SCAPE TO MARKET

Welcome to the third edition of *SCAPE to Market* – a quarterly update on the latest developments in the EV power electronics industry. In this report we study various trends such as new developments in Nissan's powertrain with its X-in-1 approach, Volkswagen's platform advances and stationary energy storage systems created from used EV batteries. Additionally, we will delve into the latest policy developments, including vehicle-to-grid capabilities and smart electric vehicle charging. Stay alert and make sure your research and innovation matters!

MARKET

- McLaren Applied has partnered with STMicroelectronics to create a new **silicon carbide (SiC) inverter** for electric vehicles. This inverter is smaller and lighter and it can extend the range of an EV by over 7%. It can provide 400kW peak and 250kW continuous power to the electric motor and is expected to be used in a range of new EV models. → **READ MORE**
- Nissan has introduced a new powertrain development approach called X-in-1, which is designed to reduce development and manufacturing costs by up to 30% by 2026, compared to 2019. The approach is centered on **modularization, sharing and standardization** of core electric vehicle (EV) and electric powertrain components. → **READ MORE**
- Volkswagen Group is focusing on improving its MEB **electric platform** with a new version called **MEB+**, which promises a range of up to 700 km and charging speeds of 175-200 kW. The MEB+ will use Volkswagen's new generation of batteries and enable significant improvements in automated driving functions. → **READ MORE**
- STABL Energy, a German start-up, is using MOSFETs from Infineon Technologies to create **stationary energy storage systems from used EV batteries**. The pilot systems can connect discarded batteries to the public power grid, without requiring a central converter. → **READ MORE**, and → **READ MORE** STABL Energy.

POLICY

- A California bill proposes requiring all electric vehicles sold in the state to have **vehicle-to-grid (V2G)** capability. This aligns with the state's plan to ban conventional car sales by 2035 to reduce carbon emissions. However, automakers argue that V2G technology could increase vehicle costs by around $3,300, leading to industry pushback. → **READ MORE**
- The UK government and Ofgem have unveiled a plan to make smart EV charging the preferred method of long duration charging by 2025. The **Electric Vehicle Smart Charging Action Plan** will allow drivers to charge their EVs when electricity is cheaper or cleaner and to sell electricity back to the grid for profit. → **READ MORE**

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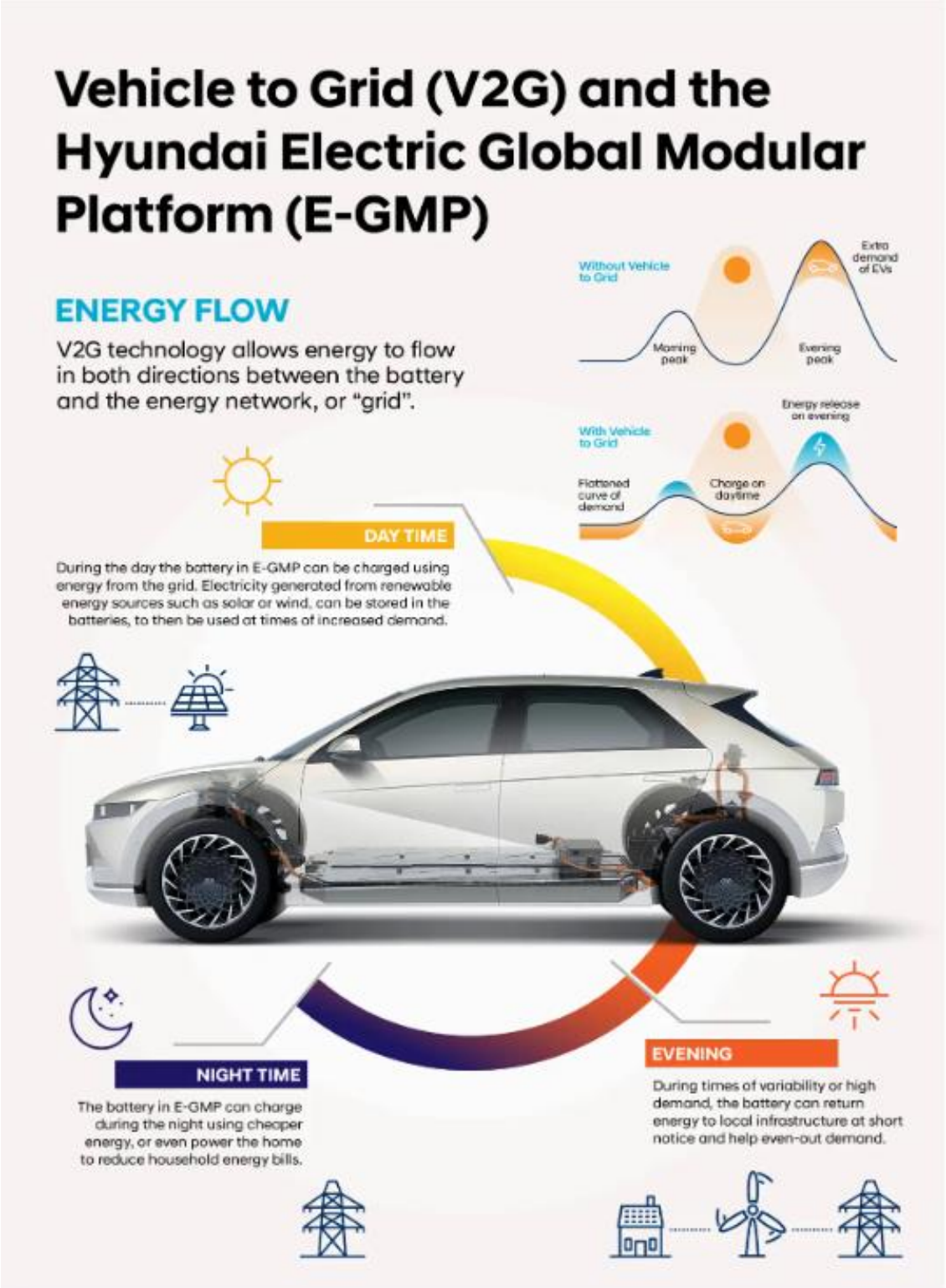

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SCAPE to Market Overview

	Power Electronics	Vertical Integration	Modular Platforms	Innovation	Policy	Public Investment	Studies
2022	Power Electronics Market **(1st edition)** EVBox Expands its DC Charging Portfolio with EVBox Troniq Modular Compact **(2nd edition)**		Infineon partners with REE automotive to foster sustainable mobility **(2nd edition)** Volkswagen Pivots To MEB+ Platform — 700 Km Range, 200 kW Charging **(3rd edition)**	CES 2023: Power Electronics Companies Showcase New Products **(1st edition)**	Chips Act: Council adopts position **(1st edition)** Electric Vehicle Onboard Equipment and Charging Infrastructure Standards **(2nd edition)**	EU-US Joint Statement of the Trade and Technology Council **(2nd edition)**	The All-Electric Society - Enabled by Power Electronics **(1st edition)** Best practices and assessment of regulatory measures for cost-efficient integration of EV into the electricity grid **(2nd edition)**
Q1 2023	Global Electric Vehicle Semiconductors Market 2023-2030 **(1st edition)**	Volkswagen Group Technology develops complete drive system for electric cars **(2nd edition)** New Nissan EV development plan to cut costs by 30% **(3rd edition)**	Wolfspeed Silicon Carbide Devices Power Future Mercedes-Benz Electric Vehicle Platforms **(2nd edition)**			UK: New plan for smart electric vehicle (EV) charging could save consumers up to £1000 a year **(3rd edition)**	The Pulse of the Semiconductor Industry **(1st edition)**
Q2 2023		Volkswagen among consortium trialling bidirectional EV charging **(3rd edition)**		Infineon provides an innovative solution for second life of EV batteries **(3rd edition)** Silicon carbide (SiC) inverter extends EV range by over 7% **(3rd edition)**	California Ponders V2G Mandate **(3rd edition)**		

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