

SCAPE TO MARKET

Q2 2026 | V2G - From Policy Promise to Commercial Reality

Welcome to the ninth edition of SCAPE to Market

a quarterly update on the latest developments in the EV power electronics industry. In this edition, we focus on **Vehicle-to-Grid (V2G) - From Policy Promise to Commercial Reality**. First introduced in 2nd and 3rd, V2G is now entering mass production, regulatory frameworks are being unlocked across Europe, and the bidirectional onboard charger, the very hardware at the heart of SCAPE's research, has become the critical component enabling this transition. Keep your ear to the ground and make sure your research and innovation matter!

MARKET

- **Nissan launches affordable bidirectional charging in 2026 - AC-based V2G at price parity with standard chargers:** Nissan, a pioneer in V2G since the first CHAdeMO-based trials in Japan over a decade ago, has confirmed the 2026 commercial launch of an AC bidirectional onboard charger priced at parity with standard mono-directional units - removing a long-standing cost barrier that has held back mass market adoption. The system, initially rolling out in the UK and Europe under the Nissan Energy brand, leverages an integrated onboard charger to deliver V2G capability without requiring a separate DC bidirectional unit. For SCAPE's research, this is a direct market signal: the bidirectional onboard charger is no longer a premium add-on. It is becoming a standard hardware requirement, and the efficiency, thermal management, and SiC/GaN topology choices that SCAPE is researching will directly determine how well these systems perform at scale. [-> READ MORE](#)

Source: Nissan Global Newsroom, November 2025 | global.nissannews.com

- **BMW and Mercedes-Benz bring V2G to European consumers in 2026 - ecosystem approach sets new standard for bidirectional integration:** Two of Europe's largest OEMs are commercializing V2G simultaneously in 2026. BMW is launching the iX3 with full DC V2G capability paired with its BMW Wallbox Professional, developed jointly with E.ON, and has committed that its entire Neue Klasse platform will support bidirectional charging from launch. Mercedes-Benz is taking an ecosystem approach with MB.CHARGE Home, bundling the vehicle, bidirectional Wallbox, green energy tariff, and grid market access into a single product - in partnership with The Mobility House, which has already deployed commercial V2G successfully in France since 2024 with Renault. The convergence of two premium OEMs on V2G in the same year signals that bidirectional hardware has crossed



from pilot to platform – and places acute demand on the power electronics supply chain to deliver efficient, compact, and cost-effective bidirectional converter solutions. For SCAPE, the simultaneous commitment of two of Europe’s largest OEMs to bidirectional hardware in 2026 is the clearest market signal yet that the bidirectional onboard charger is moving from research priority to production necessity. [-> READ MORE](#)

Source: The Mobility House Energy / BMW Press, 2025-2026 | mobilityhouse-energy.com

- Xos enters V2G production for commercial fleets in April 2026 – school buses become grid assets:** Commercial EV builder Xos (NASDAQ: XOS) began V2G production in April 2026 on one of North America’s largest electric school bus platforms, enabling fleet operators to discharge stored energy back to the grid during peak demand events and generate direct revenue without hardware retrofits. The company is extending bidirectional capability across its full product portfolio including step vans and powertrains. The Xos case illustrates the commercial logic driving V2G adoption: return-to-base fleets with predictable schedules and long idle periods are ideal V2G assets, and the global V2G market is projected to grow from \$4.3 billion in 2025 to \$15 billion by 2030, with commercial fleets expected to be the primary growth driver. The power electronics challenge in this segment – managing bidirectional energy flow across large battery packs at depot scale without disrupting daily operations – is a direct design target for SCAPE’s converter research. [-> READ MORE](#)

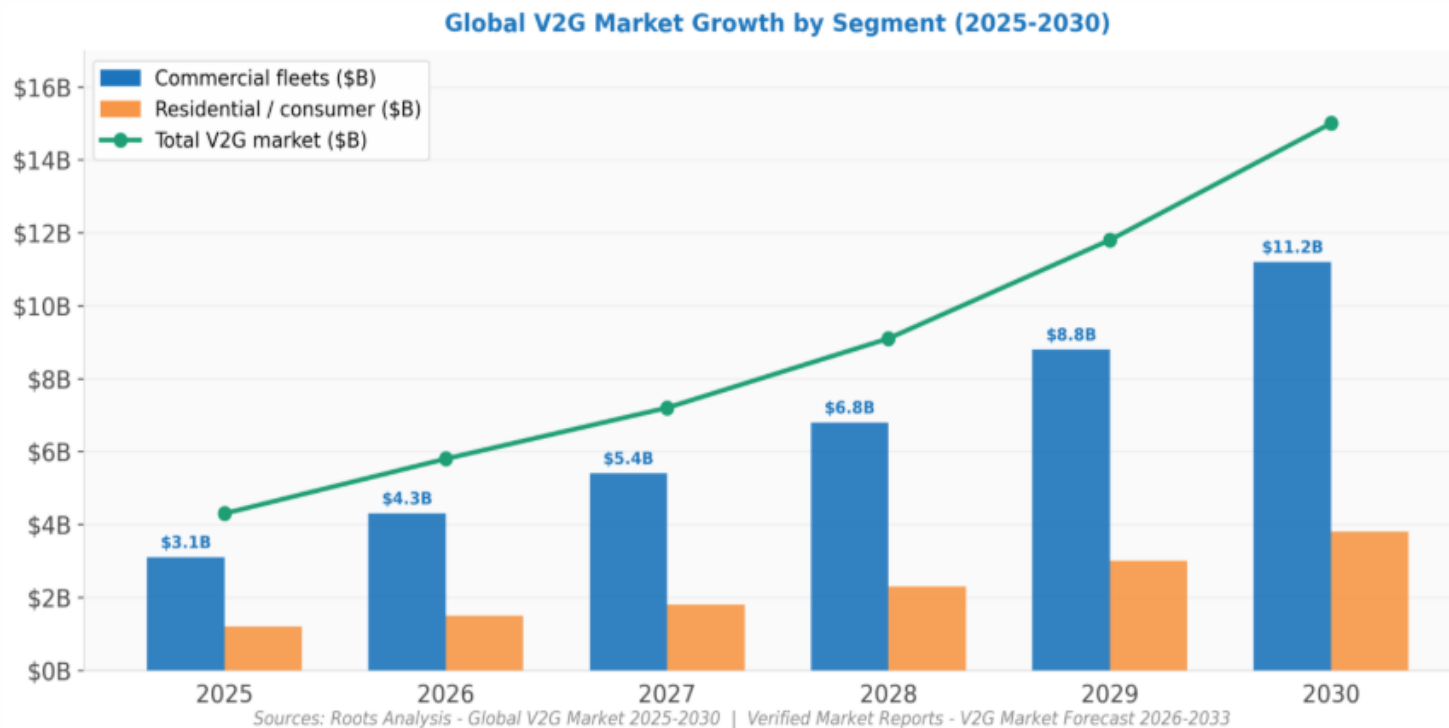
Source: Xos Inc. / GlobeNewswire, March 9, 2026, | globenewswire.com

V2G – Who is Launching What in 2026

OEM	V2G Approach	Market	Stage
Nissan	AC bidirectional OBC	UK, Europe	Launching 2026
BMW iX3	DC V2G + BMW Wallbox Pro	Europe	Spring 2026
Mercedes-Benz	MB.CHARGE Home ecosystem	Europe-wide	Production Apr 2026
Xos	Fleet depot V2G	North America	Production Apr 2026



V2G Market Growth Trajectory (2025-2030)



The blue bars show commercial fleet V2G deployments, the orange bars show residential and consumer adoption, and the green line tracks total market growth. Both segments are shown because they represent distinct but complementary design challenges for bidirectional power converters: fleet depot charging demands high-power, continuous-duty hardware, while residential V2G requires compact, cost-optimised onboard solutions. For SCAPE, both segments are relevant; the SiC and GaN bidirectional converter technologies being developed within the project are precisely the enabling hardware that both markets will depend on to scale.

POLICY

- **Germany removes the key barrier to V2G and the EU mandates ISO 15118-20 – 2026 is the regulatory tipping point:** Two landmark regulatory developments in early 2026 have fundamentally changed the V2G landscape in Europe. First, the German Parliament's November 2025 amendment to the Energy Industry Act (EnWG) abolishes double grid fees for electricity fed back from EV batteries effective January 1, 2026, making V2G economically viable for the first time in Europe's largest EV market. The MiSpeL technical framework, effective April 1, 2026, removes the need for a second meter – unlocking a decentralised storage potential of 3.3 to 5.0 GWh across Germany's existing EV fleet. Second, from January 8, 2026, all publicly accessible EU charging points must comply with the ISO 15118-1 to -5 standard series, with ISO 15118-20 – the standard that specifically governs bidirectional charging communication – becoming mandatory for all charging infrastructure from January 1, 2027. Together, these measures create, for the first time, a clear and investable regulatory foundation for V2G across the EU. [-> READ MORE](#)

Source: The Mobility House Energy / VDE Testing and Certification Institute, 2025-2026 | mobilityhouse.com; vde.com

- **UK Power Networks enables instant V2G grid connection approvals – and T&E calls for an EU V2G-ready label on all new EVs:** On the infrastructure side, UK Power Networks announced this week that it has become the first distribution network operator in the UK to enable instant automated approvals for V2G-capable EV charger connections, in partnership with Octopus Energy – reducing a key administrative bottleneck that has slowed V2G deployment. On the EU policy front, Transport and Environment (T&E) published a briefing on March 2, 2026, calling on the European Commission to introduce a voluntary V2G-ready label on the Certificate of Conformity for all new EVs, supported by mandatory compliance with ISO 15118-20 via the EU type-approval framework. For SCAPE partners, the combined signal from both developments is clear: V2G is moving from pilot to infrastructure-grade deployment, and the onboard charger hardware that enables it – SCAPE's core research output – is about to face its most demanding market test. [-> READ MORE](#)

Source: Envirotec Magazine / Transport and Environment, March 2026 | envirotecmagazine.com; transportenvironment.org

