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News Release

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KIA MOTORS UNVEILS FIRST-EVER HYBRID FOR U.S. MARKET AT LOS ANGELES AUTO SHOW

2011 Kia Optima Hybrid Will Offer Class-Leading Estimated 40 mpg[1] Highway Fuel Economy Blended with Technology, Efficiency and Design

- New Optima iteration utilizes state-of-the art lithium polymer battery for increased fuel efficiency
- Addition of hybrid model continues Kia's dramatic brand transformation

LOS ANGELES, November 17, 2010 – As the latest model in Kia's design-led transformation, the all-new 2011 Optima midsize sedan lineup expanded today with Kia Motors America's (KMA) introduction of the all-new Optima Hybrid at the Los Angeles Auto Show. With a stunning design, roomy interior, and an estimated 40 mpg class-leading fuel efficiency, Kia's first-ever hybrid in the U.S. will attract those looking for a striking and well-equipped sedan that does not sacrifice style, comfort, performance or value for fuel efficiency. Set to hit showrooms early next year, the Optima Hybrid employs a Kia-developed powertrain that includes several innovations that enable it to provide exceptional hybrid performance and efficiency.

"Kia Motors is aggressively expanding its green car investments and R&D in much the same way we committed ourselves to the quality and design innovations over the last decade that have fueled our dramatic brand transformation," said Michael Sprague, vice president, marketing & communications, KMA. "By adding our first-ever hybrid in the U.S. to the Optima lineup we are providing consumers with three powerful and fuel-efficient powertrain choices, and continuing Kia's philosophy of offering stylish, value-packed vehicles with outstanding fuel efficiency."

The 2011 Optima Hybrid uses a full parallel hybrid system and can be driven in zero emission, full-electric drive mode at speeds up to 62 miles per hour or in blended gas-electric mode at any speed. When the car comes to a stop and the electrical load is low, the engine shuts off to completely eliminate idle fuel consumption and emissions.

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1 MPG estimate based on the Federal Test Procedure conducted by Kia Motors Corporation. EPA estimates not available at the time of production and may vary from manufacturer's estimated mpg. Actual mileage may vary. Class-leading claim based on comparison as of November 2010 of 2010 and available 2011 midsize sedan hybrids.

Durable Lithium Polymer Battery

The 2011 Optima Hybrid's outstanding efficiency is due in large part to the use of a lithium polymer battery, which was developed in South Korea with partner LG Chem. The power and energy density of this new battery type allowed Kia engineers to create a lighter and more compact battery pack, with the 30 kilowatt battery pack weighing just 95.9 pounds – 28 pounds less than the 2011 Toyota Camry Hybrid's nickel metal hydride pack – which aids fuel economy and also helps to maximize Optima's cargo space.

The Optima Hybrid's battery will hold its charge up to 25 percent longer than hybrids with nickel metal hydride batteries, so the battery is more likely to have usable energy available even if it has not been in use. Both fuel consumption and emissions are cut, allowing more electric starts and drive-aways. With that improved efficiency, more of the recovered kinetic energy and charging energy from the engine is available to move the car as necessary, which allows the vehicle to provide electric driving assist more often and for a longer period. Lithium polymer also has less of the self-discharge characteristic found in most rechargeable batteries.

Unique Hybrid Architecture

Unlike most current systems on the market, the Optima Hybrid powertrain is configured with a unique architecture. Compared to the power-split hybrid systems found on vehicles from Toyota or Ford, the Optima Hybrid uses a Transmission-Mounted-Electric-Drive (TMED) layout with the electric motor separated from the transmission gear-set. Offering several advantages, this modular layout includes more efficient powertrain packaging, use of many "off-the-shelf" components such as the existing six-speed automatic transmission found on the 2.4-liter GDI Optima, and reduced engineering investment. This also allows for other possible future combinations including the application of more powerful motors and higher capacity batteries.

The Optima Hybrid also is among the first full hybrid systems on the market to use a typical step-ratio automatic transmission. The extremely compact six-speed automatic that debuted on the 2011 Kia Sorento CUV is carried over to the hybrid largely unchanged. An external electrically-driven oil pump also has been added to provide the hydraulic fluid pressure needed to keep the clutches engaged when the vehicle is in idle stop mode.

The Optima Hybrid's electric motor is hard-coupled to the input of the transmission and equipped with a permanent magnet synchronous electric traction motor that produces 40.2 horsepower (30 kilowatt) and 151.2 pound-feet of torque when electric only, and an impressive 206.2 horsepower and 195.4 pound-feet of torque when in hybrid mode. This replaces the torque converter, with a multi-disc clutch is fitted between the engine and motor, enabling the gasoling engine to be de-coupled from the powertrain for idle stop and electric drive modes. Employing this layout allows the entire package, including a torsional damper, to fit virtually within the same area as the traditional torque converter.

Another unique component of the Optima Hybrid is the Hybrid-Starter-Generator (HSG). This 8.5 kilowatt starter motor-generator is belt-driven off the Theta II engine and operates at the same 270 volts as the electric traction motor and the lithium polymer battery, but does not provide any tractive effort to the vehicle. In its place, the HSG is used only to start the engine and then to charge the hybrid battery.

One of the main benefits of the hybrid electric powertrain provides is the capability to recover energy lost during braking and store it for use during acceleration and cruising, so when the brake pedal is applied, the engine is decoupled from the traction motor and gives no drag on the vehicle. The motor is then used as a generator to recharge the hybrid battery. Converting the kinetic energy into electrical energy rather than thermal energy through the friction brakes also reduces the wear on the brake linings so they last longer. When conditions require emergency stopping or driving on hills, the extra reliance on regenerative braking allows for the brakes to be more effective.

The Optima Hybrid uses an electronically controlled brake system to determine the driver's braking needs based on the degree of pedal application, which is then converted to a total brake torque requirement. The hybrid system control then detects the current level of battery charge, vehicle speed and other conditions to determine how much regenerative braking is possible under current circumstances. The brake control system then receives the maximum regenerative braking level to manage the friction braking torque so that total net torque is equal to the driver's needs.

Like all other 2011 Optimas, the hybrid uses an Electric Power Assist Steering (EPAS) system that instantly provides boost and only when it is needed during steering maneuvers. Reducing the extra weight compared to an engine-driven hydraulic assist, the EPAS is independent of the engine and also provides assistance when the engine is not running, such as during idle stop or electric drive mode.

The Optima Hybrid also features an electrically-driven air conditioning compressor so that climate control can be maintained even when the engine is off. Like electric power steering, the electrically-driven air conditioning compressor allows for more precise on-demand control reducing the overall load on the powertrain, cutting fuel consumption.

Taking advantage of the instant and continuously available torque from the electric motor, Kia engineers modified its popular 2.4-liter Theta II engine to operate on an Atkinson cycle, raising the compression ratio by 20 percent to maximize its efficiency and achieving a 10-percent fuel saving over a regular Theta engine. This cycle generates a little less torque, but the electric motor compensates for any loss and consequently, the Optima Hybrid's overall power and torque outputs are greater than the regular model.

With the Optima also weighing in as one of the lightest cars in the segment, high performance and outstanding fuel efficiency are a natural result. The lightweight architecture of the new Optima platform, combined with the lightweight lithium polymer battery pack, brings the Optima Hybrid in at just 3,490 pounds, 230 pounds lighter than the 2011 Ford Fusion Hybrid.

Beyond the Optima Hybrid's innovative powertrain, Kia's engineers addressed all aspects of vehicle efficiency including aerodynamics and rolling resistance. The Optima Hybrid features unique exterior aero refinements, a lower ride height, an active air flap system, lower drag wheels, and underbody aero tuning to reduce drag, while low rolling resistance tires also help increase efficiency. The Optima Hybrid's drag coefficient is an exceptionally low 0.26, among the best in the world.

The end result of the Optima Hybrid's highly-efficient powertrain, low-rolling resistance tires, and clean aerodynamic signature is truly exceptional highway fuel efficiency, the best of any mid-size hybrid sedan in the market.

Added Levels of Comfort and Refinement

In addition to offering consumers class-leading fuel economy, the 2011 Optima Hybrid also delivers high level of style, comfort and refinement. Ensuring Kia's newest addition stands out from the crowd, the hybrid model has unique features to it, including front grille design, 16-inch alloy wheel design, headlamp design, fog lamps, heated outside mirrors, chrome accents on exterior door handles, front and rear lower bumpers and side sills, LED tail lamp design and a rear lip spoiler.

In addition to the extensive list of standard convenience features and stylish appointments found on the well-equipped Optima LX A/T trim, consumers opting for the Hybrid will enjoy additional standard features, including, eight-way power adjustable driver's seat, dual zone automatic temperature control with rear vents, push-button start with smart key, leather-wrapped steering wheel and shift knob, automatic up/down on front windows, chrome interior door handles, glove box illumination, rear reading lamps, and fixed rear seats with ski pass-through. Virtual Engine Sound System (VESS), standard on the Optima Hybrid, plays a pre-recorded engine sound during electric-only operation to notify people outside the vehicle that it is approaching.

The 2011 Optima Hybrid also offers a Premium Technology Package, key features include a panoramic sunroof, unique 17-inch alloy wheel design, four-way power adjustable front passenger's seat, driver's seat memory, heated and cooled front seats, heated rear seats and steering wheel, HID headlamps with automatic leveling, leatherette-wrapped center fascia, auto-dimming rear-view mirror with Homelink™ and compass, a navigation system with back-up camera and SIRIUS Traffic™[1], and an eight-speaker Infinity®[2] audio system.

Safety-Minded

The 2011 Optima Hybrid is equipped with a high level of standard safety features, as is the rest of the entire Kia line-up. This includes six airbags[3] (dual advanced front and front-seat mounted side as well as full-length side curtain), front active headrests, side-impact door beams, height-adjustable front seatbelts with pre-tensioners, three-point seatbelts for all seating positions, Lower Anchors and Tethers for Children (LATCH) and a Tire Pressure Monitoring System (TPMS). Four-wheel antilock brakes (ABS), Electronic Stability Control (ESC), a Traction Control System (TCS), a Brake Assist System (BAS) and Hill Assist Control (HAC) also are standard.

Competitive Warranty

The entire 2011 Optima lineup is covered by KMA's warranty program, which offers unprecedented consumer protection. Included in this program are a 10-year/100,000-mile limited powertrain warranty, a five-year/60,000-mile limited basic warranty and a five-year/100,000-mile anti-perforation warranty. A five-year/60,000-mile roadside assistance plan also is part of the vehicle coverage.

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1 SIRIUS Traffic requires a subscription, sold separately after three-month trial subscription included with vehicle purchase.
2 Infinity is a registered trademark of Harman International Industries, Incorporated.
3 For maximum protection, always wear your seat belt.

Kia Motors America in 2010

Kia Motors is in the midst of a dramatic, design-led transformation, which has been delivering dynamically styled vehicles in several important segments at exactly the right time, contributing to the brand's continued gains in U.S. market share. With three new vehicle introductions and several other key initiatives planned for 2010, Kia is poised to continue its momentum and will continue to build the brand through design innovation, quality, value, safety features and with new technology such as the soon-to-come UVO powered by Microsoft®[1] advanced hands-free in-car communication and entertainment system. The launches of the all-new 2011 Sorento CUV, the first vehicle to be assembled* at Kia's first U.S.-based manufacturing facilities in West Point, Georgia, and all-new 2011 Sportage compact CUV, further enhance the lineup, and are both available in retail showrooms.

About Kia Motors America

Kia Motors America (KMA) is the marketing and distribution arm of Kia Motors Corporation based in Seoul, South Korea. KMA offers a complete line of vehicles through more than 725 dealers throughout the United States. For 2009, KMA recorded its 15th consecutive year of increased U.S. market share and recently achieved its best quarter of sales ever in 2010. Kia Motors subscribes to a philosophy of building high value, high quality, safe and dynamic vehicles. Kia Motors prides itself on producing vehicles that are exciting and enabling and evoke the Kia tagline "The Power to Surprise."

Kia Motors America is the "Official Automotive Partner of the NBA." Information about Kia Motors America and its full vehicle line-up is available at its Web site – www.kia.com. For media information, including photography, visit www.kiamedia.com.

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***The 2011 Sorento is assembled at the Kia U.S. plant (Kia Motors Manufacturing Georgia, Inc.) with U.S. and globally sourced parts.**

1 Microsoft is a registered trademark of Microsoft Corporation in the United States and/or other countries.