

Zero Emission

Providing 2 days worth of electricity to the general household
from Nissan LEAF's battery

“LEAF to Home” Electricity Supply System

Coming soon— the technology allowing EVs to be used as an electric power supply

EVs are currently gathering attention as a car able to be charged at home. The times are surging forth, however. Present technology makes things function the other way, allowing the cars to in fact supply the household with energy. What would happen if cars are to be utilized as high output generators of great capacity? For example, electricity can be supplied to the home from Nissan LEAF during power shortages, and it will undoubtedly be a great help in the event of a power shutdown. Additionally, EVs with such abilities may also be effectively utilized as a clean source of power in supporting leisure activities and events at areas where other forms of power may be absent. Its options would literally be boundless. Nissan strives to achieve further technological innovations in order to illuminate bright futures with our “LEAF to Home”

Towards a future where cars would be playing a great role in “Electricity Infrastructure”—
Nissan goes beyond EVs.

The average electricity use of a general Japanese household per day is approximately 10~12kW. The capacity of Nissan LEAF's lithium-ion battery is 24kW, and thus is able to provide two days worth of electricity to a household unit when the battery is fully charged. The “LEAF to Home” electricity supply system, which achieves high capacity and reliability only possible with a vehicle battery, is swiftly gathering attention as a new form of infrastructure, and as a contributing factor to energy saving and alternate energy use. For example cutting off one's own household from the power system network when demands are highest would be a significant contribution towards the stable supply of power throughout society. Another energy-smart use would be to store power to Nissan LEAF's battery throughout the day via household solar power generation and using the stored power when necessary. Nissan LEAF's battery plays an exceptionally important role in achieving smart-houses. Also, this function can be used by simply installing a special program to Nissan LEAFs that are out there currently owned by our customers.

System structure

The supply of electricity is carried out from Nissan LEAF's quick charging connector via a PCS (Power Control System) that is connected to the household's distribution board. The system has enough output to allow all household electronics to function at once, and is able to stably supply electricity through mornings and evenings where household electricity usage is known to increase.

