

## NEW TECHNOLOGIES IN FISCAL 2013

**NISSAN PLANS TO COMMERCIALIZE 90 NEW TECHNOLOGIES DURING THE NISSAN POWER 88 PERIOD, WHICH WILL RUN THROUGH FISCAL 2016. HERE ARE THE MAIN TECHNOLOGIES THAT WE WILL COMMERCIALIZE IN FISCAL 2013.**

### DIRECT ADAPTIVE STEERING

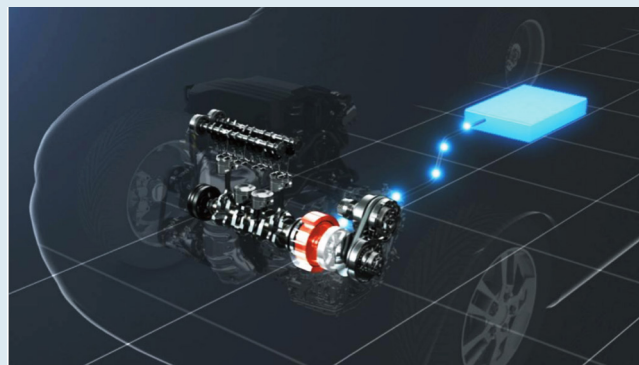
This next-generation system reads the driver's steering inputs and converts them to electronic signals to direct the vehicle's tires. It transmits the driver's steering inputs to the wheels even faster than a mechanical system, providing the driver with more easily understood feedback on road surface conditions and improving the sensation of direct control over the vehicle. The system also enables the vehicle to reduce unnecessary road-generated disturbances and insulate the driver from them, thus communicating only essential information to the driver through the steering wheel.



**WE WILL INTRODUCE 20 NEW TECHNOLOGIES, INCLUDING THE ABOVE, IN CERTAIN VEHICLES RELEASED DURING FISCAL 2013.**

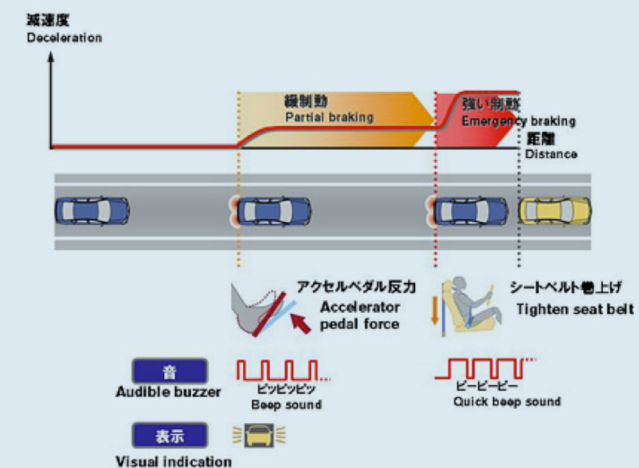
### FF-HYBRID SYSTEM

Nissan's FF (front engine, front wheel drive) Hybrid system utilizes a unique one motor, two clutch configuration. It is combined with a highly efficient new continuously variable transmission (CVT) and a compact engine, with the optional addition of a supercharger for models that require more power. In combination with a high-power, rapid charge/discharge lithium-ion battery, it provides powerful and responsive acceleration in a lightweight and compact hybrid system.



### FORWARD EMERGENCY BRAKING

Using a highly sensitive radar sensor, the system monitors the distance from the vehicle in front and its relative speed. When the system judges that a collision may occur and deceleration is necessary, it generates a visual and audible warning to encourage the driver to slow the vehicle down. At the same time, it pushes the accelerator pedal up and smoothly applies gentle braking to assist the driver in slowing down. If there is still a possibility of collision the system will automatically apply stronger braking. It will also tighten the vehicle's seatbelts to hold the driver and passengers more securely.



### ESTABLISHMENT OF THE NISSAN RESEARCH CENTER SILICON VALLEY

In February 2013 the Renault-Nissan Alliance established a new research facility in Sunnyvale, California. The Nissan Research Center Silicon Valley (NRC-SV) will undertake part of our global research activities as one of our main overseas research facilities. Its work includes research into network-connected cars, human-machine interfaces and autonomous vehicles.

Autonomous vehicle technology in particular is an example of an advanced technology with key potential for our customers around the world.

