



5th June, 2013 EV•PHV Town Symposium – Tokyo -

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"GoGoEV" Efforts on EV charging infrastructure

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(1) Introduction of GoGoEV

ev.gogo.gs/ - Cache – Similar

GoGoEV, website for location information of EV charging stations, was commenced on January 2010. As of May 2013, more than 7,200 charging stations have been registered.

2) Current situation of EV charging infrastructure

ev.gogo.gs/map/ - Cache – Similar

Current situation of EV charging infrastructure is analyzed from data in "GoGoEV".

(3) Service improvement on EV charging infrastructure

ev.gogo.gs/entry/ - Cache - Similar

From the comments are posted to GoGoEV and situation in the United States for EV charging infrastructure, required service for EV charging infrastructure is...

















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EV充電スタンド検索TOP > 東京都 > 中央区 > 銀座 Ginza parking Inc.

は気に入り				周辺地図検索	情報修正依刺
company	(株)銀座バー:	キングセンター	西銀座駐車場 [木	- <u>ムページ</u>]	
Address	中央区銀座6-	4-4		~	
	100V		ケーブルなし	利用したよ!	
Charging	200V	あり (1台)	ケーブ <mark>ル</mark> なし	利用したよ! 利用あり(2013/05/0	02 12時)
type			ケーブル <mark>付属</mark>	利用したよ! 利用あり(2013/05/0	02 12時)
	急速	-	ケーブル付属	利用したよ!	
	テスラ急速	-	ケーブル付属	(利用したよ!)	
Fee	無料	1	pre- registration	不明	
Business hours	平日:24h 土曜:24h 日曜:24h 祝日:24h		Regular holidays	無休	
電話番号	03-3572-52	201			
備考	【設置場所】地下2階 72車室				
充電器情報	EVChargerで充電器情報を確認				

Charging station information

- Name of company and location
- Address, phone number, business hours, regular holiday
- Charging type (100V / 200V / DC / Tesla)
- Fee

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- With or without pre-registration
- Others



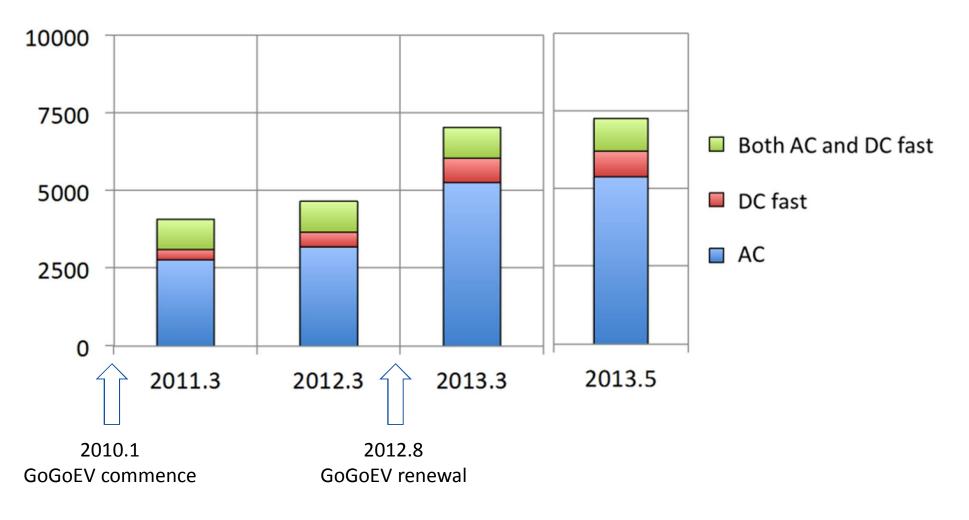




Photos	
写真件数 1件	Posted photos
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間違えました。充電ケーブルは付属していません。充電コンセントにはダイヤルキーがあってケ ーブルをセットした後に盗難防止で鍵をかける事ができます。事前登録などは無く、行ってその まま充電することが出来ました。	Posted comments
投稿日時 2013-05-03 00:40:21 投稿者 maogi	
Usage records	[]
2013年5月2日 12時 maogi 充電タイプ[200V(ケープル付属)]	Usage records
2013年5月2日 12時 maogi 充電タイプ[200V(ケーブルなし)]	





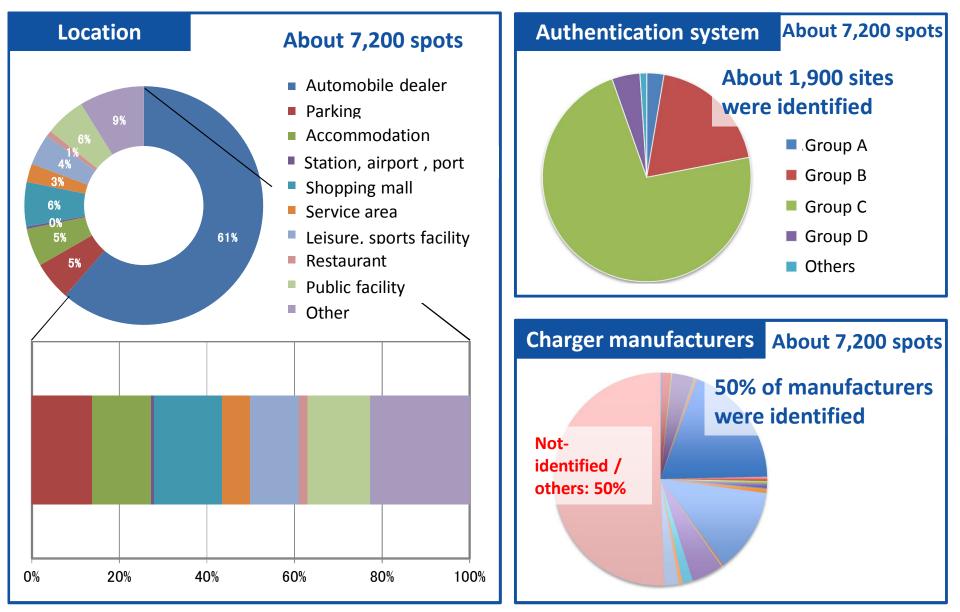


Registered number of EV Charging stations on GoGoEV



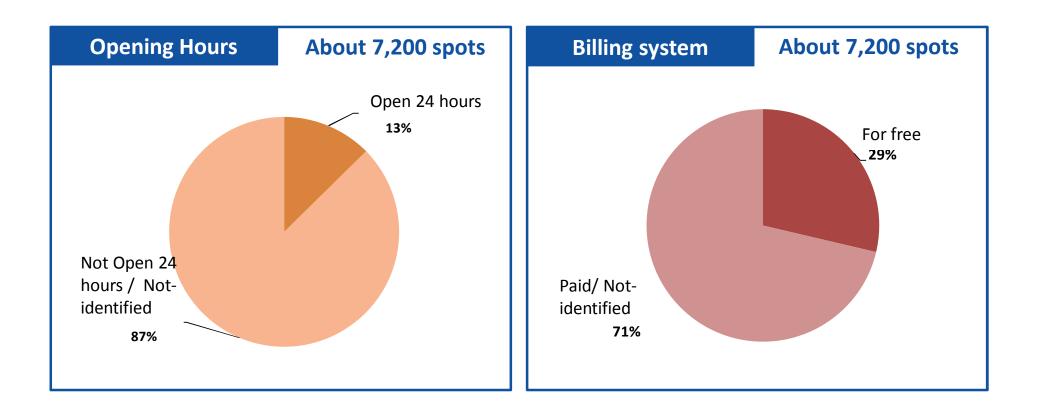
















Latent demand of EV charging infrastructure by "GoGoEV" data

- Necessity for DC fast charger installation at the location of stop in when traveling; "Service area and Parking area"
 (At present, DC fast chargers are installed in 9% of 1,794 SA/PA in Japan.)
- Necessity for charger installation at "Airports, Ports, and Train stations"

(At present, DC fast chargers are installed at only 11 sites, and AC200V chargers are installed at 10 sites.)

 Need for installation of AC200V chargers in a place to park a certain period; "Parking lot, Accommodations and Restaurants"
 (At present, EV chargers are installed at 800 sites in Parking lots, Accommodations and Restaurants)



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Current problems happening at EV charging spots (1) Congestion at spots

	Aeon mall Musashi Murayama (AC200V × 2、DC fast × 1)
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Comments
7 Comments
Today is my first time to use EV charging spot here.
Two cars, Prius and Leaf, were already in charge. But here is very convenient
Post time: 2013-04-20 15:47:20 Name: maogi
On March 16 th at 18:30, I used the charger here.
Every week, I use it and this was the 13 th time.
Users of EV charger seem to be increasing gradually. When I go there, Leaf and Prius
were in charge. Reluctantly, I used it after a short time of shopping. This station is so
convenient that the users of EV charging spot might increase more from now on.
Post time: 2013-03-19 18:04:17 Name: kenmr





Current problems happening at EV charging spots 2 Parking of non-EV vehicles

Kansa	i International Airport (AC200V \times 2)
	Comments
2 Comm	nents
	ay of the shooting (last March), unfortunately normal vehicle was parked. e recognition of EV is still too low.
Post time:	2013-04-03 08:30:34 Name: Senli04
	ere for the first time. ehicles were parked by moving pylons that said EV-only.
	w Kansai resident, I felt sad for the lack of manners. e to charge successfully the other charging spot at the other parking lot, bu
I was able	







Problems happening at EV charging spots

• Need for eliminating congestion at some charging spots Charging congestions occur on every holiday at the charging spots of some shopping malls / public facilities.

<u>Increase of the number of chargers</u> and/or <u>flexible operation of charging</u> <u>equipment</u> are required.

(e.g. Several rules; EV should be moved as soon as possible after full-charging, It is possible to disconnect the cable after full-charging by others, etc.)

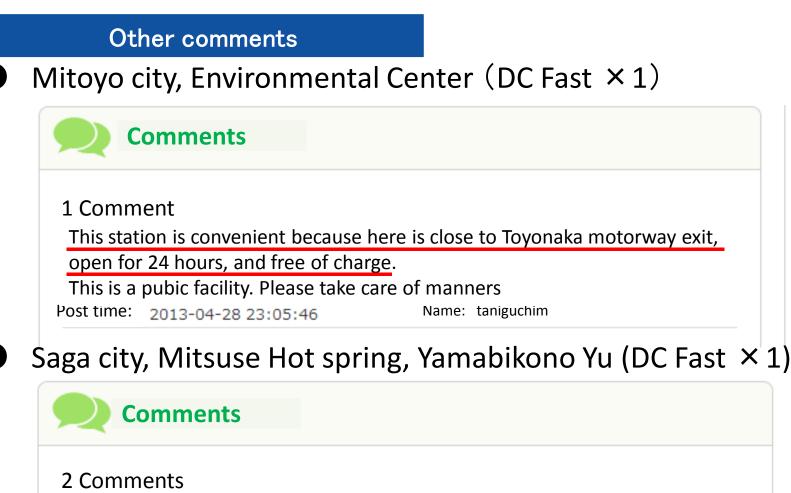
• Countermeasures to prevent Parking of non-EV vehicles

Many EV charging spots, where are suitable for a long time parking, are installed at places with high convenience.

EV charging spots installation at a place with comparatively low convenience and/or <u>real-time information system to know the availability of EV charging spots</u> are required.







Electronic toll collection machine is installed, charging has started after cable connection with a fee of 500 yen.

Here seems to be open for 24 hours

Post time: 2013-04-28 14:12:13

Name: ringorirap



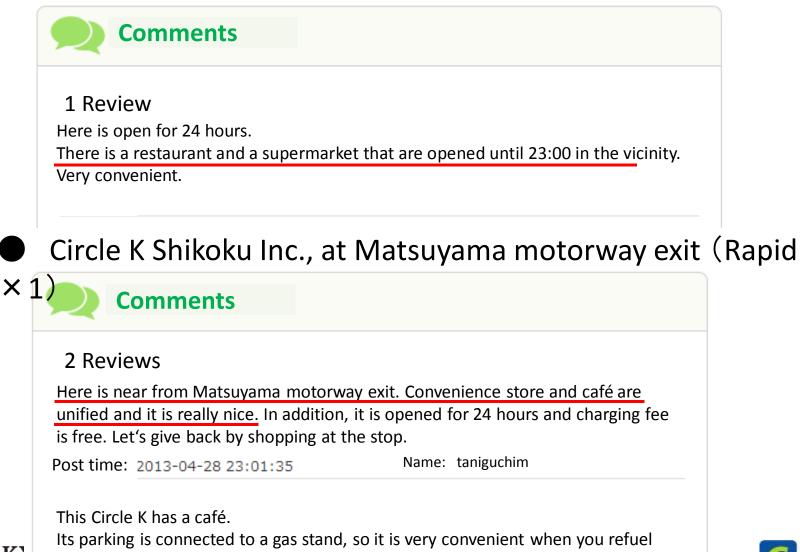
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Other comments



Nissan Prince Fukuoka sales Inc., Kokura branch (DC fast $\times 1$)



gas and charging electricity to PHEV at the same time.



Important points for EV charging infrastructure by users' comments

• Location of EV charging infrastructure

Installation of EV charging stations to the transportation hub near the motorway exit etc...

• 24-hours service

Expansion of 24 hours EV charging station service for users who charge in early morning and late night, and who drive long distance trips.

• Accurate information of charging fee and billing system

Charging fee / billing system Information need to be more accurate. In addition, cheaper or free fee is needed to penetrate EV faster.

Detailed and neighborhood information around EV charging spots

Information on places to spend the time while waiting for charging to be complete.



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Keywords

- EV charging infrastructure that are installed at convenient places Service Area, Parking lot, Accommodation, station, Air Port, Port, etc.
- EV charging infrastructure that can be used at any time
 - ✓ 24-hours chargeable
 - ✓ Eliminating congestion
 - ✓ Prevent parking of non-EV vehicles
- Accurate information of EV charging infrastructure
 - ✓ Information of charging fee / billing system
 - ✓ Detailed and neighborhood information around EV charging spots





Charge Point America project



Project to install 4,500 EV charging infrastructure (220V) in 11 regions

Project size \$ 37 million (Department of energy \$15M, Private fund \$22M)





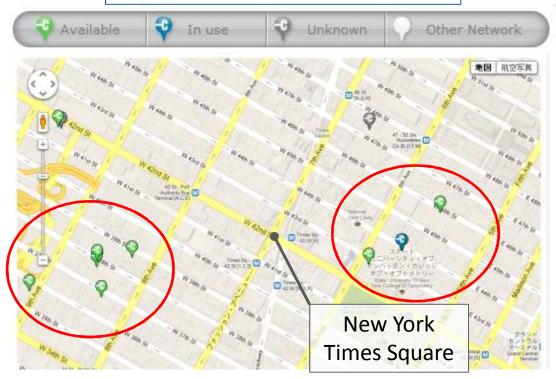
Source: http://chargepointamerica.com/ Source: http://www.treehugger.com/cars/boston-metro-area-to-get-150-chargepoint-electric-car-charging-stations.html





Charge Point America project

Real-time information about availability of EV charging spots



Reference: http://www.chargepoint.com/ http://itunes.apple.com



Providing information of EV charging spots through API





The feature of the project in the U.S.

- Selection process of the location and the number of chargers Companies and organizations, which lead the installation of EV charging infrastructure, are responsible for site selection and the number of chargers.
- Contribute to the public against the tax injection
 Sharing the charging station information is obliged because the project has been supported by tax.
- Services of EV charging infrastructure from the viewpoint of EV users

Real-time information system about EV charging availability. Encouragement to develop applications for the web or for smartphones.

GoGoEV is also going to develop <u>several</u> services <u>that contribute</u> towards the diffusion of EV.



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Thank you for your kind attention.



