

Charging points that draw energy from electric vehicles go on trial

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Energy supplier SP Group will be conducting a trial of four charging points that can draw battery charge back from electric vehicles (EVs) to balance fluctuations in en-

ergy production and consumption.

SP Group said yesterday that the vehicle-to-grid (V2G) technology could help enhance power grid reliability, so the grid can handle the mass adoption of electric vehicles expected by 2040 in Singapore.

V2G can also enable Singapore's energy system to accommodate

larger capacities of renewable energy, among other benefits.

SP Group has set up four charging points at one of its substations for the trial, which is not open to the public. It will be conducted with two units of the Nissan Leaf car. It will be completed next June.

SP Group said it will look into ar-

reas including EV charging during peak and off-peak periods, as well as the management of the voltage in the distribution system.

"If V2G technology is proven viable, it could be a win-win for the electricity system and EV owners," the firm said. It explained that it could be a cost-effective way to

supplement larger energy storage systems to overcome intermittency, while paying EV owners for use of their batteries when needed.

Intermittency refers to power supply being interrupted. Power plants have traditionally performed the role of mitigating intermittency.

Citing the example of EV charging points powered by solar energy, SP Group said: "When solar generation drops due to rain or cloud cover, the EVs plugged into the system can balance out the fall in supply. During periods of significant solar generation, the EVs can store the excess energy."

National University of Singapore transport infrastructure expert Raymond Ong said it is a good time to start trials given the expected rise in usage of EVs.

The Government has said it will phase out petrol vehicles by 2040.

Dr Ong added that the V2G system can be implemented here if people change their mentality and see each vehicle as a small energy source that can give back to the system.

"This is basically about balancing demand and supply where we may have excessive demand in power at certain periods and where power is under-utilised," he said.

But he noted that one challenge will be to determine a pricing structure that will attract sufficient EV drivers to return energy to the power grid.