

□ ELECTRIC PROPULSION

Technologies & Vehicles

Now in accelerated development, Nissan is preparing to launch various vehicles using electric power sources within two years to **reduce CO2 emissions** still further.

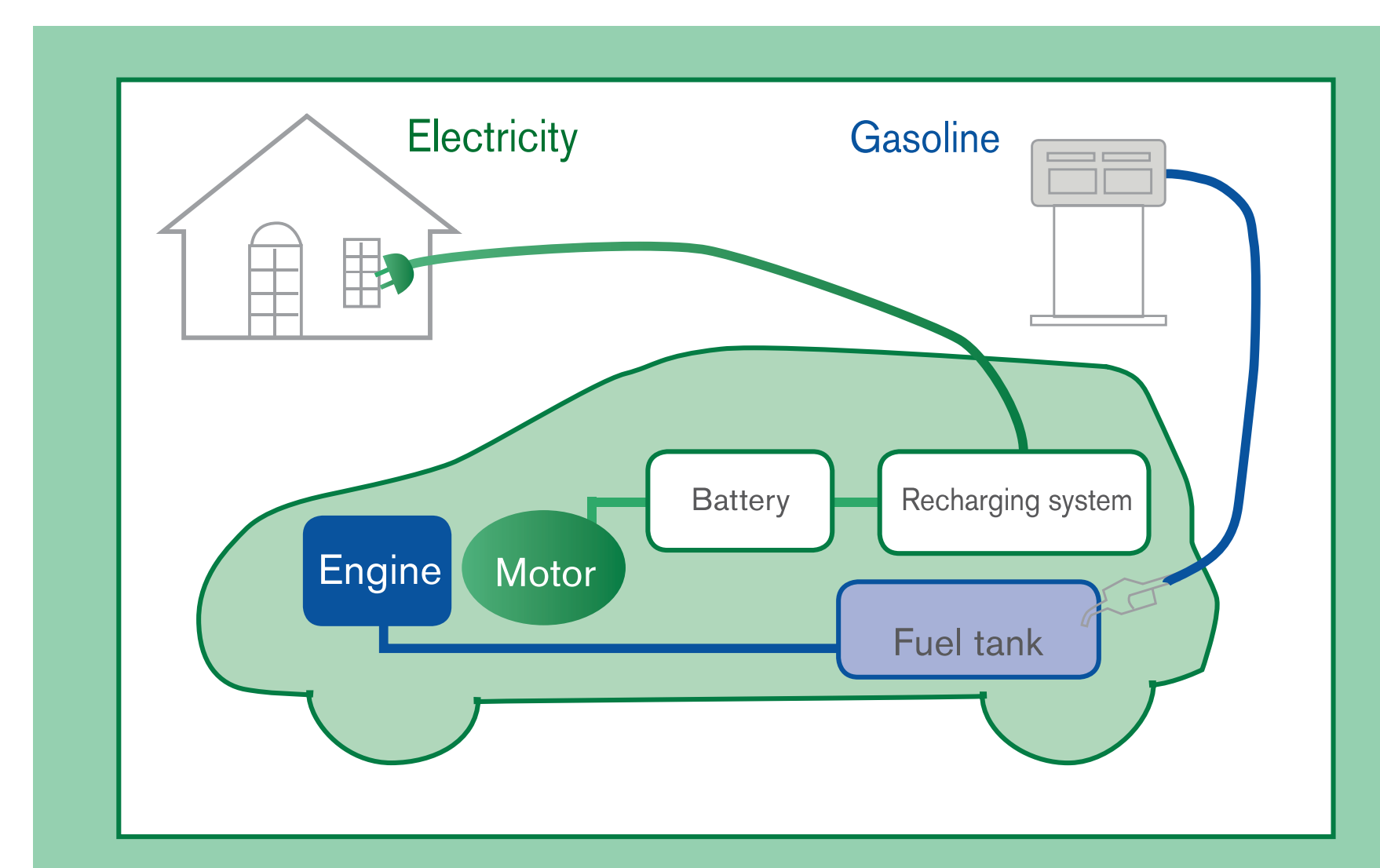
HEV Hybrid Electric Vehicles

Nissan is developing its own **hybrid system** to be introduced in the US and Japanese markets in 2010.

Plug-in hybrid vehicle development

Like an electric vehicle, a plug-in hybrid can utilize grid power to recharge its batteries, enabling it to run on electric motors alone. This produces no CO2.

Plug-in hybrid vehicle development



FCV Fuel cell vehicles

A fuel cell vehicle (FCV) is powered by the electric energy generated by the chemical reaction of hydrogen and oxygen. This provides clean operation without any CO2 or noxious exhaust emissions. In 2003, Nissan introduced its FCV to the Japanese market through a limited lease program. With further improvements in the Nissan-made fuel-cell stack, Nissan plans to launch its next-generation FCV in North America and Japan in the early 2010s.

X-Trail FCV (latest model)



EV Electric vehicles

Nissan is refining its battery and other electric power technology to extend the cruising range of electric vehicles and promote their widespread adoption. At the same time, Nissan is supporting the creation of recharging stations and other infrastructure with a view toward market launch of electric vehicles in the early 2010s, following field tests.

Pivo2 (concept model)



Progress in key electric vehicle technologies

Commercialization of electric vehicles depends on progress in motor, battery and inverter performance, three key areas where Nissan is pursuing research and development. In 2007, Nissan established a joint-venture company with NEC called Automotive Energy Supply Corporation (AESC) for the mass production of highly efficient laminated lithium-ion batteries



Nissan compact lithium-ion battery