

# FY2019 V2G Business Demonstration Project Achievements (1)


- Site construction/demonstration environment creation**


In order to demonstrate this system through experiments and testing, we constructed a demonstration system as well as five demonstration sites.


  
V2G site  
EV/PHEV and EVPS: 6


  
Shizuoka Gas site (A-1)


  
Shinjuku District site (D)

  
V(2B)2G site  
EV/PHEV and EVPS: 53

  
Shizuoka Gas site (A-2)

  
Mitsubishi Motors site (B)



  
Yokohama City site (C)

  
Demonstration command center

  
Demonstration command center

  
Demonstration command terminal

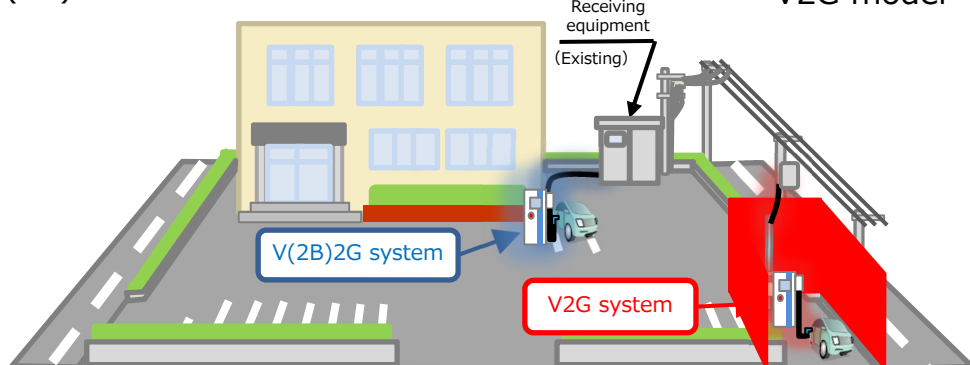
  
Demonstration site/monitoring terminals

## FY2019 V2G Business Demonstration Project Achievements (2)

- Total quantity of DR resources**

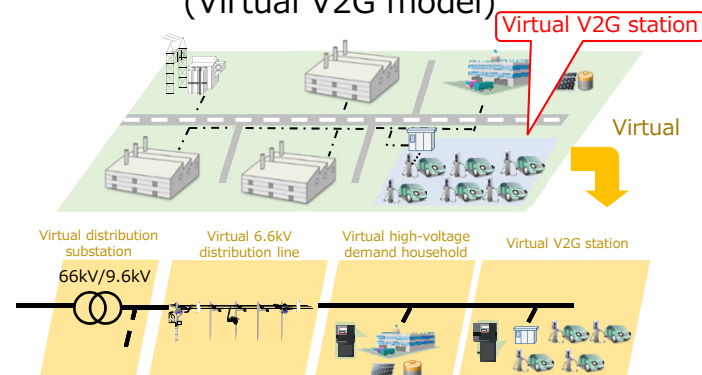
In order to demonstrate this system through experiments and testing, we constructed a demonstration system as well as five demonstration sites.

Site A-2, C  
V(2B)2G model



Site A-1, D  
V2G model

Site B  
(Virtual V2G model)



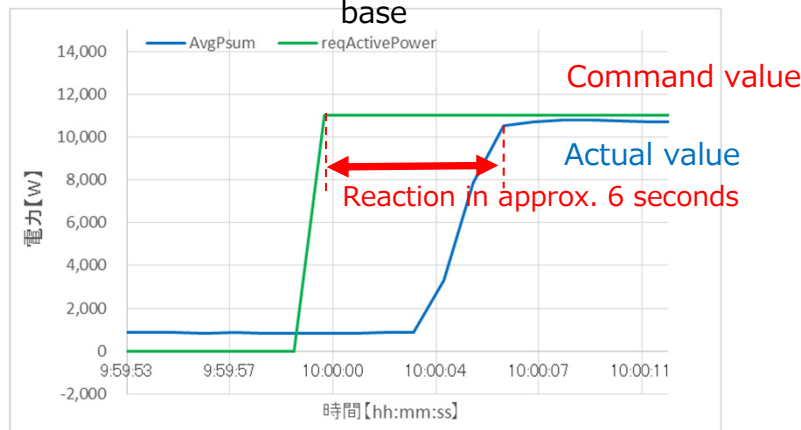
List	Site Name (honorifics omitted)	Connection category	Type	Adverse current?	Covered area	# of EVPS	Outlander PHEV	Leaf	i-MiEV	kW	kWh
A-1	Shizuoka /Yoshihara base	Low voltage	V2G	Y	Tokyo	5	1	4		30	172
A-2	Shizuoka /Tobu Branch	Medium voltage	V(2B)2G	N	Tokyo	2	1	1		12	52
B	Mitsubishi motors/Okazaki Plant	high-voltage	V(2B)2G	N	Chubu	50	50			300	600
C	Yokohama City, Public Works Office, Asahi Branch	Medium voltage	V(2B)2G	N	Tokyo	1			1	6	10.5
D	Shinjuku District site	Low-voltage	(V2G)	Y	Tokyo	1	1			6	12
Total						59	53	5	1	354	846.5

## <Demonstration achievements>

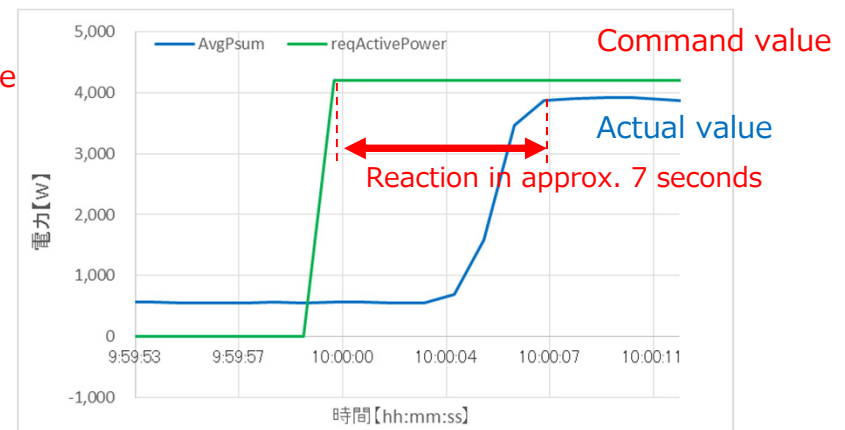
- We were able to simultaneously control multiple sites thereby verifying that synchronized control is possible
- We assessed the degree of impact on voltage fluctuation during charging/discharging based upon the predicted penetration rate of EV/PHEV over a cross-section from FY2030/50

### 11/7 (Wed) Example of reaction when a command was given (10:00:00)

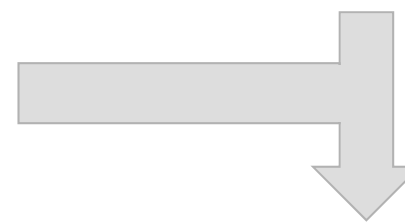
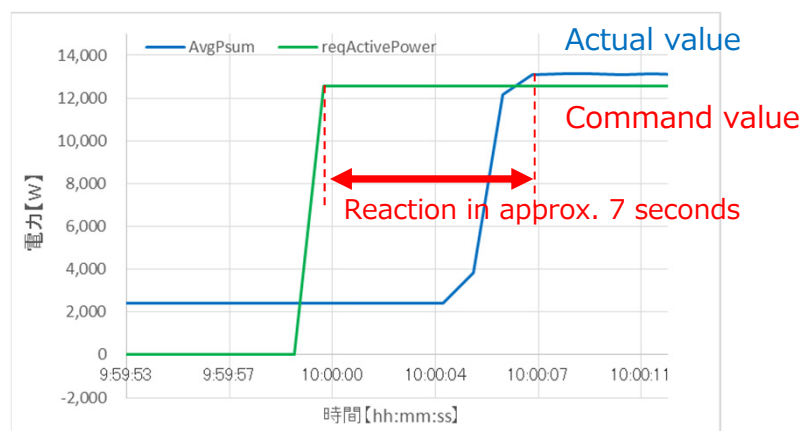
Site A-1: Shizuoka Gas/Yoshihara base



Site A-2: Shizuoka Gas/Tobu Branch



Site B: Mitsubishi Motors/Okazaki Plant



- We confirmed that we were able to synchronize and get reaction between 10:00:03~10:00:07
- We were able to achieve our target reaction delay time (within 5 minutes)