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NISSAN DEBUTS WORLD'S MOST CELEBRATED ELECTRIC VEHICLE IN AUSTRALIA

- **Award-winning Nissan LEAF goes on sale locally – the world's first purpose-built, mass-produced, all-electric car**
- **100 percent electric – zero petrol, zero tailpipe**
- **Judged World Car of the Year and European Car of the Year in 2011**

Nissan Australia has launched a game-changing car to the Australian automotive landscape – the 100 percent electric, zero petrol, Nissan LEAF.

The five-door family sized LEAF brings Electric Vehicle (EV) technology into the mainstream with its styling, technology, drivability and performance.

"Nissan is proud to introduce the first mass-produced, purpose built electric car to the Australian market in the LEAF," said Nissan Australia CEO Bill Pepper.

"This car attracts attention for its exceptional green credentials, its market leading technology and for its ground-breaking EV innovation – but we're also pleased to point out that it's an entertaining drive.

"We're excited to have LEAF on sale in Australia and heading into people's homes and businesses right around Australia.

"This is just the first EV that Nissan will introduce to Australia. As a company we are pleased to have LEAF and our upcoming EV range as a major part of Australia's zero emission future."

LEAF has already been highly-acclaimed globally, winning the 2011 World Car of the Year, 2011 European Car of the Year, 2011-12 Japan Car of the Year as well as being recognised in non-motoring awards, such as Time Magazine's Top 50 Inventions of 2009.

Francois Bancon, Nissan's Global General Manager of Product Strategy, Advanced and Exploratory Planning, is in Australia as part of the launch of LEAF.

"Several years ago when we started this project, we didn't just look at improving a conventional powertrain with a small improvement here and there – we set ourselves the target of zero emission," said Bancon.

"We did this with the Nissan LEAF. There is a market for this car and after launching it in many places around the world already we are pleased to have it on sale in Australia."

The Nissan LEAF is priced at \$51,500 MSRP and is available now from 13 LEAF-accredited Nissan dealerships across Australia.

An Award Winning Family Car

The front-wheel drive Nissan LEAF utilises a dedicated EV platform with batteries housed in the floor for optimum vehicle packaging and weight distribution. The highly rigid body design includes a rigid-mounted battery frame that helps provide greater body rigidity compared to a conventional compact car, helping it earn it a five-star Euro NCAP rating.

LEAF provides room for five adults and a good-sized cargo area. Placing the batteries in the floor of the vehicle provides optimum weight distribution to help enhance handling and allows for five-passenger seating by not intruding into the cabin space.

Nissan LEAF's 24 kWh lithium-ion (Li-ion) battery is comprised of 48 compact modules of four cells each, which allows a high degree of packaging flexibility. The batteries are designed to maximise drive time and minimise charging time. Unlike conventional cylindrical batteries, the thin, compact laminated cells offer more flexibility in design applications.

Responsive performance comes from the 80kw (108bhp) electric motor that instantly generates its maximum 280Nm torque – equivalent to the torque of a conventional 3.0-litre V6 petrol engine – from a standing start. The result is rapid acceleration perfectly in tune with the Nissan LEAF's natural urban and suburban habitat.

The Nissan LEAF is easy to drive. The electric powertrain does not idle and only rotates when the vehicle is moving. To start the engine, the driver need only press the start button, and electricity begins flowing to the motor. Using the electric shift, the driver then selects 'D' range, and the vehicle starts to move.

The Nissan LEAF utilises an independent strut suspension with stabiliser bar in front and a torsion beam rear suspension with integrated stabiliser bar. Responsive steering is provided by a vehicle-speed-sensitive electric power steering system. Braking is provided by power-assisted front vented disc/solid rear disc brakes with Anti-lock Braking System (ABS), Electronic Brake force Distribution (EBD) and Brake Assist (BA), with braking force is used to repower the battery.

Nissan LEAF's regenerative braking system helps replenish its range. By applying the brakes or reducing speed by letting off the accelerator, the electric motor acts as an electric generator, converting energy, that would otherwise be wasted, into battery energy. To increase regenerative braking, there is a driver-controlled Eco mode setting, which can also be used to reduce air conditioning and thus improve driving range when driving in urban areas.

Because Nissan LEAF does not have an internal combustion engine, Nissan has incorporated an 'Approaching Vehicle Sound for Pedestrians' system, which is designed to alert pedestrians that a vehicle is approaching. When driving at low speeds, the system emits a sound from a speaker at the front of the vehicle.

Pedestrians are able to hear the car moving and the 'approaching sound' automatically turns off above 40km/h.

Driving range

A full charge delivers a potential range of 170 kilometres (NEDC), a distance which will satisfy the daily driving demands of a clear majority of customers. Global research indicates that the average daily mileage for 80 percent of the world's population is under 100 kilometres: the figure in Japan and the UK is under 50 kilometres for 80 percent of the population.

Driving range depends on several factors, including external temperature, air-conditioning usage, battery age and driving behaviour. Generally, the more environmentally friendly one drives, the greater the driving range. A user-friendly onboard screen shows key battery data, including maximum driving range, power output and regenerated electricity. An eco-indicator on the meter displays the status of electricity consumption, giving real-time feedback on the driver's handling efficiency.

Nissan LEAF has a number of features to help you maximise your range and keep you charged up. The CARWINGS information system updates the navigation system with current charging station locations in your area, monitors the state of charge from your smartphone or computer, remotely starts vehicle charging, provides connectivity to start and stop the climate control system in the vehicle remotely via your Smartphone or computer and reminds you to plug in the car if you forget. CARWINGS is provided complimentary for three years

The LEAF onboard navigation system is 'smart' enough to tell you based on destination input and state of charge whether you have the range to 'make it' and if not, search for nearby charging station along the route. It also displays your current range radius, will alert you if you need to charge, shows you where you can find the nearest available charge station and displays how much charge you have left and how many kilometres remain.

The LEAF display screen also has a real time energy usage screen which shows you how much energy is being used and regenerated, how much further you can drive, and the real time impact of using climate control on your range. The multi-function display drive computer measures energy economy and calculates estimated charging time.

When your battery has 4kWh remaining, the empty warning light will come on as well as a notification on the screen indicating where to find all charging stations within range. In the event that the battery becomes critically low, power limitation mode will automatically minimise energy consumption and reduce speed to help you get to a charging dock.

An EV from the ground up

Nissan LEAF is unique – it's not a conversion of a conventional car but has been designed as an EV from the ground up. And that means the designers have been able to give LEAF looks that are as distinctive as its power train, with no packaging compromise, a distinctive profile, a roomy, futuristic interior and a large luggage area.

Built on an all-new bespoke EV platform, LEAF sits on a generous 2700 mm wheelbase. It is 4445 mm long, 1770 mm wide and 1550 mm tall.

Because it is powered by a small electric motor and with the compact battery packs located under the floor at the centre of the chassis, the Nissan LEAF's design isn't compromised by the need to house a traditional engine at the front.

The result is the Nissan LEAF's low-slung, abbreviated front-end design which is dramatically framed by the vertical blue LED headlights. These also direct airflow away from the door mirrors to improve the Nissan LEAF's aerodynamics.

The body was designed using Nissan's 'smart fluidity' principle, combining visually pleasing flowing lines with aerodynamic efficiency. The kicked-up roofline blends into a large spoiler while the Nissan LEAF's wind cheating shape is further helped by the flat, smooth underfloor.

This underbody (including a large front flat floor cover, motor area undercover, front undercover and rear diffuser with fins) helps manage airflow under the vehicle. An innovative vortex-shedding roof-mounted antenna is one of many design elements utilised to help reduce wind noise. Other noise reduction features include a quiet-operation windshield wiper motor, a sound insulation windshield design and a dual-isolated motor-mounting system.

With the operation of the LEAF powertrain so quiet, engineers have paid extra attention to management of wind noise in the exterior design, since it would be more noticeable than with a traditional internal combustion vehicle.

The rear view is dominated by thin, gently curved, vertical taillights and is, of course, notable by the total absence of an exhaust pipe.

Inside there is ample space for five adults and the airy interior houses advanced electronic devices including a flat centre cluster for the bespoke IT system and a neat and easy to use gearshift selector inspired by a computer mouse.

Nissan LEAF's charging points are hidden under a small door located in the front of the vehicle. There are two points, one 240 volt as well as a 400 volt 'fast charge'.

The five-door hatchback design also features chrome door handles, aerodynamic outside mirrors and a large greenhouse to provide a bright interior environment. Attractive 5-spoke 16-inch aluminium-alloy wheels mounted with P205/55R16 Bridgestone Ecopia tyres are standard.

The Nissan LEAF is available in five colours – blue ocean, cayenne red, eclipse black, brilliant silver and glacier white.

Distinctive 'EV Touch' Interior

The LEAF is packed with features and EVIT (Electric Vehicle Information Technology). Accessories are powered by a separate 12-volt battery that is recharged with the aid of a solar panel on the rear spoiler of the car.

The roomy Nissan LEAF interior offers a pleasingly modern design created to provide a unique 'EV touch' with 'simple and human flow.' The bright, welcoming atmosphere starts with the wide, high tech instrument panel design, which is dominated by a twin combination meter display in front of the driver and a centre 'floating' piano black

C-stack with a seven-inch information display.

The digital 'eyebrow' display at the top of the instrument panel provides high visibility for the Eco indicator and speedometer, while the lower liquid crystal meter display houses the power meter, battery temperature gauge, multi-function display, remaining energy gauge, capacity level gauge and distance to empty display.

The flat panel centre C-stack cluster continues the 'EV touch' feel with the colour monitor for the standard navigation system, available RearView Monitor and control of the audio and climate systems.

The display also provides access to the CARWINGS telematics system, which is connected to a global data centre, (subscription required, free for first 36 months). Through CARWINGS, Nissan LEAF drivers are able to use mobile smart phones to turn on air conditioning and set charging functions remotely, even when the vehicle is powered down. The system also displays 'reachable area', as well as showing a selection of nearby charging stations. An on-board charging timer can also be programmed to start the charging event whenever desired.

The Nissan LEAF interior also includes comfortable front bucket seats and a 60/40 split folding rear seat and rear HVAC duct. The seat fabric is made with partially recycled materials. Recycled materials are also used for the back door trim, roof trim and headliner, carpeting and a number of other interior pieces such as the door panels and centre console storage cover.

The centre console area includes the palm shifter (inspired by a computer mouse) for the 'by wire' drive selector. The three-spoke heated steering wheel houses controls for the cruise control, audio system and standard Bluetooth Hands-free Phone System.

Five Star Safety Rating

The European New Car Assessment Programme (Euro NCAP) has awarded the 100 percent electric Nissan LEAF the highest level of car safety following its performance in the independent organisation's stringent crash tests. The zero-emission vehicle received a five-star rating, the first electric vehicle ever to earn this distinction.

Nissan LEAF's safety assessment followed standard Euro NCAP procedure, with tests for frontal impact, side impact, side pole impact and whiplash. The car's 48 lithium-ion battery modules, which are housed in a special compartment beneath the floor, completely withstood all the impacts.

In addition, the EV's battery system was switched on during the crash simulations to test the in-built safety measures of the electrical system, which includes automatic cut-off isolation in the event of an accident. The car passed those with flying colours, too.

Recycled and recyclable

Nearly 100 percent of the vehicle weight will be recyclable through the development of recycling technology for parts and components specific to an EV such as the battery, motor and inverter. During the car's development, Nissan has also been actively working on using recyclable materials in its production. Although a difficult process, Nissan has succeeded in adopting recycled materials in some parts of the Nissan LEAF by developing colour-shade adjustment technologies and enhanced quality control of resin materials.

In Japan, Nissan has set up a joint venture with Sumitomo Corporation to 'Reuse, Resell, Refabricate and Recycle' lithium ion batteries from EVs. In Europe, Nissan with its Alliance partner Renault is studying the establishment of a similar business with a local partner.

For further information:

Jeff Fisher

General Manager – Corporate Communications & Motorsport
Nissan Australia
Phone: (03) 9797 4358
Email: jeff_fisher@nissan.com.au

Chris Jordan

Press & PR Supervisor
Nissan Australia
Phone: (03) 9797 4155
Email: chris_jordan@nissan.com.au