

Revised US emission timelines support higher for longer PGM demand

The United States has finalised its vehicle emission reduction targets for 2032. The Environmental Protection Agency (EPA) has set CO₂ emission reduction targets of -56% and -44% for light-duty and light-commercial vehicles respectively between 2026 and 2032. These targets are unchanged from those proposed in April 2023, however, the interim thresholds leading up to the 2032 targets have been made more lenient, thereby allowing for a slower initial BEV transition (Fig. 1). WPIC estimates that each 1% of North American ICE-based market share supports around 25 koz of 2E PGM demand respectively.

The US utilises fleet average emission standards which means an automaker's fleet (as a ratio of sales volumes) must comply with emission thresholds rather than any single vehicle. The technology agnostic approach allows a varying drivetrain split between ICE, hybrid, fuel cell and electric. The EPA estimates that by 2032, BEV market share (Fig. 7) will range between 30-56% for LDV (WPIC: 61%) and between 20-32% for LCV (WPIC: 18%). While the 2032 targets appear reasonable, flexibility is important to a US consumer that currently favours large combustion engine vehicles. US BEV market share reached 8% in 2023, lagging China and Europe at 23% and 15% respectively (Fig. 4). The Inflation Reduction Act (IRA) should help US BEV adoption; however, investment will only see results over the medium-term. Hence, the EPA's decision to revise interim fleet average emission thresholds (Fig. 1) lowers the near-term pressure on automakers to push consumers to switch to BEV and allows more ICE-based vehicle sales in the US.

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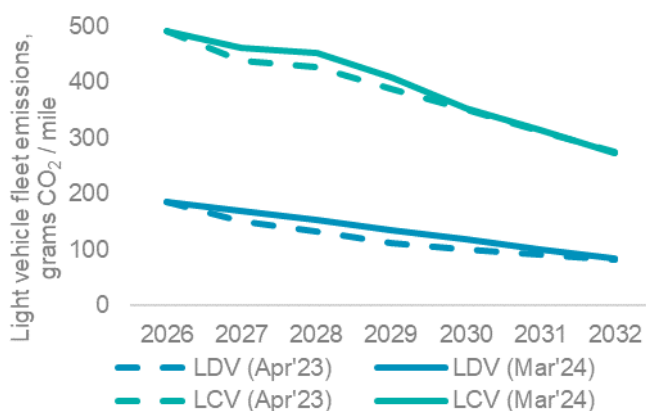
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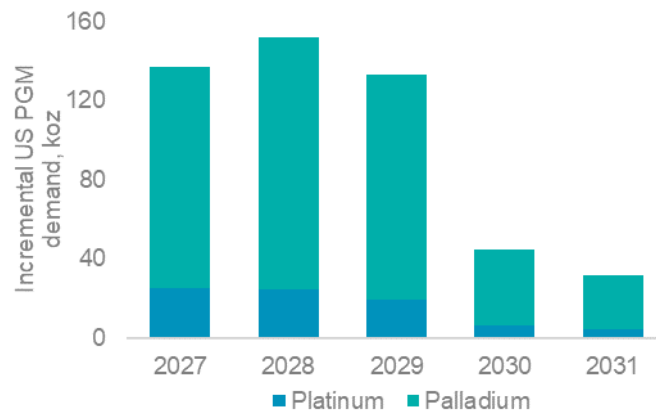
28 March 2024

Figure 1: The changes announced by the EPA allow for more lenient interim emission thresholds



Source: US EPA, WPIC Research

Figure 2: PGM demand could benefit from less stringent regulation allowing for higher PGM containing ICE sales



Source: WPIC Research

WPIC estimates the US could sell a cumulative three million additional ICE-based light-vehicles between 2027 and 2031, which is an additional 100 koz 2E PGM p.a. on average (Fig. 2). On a standalone basis, 100 koz of 2E PGM is 0.5% of incremental 2E demand. However, the more important take away is the growing global trend of concessions to emission reduction timelines which cumulatively extends the role of ICE. During 2023,

- The UK deferred its ban on ICE vehicle sales by five years,
- The EU approved the post-2035 sale of e-fuelled ICE vehicles, and
- Several automakers re-prioritised hybrids in future model rollouts.

Furthermore, protectionist overtures against Chinese vehicle imports may protect EU and US automakers (plus their workforces) whose vehicle mix is skewed to ICE powertrains. These multi-faceted considerations suggest hybrid vehicles have a core role in decarbonising transport. Accordingly, despite rising BEV market share, an automotive PGM demand decline will be moderate at -1.2% CAGR between 2023 and 2028 (Fig. 8).

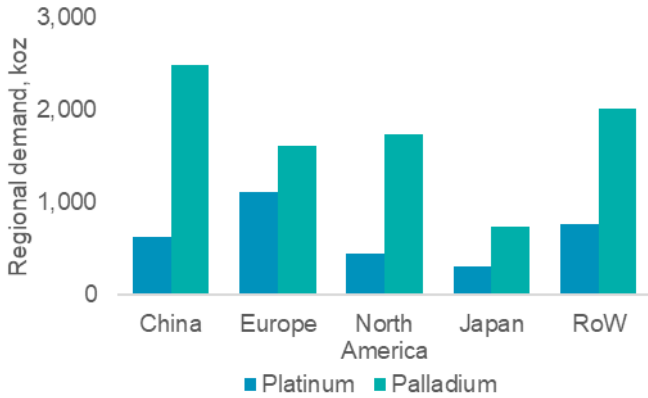
The US has revised interim fleet average emission limits which could support greater ICE or hybrid sales and PGM demand

Automotive PGM demand's long tail is set to be even longer despite rising BEV market share

Platinum's attraction as an investment asset arises from:

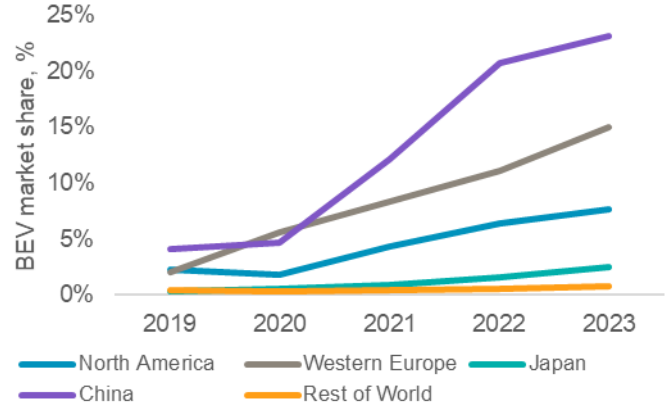
- WPIC research indicates the platinum market entering a period of consecutive deficits from 2023.
- Platinum supply remains challenged, hampered by production challenges in South Africa and with recycling supplies.
- Automotive platinum demand growth should continue due principally to substitution in gasoline vehicles.
- Growing off a small base, hydrogen will be a major source of platinum demand in the future.
- The platinum price remains historically undervalued and significantly below both gold and palladium.

Figure 3: North America is the third largest end market for automotive PGM demand, 2023



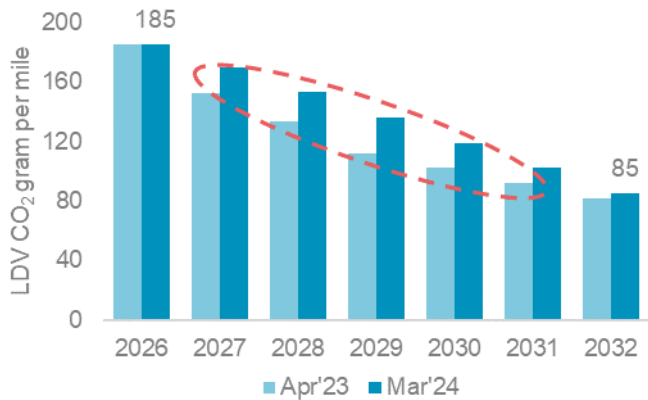
Source: Metals Focus, WPIC Research

Figure 4: North American BEV market share lags China and Europe



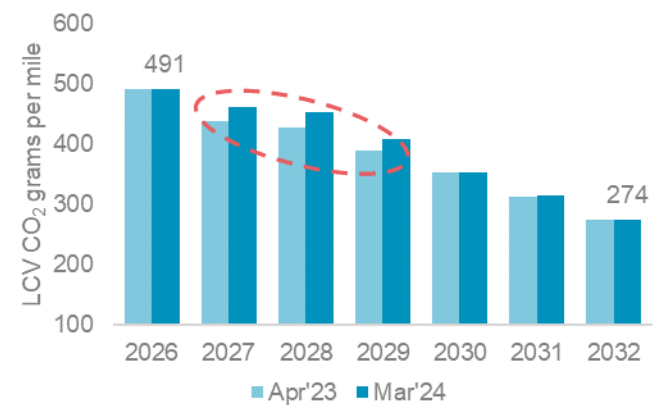
Source: China Association of Automobile Manufacturers, ACEA, WPIC Research

Figure 5: Interim fleet average emission targets for light-duty vehicles have been made more lenient by the US EPA



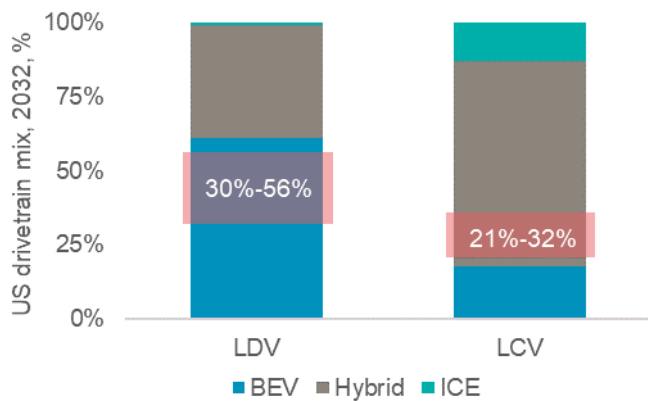
Source: US EPA, WPIC research

Figure 6: Interim fleet average emission targets for light commercial vehicles have also been made more lenient by the US EPA



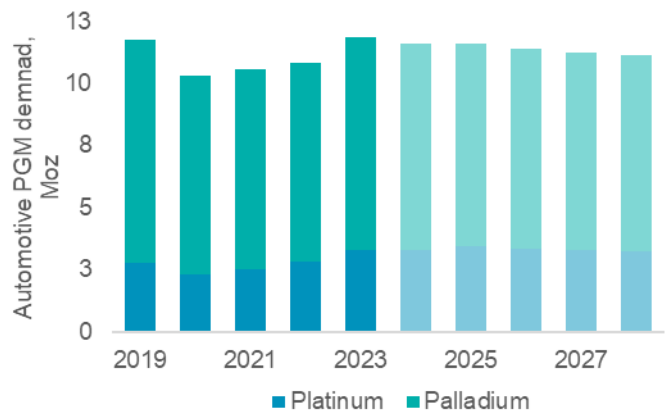
Source: US EPA, WPIC research

Figure 7: The EPA's estimated BEV market shares by 2032 are between 30-56% for LDV (WPIC: 61%) and between 20-32% for LCV (WPIC: 18%)



Source: US EPA, WPIC Research

Figure 8: Hybridisation of the drivetrain will support automotive PGM demand despite rising BEV market share



Source: Metals Focus (Pt: 2019 to 2024; Pd: 2019 to 2022), WPIC research

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