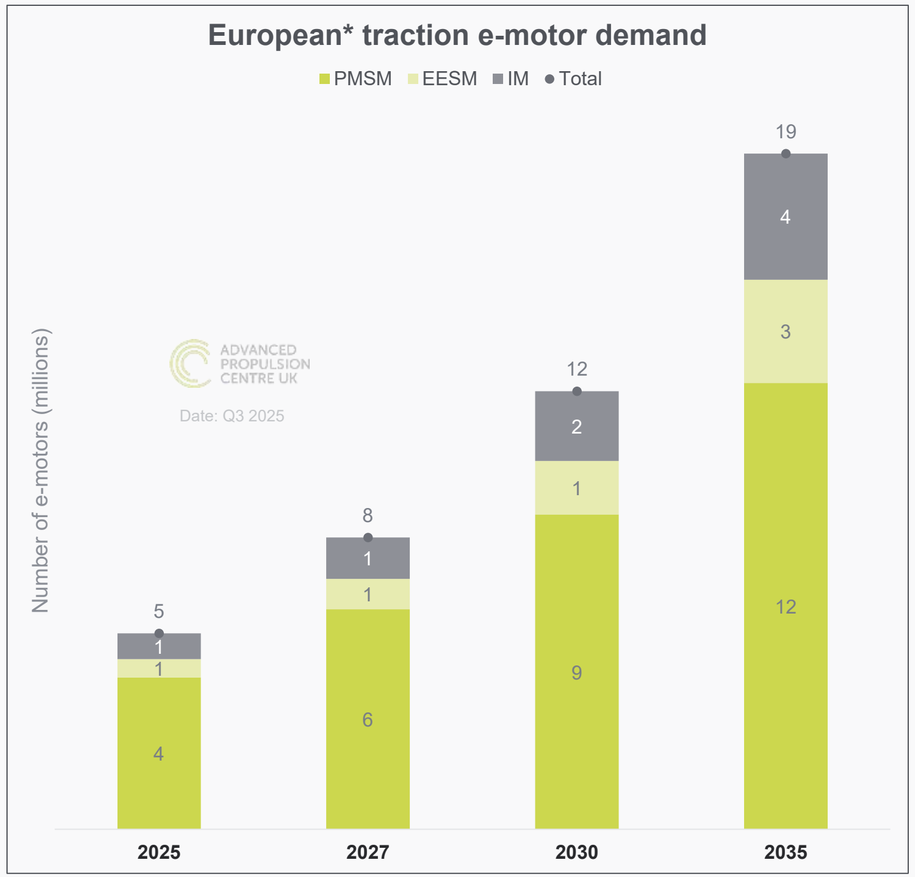
 European demand update	 UK demand update
• European demand for electric motors is anticipated to more than triple over the next ten years, mirroring the region's accelerating adoption of xEVs. • Permanent Magnet Synchronous Motors (PMSMs) are projected to maintain their leading position, with a market share exceeding 60% over the next 10 years. • However, Electrically Excited Synchronous Motor (EESM) and Induction Motor (IM) technologies are expected to gain market share as they eliminate the reliance on rare earth elements (REEs), helping to mitigate supply chain risks. • China's pause on REE export controls extends to the UK, with a 12-month suspension of the relevant export controls published on 9 October 2025.	• PMSMs are set to remain dominant in UK produced vehicles with most primary drive units utilising this technology. • Concerns around supply chain resilience may drive increased interest in alternative motor architectures, substitute materials, and advanced recycling technologies.

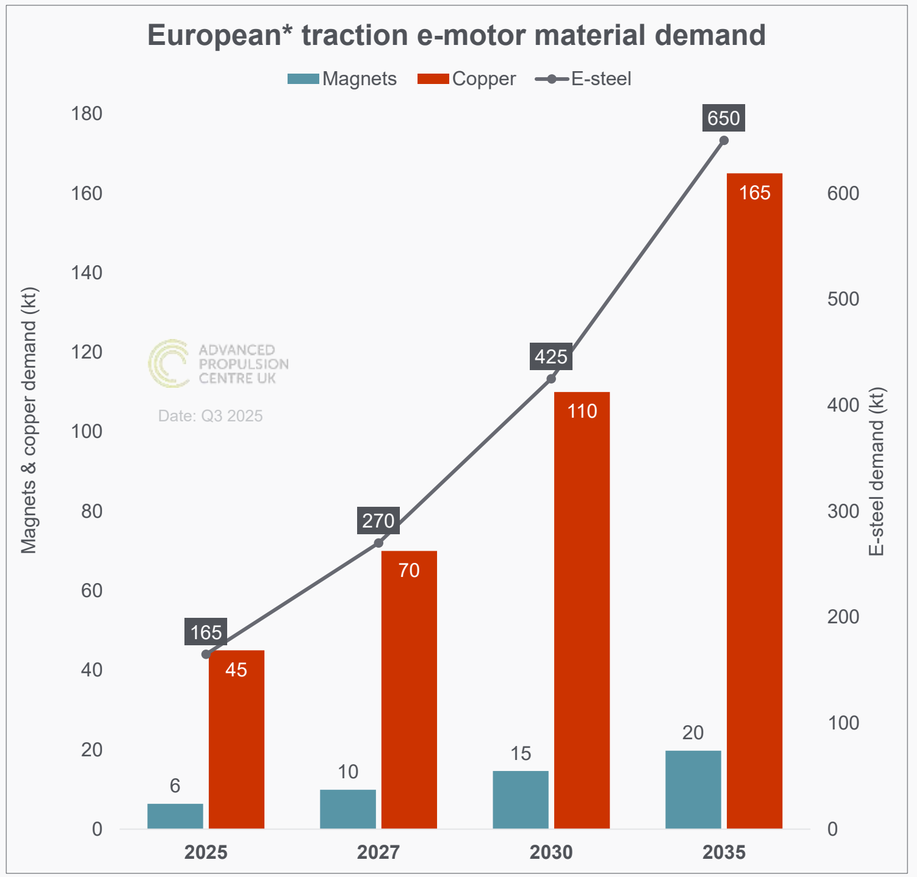
European demand for traction electric motors

Passenger cars and light-commercial vehicles (< 6 tonnes)

Notable changes compared with previous quarter

- A slight reduction in average motor size is expected compared to the Q2 2025 Demand Report. While the average power within most individual vehicle classes continues to rise, the overall sales-weighted average power begins to decline as smaller vehicle segments gain market share in later years.





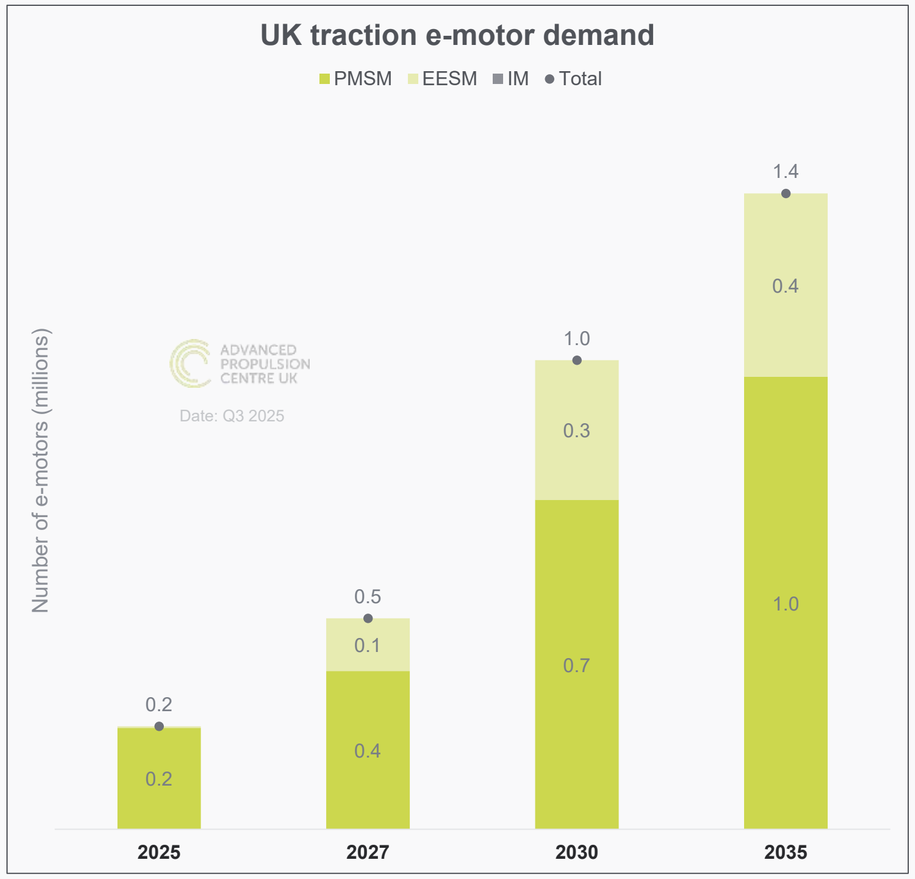
Source: APC Demand Databases using S&P Global AutoTechInsight (Sep 2025), Benchmark / Rho Motion data (2025), BNEF forecasts (2025)
Note: Passenger cars & light commercial vehicles < 3.5t only, *European forecast includes non-EU countries such as Turkey
Excluding mild hybrid electric motors

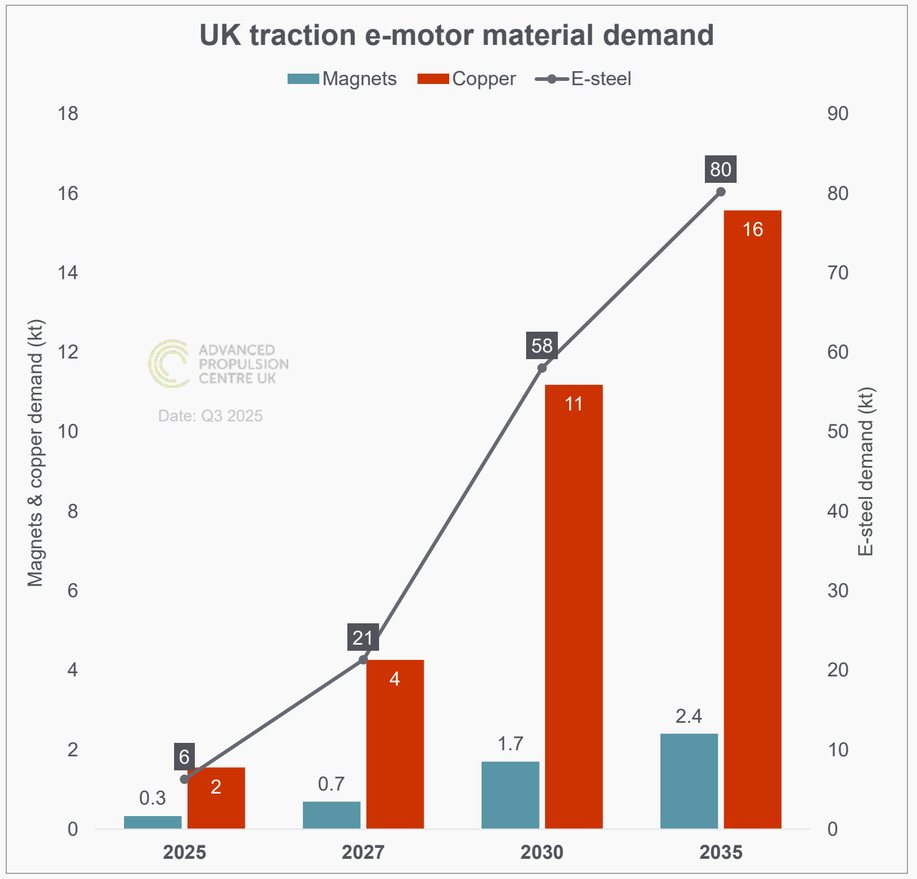
UK demand for traction electric motors

Passenger cars and light commercial vehicles (< 6 tonnes)

Notable changes compared with previous quarter

- No significant changes to Q2 2025 Demand Report.





Source: APC Demand Databases using S&P Global AutoTechInsight (Sep 2025), Benchmark / Rho Motion data (2025), BNEF forecasts (2025)
Note: Passenger cars & light commercial vehicles < 3.5t only
Excluding mild hybrid electric motors

Glossary

Glossary

BEV	Battery electric vehicle
CAM	Cathode active material
EESM	Electrically excited synchronous motor
EOL	End-of-life
FCEV	Fuel cell electric vehicle
IM	Induction motor
LCE	Lithium carbonate equivalent
LF(X)P	Lithium iron phosphate (LFP) lithium-ion cathode which can include manganese (LFMP)
NCA	Nickel cobalt and aluminium lithium-ion cathode
NMC	Nickel manganese cobalt lithium-ion cathode
NMCA	Nickel manganese cobalt and aluminium lithium-ion cathode
MHEV	Mild hybrid vehicle
OEM	Original equipment manufacturer
Other-HEV	Non-plug-in hybrid vehicles including full and mild hybrids that combine an internal combustion engine and a battery to deliver power
PHEV	Plug-in hybrid electric vehicle combining an internal combustion engine and an electric powertrain
PMSM	Permanent magnet synchronous motor
REE	Rare earth element
xEV	Electrified vehicle including BEV, PHEV, HEV, FCEV

ADVANCED PROPULSION CENTRE UK

This Q3 2025 automotive demand forecast is provided by the Technology Trends team at APC.

Data sources have been used from October 2025 and Q3 2025 (July – September) forecasts.

If you have any questions or would like more detail on any of the graphs or data, please email: info@apcuk.co.uk