

## FY2020 V2G Business Demonstration Project Implementation Plan

## &lt;Demonstration Details&gt;

- Development and examination of mechanism that can provide blanket control of EV/PHEV at multiple sites in the same area (via an online system)

We shall examine and identify problems with a demonstration system as we aim to achieve “power transfer between multiple sites” in order to deal with unplanned mobility needs (example: fluctuations in the number of vehicles).

-Create scenarios and procedures for stabilizing power grids in accordance with actual conditions

We shall revise and examine control requirements in anticipation of future coordination with policies to avoid suppressing the output of renewable energy sources, such as photovoltaic power generation (solar power).

- Resource expansion

We shall add another demonstration site (4 EVPS\*<sup>1</sup>) to the FY2019 demonstration project (Table 1) thereby constructing the largest V2G demonstration environment in Japan (Figure 1).

\*1 Abbreviation for EV Power Station. Refers to discharge and charging stations.

Table 1 Breakdown of Resources for the FY2020 V2G Demonstration Project

Demonstration site	# EV/PHEV	Vehicle Use	# of EVPS
Shizuoka Gas Tobu Branch	2 (EV:1, PHEV: 1)	Commuting: 2	2
Shizuoka Gas Yoshihara Base	5 (EV:4, PHEV:1)	Commuting: 5	5
Mitsubishi Motors Okazaki Plant	50 (PHEV: 50)	Commuting: 50	50
Yokohama City, Public Works Office, Asahi Branch	1 (EV: 1)	Work Vehicle: 1	1
Partner company site	1 (PHEV: 1)	Work Vehicle: 1	1
[New for FY2020] TEPCO PG,	4 (EV: 4)	Work Vehicle: 4	4

Kanagawa Branch			
Total	63 (EV: 10, PHEV: 53)	Commuting: 57 Work Vehicles: 6	63

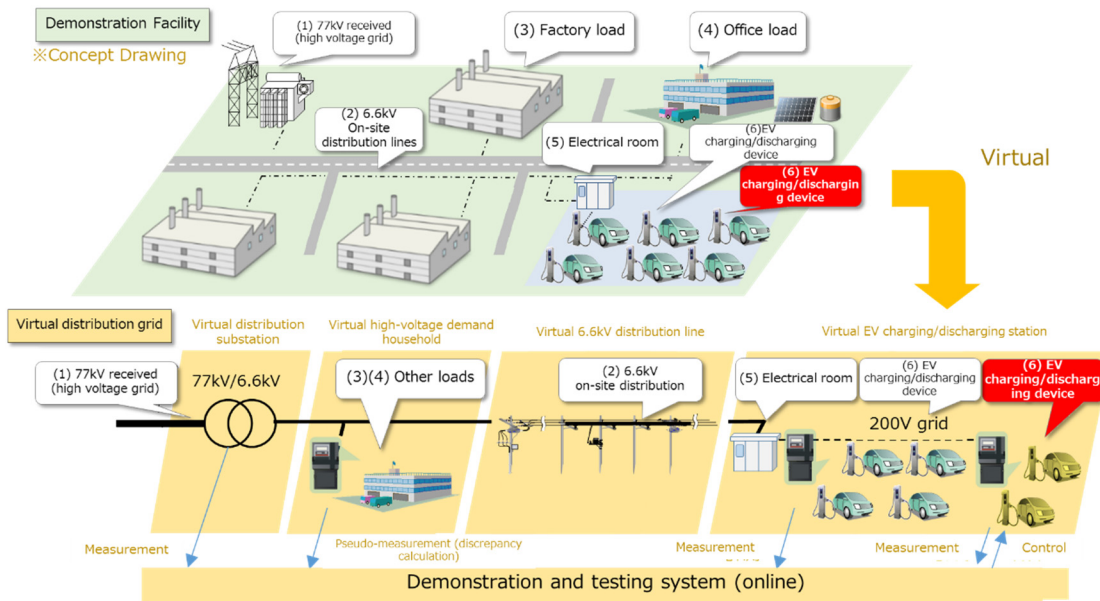


Figure 1 Demonstration Site Example

- Business model deliberation

We shall estimate the monetization of each aggregation coordinator\* and resource aggregator in the supply/demand adjustment market (primary/secondary (1): To be established in FY2024), and assess/analyze commercial feasibility.

\*Aggregation coordinator:

Combines multiple power loads controlled by resource aggregators, which control resources by signing demand-side households to VPP service contracts, and engages in direct power transactions with general transmission and distribution system operators and electricity retailers.

-Examining state of health (SOH) if V2G are to be leveraged

The state of health of drive batteries if leveraged for V2G shall be assessed by using approximately 70 PHEV (50 V2G controlled vehicles: 20 vehicles not controlled by V2G).