

# **New Kia Niro**

# Kia introduces new Niro hybrid crossover

- Stand-out crossover design for the hybrid car market
- Dedicated hybrid powertrain specifically developed for new model
- CO<sub>2</sub> emissions as low as 88 g/km and 3.8 litres per 100 km
- Predictive driving assistance maximises efficiency in all driving conditions available at a later stage
- Lightweight, high-strength steel and aluminium body for maximum safety and low NVH
- Available with advanced DRiVE WISE driver assistance technologies
- Infotainment options to include Kia Connected Services, Android Auto™ and Apple CarPlay™
- Optional 1,300 kg towing capacity available from Q4 2016
- On-sale in Europe from Q3 2016

**Frankfurt, 25 May 2016** – The Kia Niro, which made its European debut at the 2016 Geneva International Motor Show, is an new low-emissions hybrid crossover, marking the development of Kia's first dedicated eco-car platform.

The Kia Niro offers the practicality and curbside appeal of a spacious crossover, together with the high fuel efficiency of an advanced hybrid powertrain. Engineered from the ground up as a dedicated hybrid vehicle, its attractive, modern design will help the car stand out among conservatively-styled hybrid rivals.

The Niro's new platform has been engineered in isolation from existing Kia models, and is designed to accommodate a specific set of environmentally-conscious technologies and next-generation powertrains. The Niro's hybrid powertrain – made up of a 1.6-litre GDI (gasoline direct injection) engine, lithium-ion polymer battery pack, 32 kW electric motor and six-speed double-clutch transmission – emits just 88 g/km  $CO_2$  (combined), and is capable of using just 3.8 litres of gasoline for every 100 km of driving.

Michael Cole, Chief Operating Officer, Kia Motors Europe, commented, "The Kia Niro offers buyers a compelling blend of crossover practicality with the cool, modern styling for which Kia is famous, and an efficient new hybrid powertrain to keep running costs down. The Niro fills a gap in the market for a crossover with typically low hybrid emissions, and will appeal to a broad range of European buyers." Cole added: "Hybrid sales have more than doubled in Europe over the last five years, and are forecast to account for around 700,000 sales in Europe by 2020. The Niro will allow Kia to meet this growing demand for alternatively-fuelled vehicles, and help us meet our 2020 global target to improve average fleet fuel efficiency by 25% over 2014 levels."

# Stand-out crossover styling for the hybrid car market

A new addition to Kia's design-led product range, and without precedent in the Kia line-up, the Kia Niro boasts a brand new form. The styling of the Niro was led by Kia's design centres in California, USA and Namyang, Korea and incorporates the practicality and aesthetic allure of a compact crossover, with a sleek, aerodynamic body and subtly sculptured surfaces.

With its aerodynamic, crossover-inspired silhouette, subtly sculptured surfaces and sharp, modern lines, the Niro is nevertheless instantly recognisable as a Kia. The new model bears the latest evolution of Kia's signature 'tiger-nose' grille, as well as the brand's characteristically wide C-pillar and a series of other signature design cues.

Sporting a compact SUV shape, the Niro boasts smooth, sleek proportions, while its relatively wide stance portrays stability and a low centre of gravity. With a relatively long bonnet, short overhangs, elevated headlamps and rising shoulder line, the Niro's athletic crossover stance represents a shift away from other hybrid cars on the market today. The Niro's silhouette tapers slightly towards the rear of the vehicle, ending in a subtle rear roof spoiler, elevated tail-lamps and a wide, squared-off rear bumper. Combined with bold wheel arches, the design places greater visual volume over the rear haunches.

Designed principally for efficient aerodynamic performance, the Niro's body allows for a low drag coefficient of just 0.29 Cd – making it more aerodynamic than many other hybrid rivals. Its relatively long wheelbase (2,700 mm) and short front and rear overhangs (870 and 785 mm, respectively) also ensure occupants enjoy generous interior space.

The Kia Niro occupies a new space within the brand's model line-up in terms of its size. The Niro is 4,355 mm in length, 1,805 mm wide and 1,535 mm tall, making it smaller overall than the all-new Kia Sportage, though occupying a larger footprint than the cee'd hatchback.

For Europe, the Kia Niro will be available with a choice of 10 colours, and buyers can choose from a selection of 16- or 18-inch alloy wheel designs.

# Modern, horizontal dashboard emphasises cabin space

The cabin of the Kia Niro has been designed to give an impression of space and modernity, with a wide dashboard and defined horizontal lines. The Niro follows the most recent Kia models in offering high quality, soft-touch materials throughout the interior.

Clear lines running the width of the cabin separate the different areas of the dashboard, with the instrument binnacle and HMI (human-machine interface) system situated along the same parallel, and a column of controls located beneath, incorporating heating and ventilation and switches for key driver assistive systems. The horizontal layout of the dashboard serves to

draw the viewers' eyes along the width of the cabin, for a greater impression of spaciousness, while the ergonomic centre console is angled slightly towards the driver.

The Kia Niro is available with a single-tone cabin, available either in black or dark grey, and upholstered in cloth, cloth and leather or full leather.

# 88 g/km CO<sub>2</sub> emissions from advanced hybrid powertrain

In developing the Kia Niro HEV, engineering teams' efforts have been principally focused on delivering class-leading fuel economy in the compact crossover segment. The Kia Niro combines its stylish design with low emissions and high fuel economy, with a  $CO_2$  emissions rating of just 88 g/km (combined). Equipped with 16-inch alloy wheels, the Niro's fuel economy is rated at 3.8 litres per 100 km (combined and urban, NEDC), while models with 18-inch wheels are capable of using just 4.4 litres per 100 km.

Conceived as a dedicated hybrid model, the Kia Niro HEV achieves its ultra-low emissions levels and impressive fuel economy with a downsized hybrid powertrain. Kia's 1.6-litre 'Kappa' GDI engine – producing 105 ps and 147 Nm torque – is paired with a 32 kW electric motor and a 1.56 kWh lithium-ion polymer battery pack. The powertrain's combined 141 ps power output is applied to the road through a highly-efficient six-speed double-clutch transmission (6DCT), with a maximum 265 Nm (195 lb ft) torque available in first gear for decisive off-the-line acceleration.

The new engine marks the first combination of the Atkinson combustion cycle, cooled exhaust gas recirculation (EGR), gasoline direct injection and a long-stroke-narrow-bore specification to maximise efficiency. Efficiency and emissions are further improved via the Niro's exhaust heat recovery system, which speeds engine warm-up by routing coolant to a heat exchanger in the exhaust system

The transmission is the latest version of Kia's 6DCT, based on the same architecture as Kia's efficient new 7DCT, developed in-house for the recently-upgraded Kia cee'd. The 6DCT has been re-engineered specifically for use with the Niro's advanced hybrid powertrain, delivering a more direct and immediate response – and a more entertaining drive – than a traditional electronic continuously-variable transmission (e-CVT). The Niro's 6DCT is able to shift gears automatically, while keener drivers can pull the gear lever towards them to put the car into Manual Sports mode and allow manual shifting.

For the 6DCT's application in the Niro, the layout and gear train have been redesigned for light weight and compact size. New low-friction bearings and low-viscosity transmission fluid help reduce mechanical friction for quicker reaction times, while also reducing mechanical noise.

Kia has engineered a new Transmission-Mounted Electric Device (TMED) to allow the DCT to work best with the hybrid powertrain. The TMED allows the full output of both the engine and electric motor to be transferred in parallel through the transmission, with minimal loss of energy. This differs from a power-split system, which converts a portion of engine output for delivery through the electric motor, resulting in a loss from energy conversion, as is typical of an e-CVT-based hybrid. The application of the new TMED also allows the hybrid system to

access the battery's power directly at higher speeds, for more immediate accelerative response.

# Advanced battery pack with energy-saving and harvesting technologies

The 1.56 kWh lithium-ion polymer battery pack is the lightest and most efficient pack used by Kia to date, with up to 50% higher energy density and 13% greater energy efficiency than the battery packs found in key rivals. Weighing just 33 kg, the Niro's battery pack – with an advanced power relay – allows the battery to regenerate electrical energy under deceleration.

# Predictive driving assistance maximises efficiency in all driving conditions

A new Eco Driving Assistant System (Eco DAS) is currently under development for the European market, which will be added to the Niro at a later point in its lifecycle. The Eco DAS includes Coasting Guide Control (CGC) and Predictive Energy Control (PEC). Both technologies aim to maximize the fuel mileage by suggesting to the driver when to coast or brake.

CGC will alerts drivers as to the best time to lift off the accelerator and coast towards a junction, allowing the battery to regenerate under engine deceleration. It will operate at certain speeds when a navigation destination is set, and alert drivers when to coast via a small icon on the instrument cluster.

PEC uses the navigation and cruise control systems to anticipate the topographical changes on the road ahead (namely the uphills or downhills) to determine when conditions are optimal to recharge the battery and when it's better to direct stored energy to the wheels and actively manage energy flow accordingly. Niro features the 1st system to adjust for both uphill and downhill.

# High stability and engaging handling from fully-independent suspension

The Kia Niro has been engineered independently to other Kia models, with a significantly reengineered version of existing Kia platform hardware. This platform has been designed to accommodate the Niro's specific set of hybrid powertrain technologies, while its global development and evaluation programme ensures it offers buyers the smooth ride, engaging handling and high stability expected of a modern Kia model.

The Kia Niro is equipped with fully-independent MacPherson strut front suspension, tuned to offer maximum on-centre steering feel, immediate reactions to steering inputs and high-speed stability.

The Niro also adopts fully-independent multi-link rear suspension with dual lower arms. The result is a comfortable ride under all conditions, with each rear wheel able to absorb bumps and shocks independently, while ensuring high agility and stability with a larger tyre contact patch under cornering than a traditional torsion beam suspension setup, common among many models in the compact crossover and hybrid segments.

Special attention was also paid to brake feel. Applying lessons learned through development of two generations of the Optima Hybrid as well as the fully-electric Soul EV, Kia engineers

designed the Niro's regenerative system to seamlessly blend in hydraulic friction braking. Consequently, deceleration feels more consistent and linear than other hybrids.

The Niro also features the latest electronic driver aids, including Kia's Vehicle Stability Management and Electronic Stability Control, to provide stability, traction and safety in all conditions.

# NVH countermeasures ensure refinement in all-electric or hybrid driving modes

A series of measures have been adopted in the new Kia Niro to ensure low levels of noise, vibration and harshness (NVH). A particular challenge for the Niro, Kia engineers sought to ensure the car remained as quiet and refined as possible.

As a parallel hybrid, it is important that the Niro remains as refined as possible when the 1.6litre GDI engine is running. The new model therefore features a range of measures to reduce the penetration of engine noise into the cabin. These include specially-designed asymmetric engine mounts to manage powertrain movements at each point in the front subframe, high density under-bonnet insulation, and a sound-deadening acoustic shield with a special support structure to improve the sound of the engine accelerating across the most used range of engine speeds.

Reducing road noise was particularly important in order for engineering teams to minimise NVH in the cabin. Road noise is minimised and made as consistent as possible on different road surfaces with the adoption of high-insulation, rigid bushings in the front subframe. Additional insulation has also been applied around the base of the A- and B-pillars, while the rear wheel arch has been made stiffer with high-strength steels to minimise the transfer of road noise and vibrations from the rear of the car.

Suppression of wind noise was equally important, particularly at higher speeds. The Kia Niro therefore employs acoustic windshield glass and features a cowl over the windscreen wipers to reduce air turbulence at the base of the windscreen. Wind roar and 'whistling' is also minimised with carefully profiled door mirrors and – in its capacity as a practical crossover – any holes in the roof rack (to support cross bars) are covered.

# High practicality with crossover platform engineered to accommodate hybrid system

The Niro hybrid crossover is designed to offer high levels of practicality and comfortable interior dimensions despite the compact on-road footprint.

Its relatively long wheelbase – 2,700 mm – contributes to generous interior proportions for all occupants, with up to 1,059 mm and 950 mm of legroom for front and rear passengers respectively. Its 1,805 mm-wide body provides occupants with plenty of shoulder room – 1,423 mm in the front and 1,402 mm in the rear. Headroom for all passengers is class-leading, with up to 1,018 mm in the front and 993 mm in the rear – even greater space than most C-SUVs.

For all occupants, the Niro's crossover stance results in a slightly raised seating position and higher ground clearance compared to its hybrid and hatchback rivals, making ingress and egress easier, and resulting in a relaxed, comfortable driving position.

With plenty of space in the cabin, Kia's engineering and design teams have created a new front seat design for the Niro. The new seat is 1.3 kg lighter than existing Kia seats, yet is designed to absorb greater levels of vibration with higher density cushioning and high-strength steel frames, minimising fatigue on longer journeys. Reprofiled springs and pads result in high levels of thigh, hip and side support.

The platform underpinning the new Kia Niro has been engineered to ensure no compromise in storage capacity due to the location of the hybrid powertrain. The Niro offers 427 litres of cargo capacity (VDA; with tyre mobility kit), with no intrusion into boot space from the battery pack. The battery itself is located beneath the rear passenger bench, allowing the maximum possible boot space within its compact overall dimensions. The Niro's boot is also of a sufficient shape and size to offer a full-size spare wheel beneath the boot floor (depending on market). With the rear seats folded down, luggage capacity grows to 1,425 litres.

The fuel tank is located alongside the battery pack beneath the rear bench, with a 45-litre capacity.

From Q4 2016, the new Niro will be available with an Optional Towing Pack – rare amongst cars in the hybrid class – allowing owners to tow braked loads of up to 1,300 kg.

Infotainment: Kia Connected Services, Android Auto<sup>™</sup> and Apple CarPlay<sup>™</sup> The new Kia Niro features a number of on-board technologies to improve comfort and convenience for buyers.

At the heart of the dashboard is Kia's latest Human Machine Interface (HMI) and a large 7.0or 8.0-inch touchscreen infotainment system, with optional navigation. Both systems support Bluetooth smartphone and audio connectivity and DAB digital radio, which is available across a number of European markets, and are connected to a six-speaker audio system. Music lovers can also specify new eight-speaker audio from JBL®, with a powerful 320 watt output, external amplifier.

The new Niro will also be the latest model from the company to adopt Kia's Connected Services, powered by TomTom®. This new connectivity package offers drivers a wide range of up-to-date information, including live traffic updates\*\*, speed camera locations and alerts\*\*, local point-of-interest search and weather forecasts. Available in cars equipped with navigation Kia's Connected Services will be available free of charge for European buyers for seven years after the car's purchase.

\*\*Legal restrictions to these services may apply depending on country usage

The Niro is additionally the first Kia model to feature Android Auto<sup>™</sup>, designed to work with Android phones running 5.0 (Lollipop) or higher. Available from launch, Android Auto<sup>™</sup> connects to the user's phone and lets them access smartphone apps and functions through the in-car infotainment system, such as voice-guided Google Maps navigation, hands-free calls and texts and voice recognition. Android Auto<sup>™</sup> also lets users stream music from Google Play Music<sup>™</sup>. In the Niro, the system has been designed to minimise distractions, and allow the driver to keep their hands on the wheel and eyes on the road ahead at all times.

Apple CarPlay<sup>™</sup>, for iPhone 5 or newer, will be available to Niro buyers by the end of 2016, after the car's launch across Europe. Apple CarPlay<sup>™</sup> will enable full Siri voice control to control the phone's various functions and apps, including navigation via Apple Maps, calls and text dictation. Apple CarPlay<sup>™</sup> also supports other audio apps, such as music streaming or audiobooks, that the user may have downloaded to their iPhone.

Meeting a trend for ever-increasing smartphone use, the Kia Niro is available with a new wireless charger for mobile devices, enabling users to charge a mobile device on the move, without the need for a wire connection. With 'foreign object detection', the 5W charging system activates when a compatible device is placed on the pad – situated at the base of the centre console – and warns owners when they've left a phone on the charger when they leave the vehicle. The system displays the phone's charging condition and features a safety system to prevent overheating while in use.

# High-strength steel body combined with range of active safety technologies

The Niro builds on Kia's legacy of developing some of the safest vehicles on the road, offering high standards for occupant and pedestrian crash safety. Engineered to meet the demands of the toughest and most demanding crash safety tests around the world, the Niro features a strong bodyshell and a wide array of passive safety equipment, as well as the latest active safety and autonomous hazard avoidance technologies.

The Kia Niro's structure is particularly strong, with its bespoke new platform made up of a significant proportion of Advanced High Strength Steel (AHSS). Part of a wider effort by Kia, the extended use of AHSS will help Kia reach its target of a 5% reduction in the average weight of new car bodies by 2020 compared to 2014 levels, while enabling greater safety and security.

53% of the body is made out of strong, light AHSS, while aluminium is used for the bonnet, tailgate panel assembly, front bumper back beam and several chassis elements, including front knuckles, front lower arms and brake calipers. Even the parking brake pedal contributes to the weight savings through the use of a Fibre-Reinforced Plastic (FRP) construction. These weight-saving measures contribute both to safety and the car's class-leading fuel efficiency.

Strengthened hot-stamped steel is also used to reinforce the cabin, particularly for the Aand B-pillars, roof rails and wheel arches. These materials mean the Niro has a high level of torsional rigidity and can effectively distribute impact forces around the body for maximum occupant safety.

The Niro is fitted as standard with seven airbags for optimum passive occupant safety, with airbags for driver and front passenger, driver knee, first row side airbags, and first and second row curtain airbags. ISOFIX child-seat tether and anchor points are fitted as standard to the second row of seats, to safely secure children.

The new Niro is expected to perform strongly in the Euro NCAP's increasingly-important Safety Assist category, which analyses the latest driver assistance technologies engineered to avoid accidents and mitigate the effect of a collision.

Kia's Vehicle Stability Management (VSM) system, fitted as standard to the new car, helps ensure stability under braking and cornering by carefully controlling the vehicle's Electronic Stability Control (ESC) and electric motor-driven power steering. If the system detects a loss of traction, VSM helps the driver to remain safely in control of the vehicle.

Cutting-edge driver assistance features are also available, with Kia bringing a suite of its DRiVE WISE Advanced Driver Assistance Systems (ADAS) to the Niro. DRiVE WISE will help Kia achieve its ambitions for intelligently safe mobility and improving safety for all road users, and the new Niro is available with many of the latest active hazard avoidance technologies, depending on market. Available systems will include:

- Autonomous Emergency Braking (AEB)\* with pedestrian detection, employing a radar and camera detection system to detect potential collisions with other vehicles or pedestrians and help bring the car to a halt
- Smart Cruise Control (SCC), which automatically adjusts the Niro's speed to maintain a safe distance from vehicles in front
- Lane Departure Warning System (LDWS) fitted as standard to all Niro models in Europe – emits an audible alert when the driver strays from the current lane without using the indicators
- Lane Keeping Assist System (LKAS) also fitted as standard detects the position
  of the Niro in relation to lane markings and takes automatic action to correct the
  steering line if it senses the car starting to draft without the use of indicators
- Blind Spot Detection (BSD) which monitors cars behind the Niro and provides the driver with a visual warning in the door mirror when another car enters the driver's blind spot
- Rear Cross Traffic Alert (RCTA), which warns against other cars driving behind the Niro in car parks while reversing.

# Kia targeting 25% fuel economy improvement by 2020 compared to 2014

The development of the Niro, with an all-new platform and bespoke powertrain, will contribute to Kia's ambition to becoming a leader in the low emissions car market by 2020. In the next five years, Kia will expand its current green car line-up from the four current models to 11 – starting with the Niro hybrid and Optima plug-in hybrid – and is targeting a 25% global improvement to average fleet fuel efficiency over 2014 levels.

This expanded range of low-emissions vehicles will encompass a wide range of advanced powertrains, from hybrids and plug-in hybrids to battery-electric and hydrogen fuel cell electric vehicles (FCEV). The Niro is among the first of Kia's new models to be designed, engineered and produced as part of this plan.

As well as investment in advanced propulsion technologies, by 2020 Kia will also replace seven out of its 10 current engine ranges with next-generation gasoline and diesel units,

while increasing the number of turbocharged engines. Higher-efficiency, multi-speed transmissions are also planned, while Kia engineers are targeting a 5% reduction in the average weight of new car bodies through greater application of ultra-high strength steel.

# On sale in Europe during Q3 2016

The new Kia Niro has entered full series production at Kia's state-of-the-art manufacturing facility in Hwasung, Korea and will go on sale across Europe towards the end of Q3 2016. As with every Kia sold in Europe, the Niro will come with the brand's unique 7-Year, 150,000 km warranty as standard.

- Ends -

# ALL NEW KIA NIRO - TECHNICAL SPECIFICATIONS (EUROPE)

#### Body and chassis

Five-door, five-seater hybrid crossover, with steel and aluminium unitary construction bodyshell. Gasoline four-cylinder engines and parallel hybrid system driving the front wheels via six-speed double-clutch transmission.

## Powertrain

<u>1.6-litre / 105 ps GDI</u>	
Туре	DOHC, four cylinder in-line
Capacity	1.6-litres
Bore and stroke	72.0 x 97.0
Compression ratio	13.0:1
Max power	105 ps (77 kW) @ 5,700 rpm
Max torque	147 Nm (108 lb ft) @ 4,000 rpm
Valves	16 (four per cylinder)
Fuel system	Gasoline direct injection
Emissions class	Euro Stage 6b

# Battery and electric motor

Battery type	Lithium-ion polymer
Voltage	240 V
Energy	1.56 kWh
Max power (motor)	44 ps (32 kW) @ 1,798-2,500 rpm
Max torque	170 Nm (125 lb ft) @ 0-1,798 rpm

#### Combined hybrid system

Total power	141 ps (104 kW) @ 5,700 rpm
Total torque	265 Nm (195 lb ft) @ 1,000-2,400 rpm

#### Transmission

Six-speed double-clutch transmission (DCT)

#### Gear ratios

1	3.867
2	2.217
3	1.371
4	0.930
5	0.956
6	0.767
Reverse	5.351
Final drive	4.438 (gears 1-4)
	3.227 (gears 5-6, R)

#### Drivetrain

Front-wheel drive

#### Suspension and damping

Front Rear Fully-independent by subframe-mounted MacPherson struts, coil springs and gas-filled shock absorbers, with anti-roll stabiliser bar Fully-independent by subframe-mounted double wishbones, coil springs and gas-filled shock absorbers, with anti-roll stabiliser bar

## Steering

Туре	Electric motor-driven rack-and-pinion power steering
Steering ratio	13.9:1
Turns, lock-to-lock	2.66
Turning circle	5.3 metres

#### Brakes

Front	15-inch ventilated discs
Rear	14-inch solid discs
Parking brake	Foot-operated

#### Wheels and tyres

Standard	Alloy 16-inch, 205/60 R16 tyres
Optional	Alloy 18-inch, 225/45 R18 tyres
Spare	Tyre mobility kit or optional temporary spare wheel

#### Dimensions (mm) Exterior

LAGHO			
Overall length	4,355	Overall width*	1,805
Overall height	1,535	Wheelbase	2,700
Front overhang	870	Rear overhang	785
Ride height	160	-	

\*excluding door mirrors

#### Interior

Intenor		
	1 <sup>st</sup> row	2 <sup>nd</sup> row
Head room	1,018	993
Leg room	1,059	950
Shoulder room	1,423	1,402
Hip room	1,364	1,228

#### Capacities

Fuel tank	45 litres
Luggage (VDA)	427 litres

#### Weights (kg)

Curb weight 1,425 Gross weight 1,930 Tow capacity, braked 1,300\* \*Optional Towing Pack available from Q4 2016

#### Performance

Top speed (kph)	162
0-100 kph (secs)	11.5

# Economy (litres / 100 km)

	16-inch wheels	18-inch wheels
Combined	3.8	4.4
Urban	3.8	4.4
Extra urban	3.9	4.5
CO <sub>2</sub> (g/km)	88	101

## MAY 2016

# About Kia Motors Europe

Kia Motors Europe is the European sales, marketing and service arm of the Kia Motors Corporation. With its headquarters in Frankfurt, Germany, it covers 30 markets in Europe.

# **About Kia Motors Corporation**

Kia Motors Corporation (www.kia.com) – a maker of quality vehicles for the young-at-heart – was founded in 1944 and is Korea's oldest manufacturer of motor vehicles. Over 3 million Kia vehicles a year are produced in 10 manufacturing and assembly operations in five countries which are then sold and serviced through a network of distributors and dealers covering around 180 countries. Kia today has over 50,000 employees worldwide and annual revenues of nearly US\$44 billion. It is the major sponsor of the Australian Open and an official automotive partner of FIFA – the governing body of the FIFA World Cup<sup>™</sup>. Kia Motors Corporation's brand slogan – "The Power to Surprise" – represents the company's global commitment to surprise the world by providing exciting and inspiring experiences that go beyond expectations.

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