

## *Hyundai, Kia and Genesis' electric futures ride atop the E-GMP platform*

*Emme Hall*



*Provided by Roadshow Hyundai's slippery Prophecy electric four-door is rumored to spawn a production model on the company's E-GMP platform.*

*Hyundai has already telegraphed it's going all in on battery-electric vehicles, and on Tuesday, officials at the Korean automaker detailed how they plan to get there: by riding atop the company's new Electric-Global Modular Platform, or E-GMP.*

*This new architecture will support the Hyundai Motor Group's goal of introducing 23 battery electric vehicle models by 2025 across its Hyundai, Kia and Genesis model ranges. The company's goal is to sell 1 million BEVs in that same time frame, representing 20 percent of its global sales.*

*The automaker claims its new rear-wheel-drive-based E-GMP architecture will provide impressive benefits. Vehicles produced on this platform will get over 310 miles on a single charge, at least when measured on the WLTP test cycle, which is admittedly more lenient than the EPA equivalent.*

*Hyundai also says the platform's electric powertrain will be able to charge to 80% in just 18 minutes, or 62 miles in just 5 minutes. That's made possible by the platform having 800-volt charge capability as standard with a rate of up to 350 kW.*

*This is futureproofing to a large extent, as such high-speed chargers aren't exactly ubiquitous. However, the system also allows for today's more common 400-volt charging system at a rate of up to 150 kW.*

*The idea is that drivers will be able to use the current 400-volt infrastructure, such as it is, and will be able to seamlessly transition to 800-volt charging when that comes online.*



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*For speed freaks, Hyundai is planning a high-performance model with around 600 horsepower, a 0-62 mph time of under 3.5 seconds and a top speed of 161 mph. Yowza.*

*On the more practical side, Hyundai says the modular E-GMP will underpin everything from sedans to a range of crossover SUVs. A standardized battery pack is mounted under the floor, leaving a flat surface allowing for a variety of seating arrangements and plenty of space.*



*E-GMP features an integrated drive axle, where the wheel bearings are combined with the driveshaft to transmit power.*

*During a virtual media event on Tuesday, the company also confirmed wireless charging will be in the future of E-GMP-based vehicles, but declined to offer details or availability timing.*

*An Integrated Charging Control Unit will allow Hyundai's BEVs to supply up to 3.5 kW of power to the buyer's choice of external electronic accessories running on 110 or 220 volts.*

*The company says that means these vehicles' battery packs can power a medium-size air conditioner and a 55-inch television for up to 24 hours, for instance. The bidirectional vehicle-to-load, or V2L, system can also be used to charge another EV.*

*One interesting technological feature that Hyundai says is a world-first innovation for a production car: an integrated drive axle, where the wheel bearings are combined with the driveshaft to transmit power. This is packaged with a five-link rear suspension to provide seamless power delivery for improved comfort and stability.*



*Provided by Roadshow Could Hyundai's E-GMP platform give life to the funky little Genesis Mint concept? Genesis*

*Finally, the power electric system -- that's the motor, inverter and EV transmission -- are all integrated into one unit. By using silicon-carbide semiconductors in the motor, Hyundai says, its drive unit is between 2% and 3% more efficient. That translates to better range -- E-GMP vehicles can go 5% longer on the same amount of battery energy.*

*Naturally, while the E-GMP platform is rear-wheel-drive biased, all-wheel drive will also be an option. Vehicles equipped with AWD will be able to switch between RWD and FWD drive as conditions change. The company says its first E-GMP vehicle will be the Hyundai Ioniq 5 in 2021, part of the already-announced expansion of the [Ioniq](#) nameplate into its own subbrand of sorts.*

*The Ioniq 5 is expected to be based on the company's recent [Concept 45](#), a strikingly retrofuturistic hatchback. We're also expecting some version of Hyundai's lithe little [Prophecy show car](#) to eventually make it into showrooms.*

*Conversely, the first E-GMP Kia vehicle will be a new crossover coming that same year. E-GMP will also spill over into the upscale Genesis luxury line of vehicles. Us? We're hoping for a production version of the company's [2019 Mint concept](#).*





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